WARNING: AT LEAST ONE DOCUMENT COULD NOT BE INCLUDED!
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Selected docket entries for case 20−16401

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Filed	Document Description	Page	Docket Text
07/21/2020	1		DOCKETED CAUSE AND ENTERED APPEARANCES OF COUNSEL. SEND MQ: Yes. The schedule is set as follows: Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club Mediation Questionnaire due on 07/28/2020. Transcript ordered by 08/19/2020. Transcript due 09/18/2020. Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club opening brief due 10/28/2020. Appellees EFR Arizona Strip LLC, Energy Fuels Resources (USA), Inc., Heather Provencio and United States Forest Service answering brief due 11/30/2020. Appellant's optional reply brief is due 21 days after service of the answering brief. [11760444] (RT)
	1 Docketing Letter and Briefing Schedule	10	
	1 Notice to All Parties and Counsel	13	
	1 Mediation Letter	15	
	1 Mediation Questionnaire **DOCUMENT COULD NOT BE RETRIEVED!**		
	1 Case Opening Packet	16	
07/27/2020			Added Attorney(s) Roger Flynn for party(s) Appellant Center for Biological Diversity Appellant Sierra Club Appellant Grand Canyon Trust, in case 20−16401. [11767608] (RT)
07/27/2020	3 Main Document	38	Filed (ECF) Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club Mediation Questionnaire. Date of service: 07/27/2020. [11768161] [20−16401] (Paul, Aaron)
07/27/2020			The Mediation Questionnaire for this case was filed on 07/27/2020. To submit pertinent **confidential** information directly to the Circuit Mediators, please use the following **link**. Confidential submissions may include any information relevant to mediation of the case and settlement potential, including, but not limited to, settlement history, ongoing or potential settlement discussions, non−litigated party related issues, other pending actions, and timing considerations that may impact mediation efforts.[11768269]. [20−16401] (AD)
08/11/2020	5 Order − Call Me	40	MEDIATION ORDER FILED: By 08/25/2020, counsel to email Circuit Mediator regarding settlement potential. Include Ninth Circuit case number in subject line. This communication will be kept confidential, if requested, and should not be filed with the court. The existing briefing schedule remains in effect. SEE ORDER FOR DETAILS. [11784859] (BLS)
08/13/2020			Filed (ECF) notice of appearance of Thekla C Hansen−Young (US Department of Justice, ENRD Appellate Section, PO Box 7415, Ben Franklin Station,

			Washington DC 20044) for Appellees Heather Provencio and USFS. Date of service: 08/13/2020. (Party was previously proceeding with counsel.) [11787424] [20−16401] (Hansen−Young, Thekla)
08/13/2020			Added Attorney(s) Thekla Hansen−Young for party(s) Appellee Heather Provencio Appellee USFS, in case 20−16401. [11787435] (CW)
10/19/2020	8 Main Document	42	Filed order MEDIATION (JW): This case is RELEASED from the Mediation Program.The briefing schedule previously set by the court is amended as follows:appellants' opening brief is due December 14, 2020; appellees' answering brief isdue January 14, 2021; appellants' optional reply brief is due within 21 days fromthe service date of the answering brief.Counsel are requested to contact the Circuit Mediator should circumstancesdevelop that warrant settlement discussions. [11863377] (AF)
10/20/2020	9 Main Document	44	Filed AMENDED order MEDIATION (JW): The court's order of October 19, 2020, is amended as follows:This case is RELEASED from the Mediation Program.The briefing schedule previously set by the court is amended as follows:appellants' opening brief is due December 14, 2020; appellees' answering brief isdue January 28, 2021; appellants' optional reply brief is due within 21 days fromthe service date of the answering brief.Counsel are requested to contact the Circuit Mediator should circumstancesdevelop that warrant settlement discussions. [11864965] (AF)
12/10/2020			Filed (ECF) Streamlined request for extension of time to file Opening Brief by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. New requested due date is 12/22/2020. [11922259] [20−16401] (Paul, Aaron)
12/10/2020			**Streamlined request [10] by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club to extend time to file the brief is approved. This briefing schedule retains the intervals established in the previous briefing order. Amended briefing schedule: Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club opening brief due 12/22/2020. Appellees EFR Arizona Strip LLC, Energy Fuels Resources (USA), Inc., Heather Provencio and United States Forest Service answering brief due 02/05/2021. The optional reply brief is due 21 days from the date of service of the answering brief.** [11922891] (DLM)
12/22/2020	12 Main Document	46	Submitted (ECF) Opening Brief for review. Submitted by Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club. Date of service: 12/22/2020. [11937663] [20−16401] (Paul, Aaron)

12/22/2020	13		Submitted (ECF) excerpts of record. Submitted by Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club. Date of service: 12/22/2020. [11937673] [20−16401] (Paul, Aaron)
	13 ER Vol Index	124	
	13 ER Vol 1	128	
	13 ER Vol 2	169	
	13 ER Vol 3	418	
12/23/2020	14 ECF Brief and Excerpts Filed Order	674	Filed clerk order: The opening brief [12] submitted by Center for Biological Diversity, Grand Canyon Trust and Sierra Club is filed. Within 7 days of the filing of this order, filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: blue. The excerpts of record [13] submitted by Center for Biological Diversity, Grand Canyon Trust and Sierra Club are filed. Within 7 days of this order, filer is ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers. The paper copies shall be submitted to the principal office of the Clerk. [11937950] (KWG)
12/30/2020			Received 3 paper copies of excerpts of record [13] in 3 volume(s) and index volume filed by Appellants. [11948959] (LA)
12/30/2020			Received 6 paper copies of Opening Brief [12] filed by Appellants. [11949167] (SD)
01/14/2021			Filed (ECF) Streamlined request for extension of time to file Answering Brief by Appellees USFS and Heather Provencio. New requested due date is 03/01/2021. [11963815] [20−16401] (Hansen−Young, Thekla)
01/14/2021			**Streamlined request [17] by Appellees Heather Provencio and USFS to extend time to file the brief is approved FOR ALL APPELLEES. Streamline requests allow for 30 day extensions. Amended briefing schedule: Appellees EFR Arizona Strip LLC, Energy Fuels Resources (USA), Inc., Heather Provencio and United States Forest Service answering brief due 03/08/2021. The optional reply brief is due 21 days from the date of service of the answering brief.** [11964207] (DLM)
02/26/2021	19 Main Document	676	Filed (ECF) Appellees Heather Provencio and USFS Unopposed Motion to extend time to file Answering brief until 04/05/2021. Date of service: 02/26/2021. [12018157] [20−16401] (Hansen−Young, Thekla)
02/26/2021	20 Brief Extension Order	680	Filed clerk order (Deputy Clerk: th): Granting Unopposed Motion [19] (ECF Filing) filed by Appellees USFS and Heather Provencio to extend time to file the ans. brief. The extension of time will apply to all appellees. The appellees' answering briefs are due 04/05/2021. The optional reply brief is due 21 days after service of the last−served answering brief. [12018571] (TH)

04/01/2021	21 Main Document	682	Filed (ECF) Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. Correspondence: formal notice of death of attorney of record. Date of service: 04/01/2021 [12060523] [20−16401] (Glass, Bradley)
04/01/2021			Terminated Michael Kevin Kennedy for Energy Fuels Resources (USA), Inc. and EFR Arizona Strip LLC in 20−16401 − DECEASED [12060534] (DJV)
04/05/2021	23 Main Document	683	Submitted (ECF) Answering Brief for review. Submitted by Appellees Heather Provencio and USFS. Date of service: 04/05/2021. [12063512] [20−16401]−−[COURT UPDATE: Attached corrected brief. 04/06/2021 by LA] (Hansen−Young, Thekla)
04/05/2021	24		Submitted (ECF) supplemental excerpts of record. Submitted by Appellees Heather Provencio and USFS. Date of service: 04/05/2021. [12063515] [20−16401]−−[COURT UPDATE: Attached corrected excerpts. 04/06/2021 by LA] (Hansen−Young, Thekla)
	24 ER Vol Index	802	
	24 ER Vol 1	805	
	24 ER Vol 2	1035	
	24 ER Vol 3	1306	
04/05/2021			STRICKEN PER ORDER [32]. ~~Submitted (ECF) Answering Brief for review. Submitted by Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. Date of service: 04/05/2021.~~ [12064308] [20−16401] (Glass, Bradley)
04/06/2021	26 ECF Brief Filed Order	1583	Filed clerk order: The answering brief [25] submitted by EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. is filed. Within 7 days of the filing of this order, filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: red. The paper copies shall be submitted to the principal office of the Clerk. [12064832] (LA)
04/06/2021	27 ECF Brief and Excerpts Filed Order	1585	Filed clerk order: The answering brief [23] submitted by Heather Provencio and USFS is filed. Within 7 days of the filing of this order, filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: red. The supplemental excerpts of record [24] submitted by Heather Provencio and USFS are filed. Within 7 days of this order, filer is ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers. The paper copies shall be submitted to the principal office of the Clerk. [12065530] (LA)
04/08/2021	28 Main Document	1587	Filed (ECF) Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. Motion to file substitute or corrected brief. Date of service: 04/08/2021. [12068361] [20−16401]−−[COURT UPDATE: Removed PDF of the brief, filed correctly in [29]. 04/09/2021 by KWG] (Glass, Bradley)

04/08/2021	29 Main Document	1590	Submitted (ECF) Answering Brief for review. Submitted by Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. Date of service: 04/08/2021. [12069121]−−(Court entered filing, originally filed with the motion in [28].)−−[Edited: Backdated entry to original submission date (04/08/2021). 04/12/2021 by LA] (KWG)
04/09/2021			Received 6 paper copies of Answering Brief [23] filed by Heather Provencio and USFS. [12069837] (SD)
04/12/2021			Received 3 paper copies of supplemental excerpts of record [24] in 3 volume(s) and index volume filed by Appellee Heather Provencio. [12070360] (KWG)
04/12/2021	32 Main Document	1827	Filed clerk order (Deputy Clerk: TAH): Based on the representation that modification is limited to updating citations to the supplemental excerpts of record, the motion of appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. (Docket Entry No. [28]) for leave to file a substitute answering brief is granted. The Clerk will file the movants' substitute answering brief (Docket Entry No. [29]) and will strike the previously filed brief (Docket Entry No. [25]).The optional reply brief is due within 21 days after the date of this order. [12071303] (AF)
04/12/2021	33 ECF Brief Filed Order	1829	Filed clerk order: The answering brief [29] submitted by EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. is filed. Within 7 days of the filing of this order, filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: red. The paper copies shall be submitted to the principal office of the Clerk. [12071362] (LA)
04/15/2021			Received 6 paper copies of Answering Brief [29] filed by EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. [12076328] (SD)
04/26/2021			Filed (ECF) Streamlined request for extension of time to file Reply Brief by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. New requested due date is 06/02/2021. [12086017] [20−16401] (Paul, Aaron)
04/26/2021			**Streamlined request [35] by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club to extend time to file the brief is approved. Streamline requests allow for only 30 day extensions. Amended briefing schedule: the optional reply brief is due 06/01/2021.** [12086603] (DLM)
05/07/2021			This case is being considered for an upcoming oral argument calendar in San Francisco Please review the San Francisco sitting dates for September 2021 and the 2 subsequent sitting months in that location at http://www.ca9.uscourts.gov/court_sessions. If you have an

			unavoidable conflict on any of the dates, please file Form 32 **within 3 business days of this notice** using the CM/ECF filing type **Response to Case Being Considered for Oral Argument**. Please follow the form's instructions carefully. When setting your argument date, the court will try to work around unavoidable conflicts; the court is not able to accommodate mere scheduling preferences. You will receive notice that your case has been assigned to a calendar approximately 10 weeks before the scheduled oral argument date. If the parties wish to discuss settlement before an argument date is set, they should jointly request referral to the mediation unit by filing a letter **within 3 business days of this notice**, using CM/ECF (**Type of Document**: Correspondence to Court; **Subject**: request for mediation).[12105774]. [20−16401] (KS)
06/01/2021	38 Main Document	1831	Submitted (ECF) Reply Brief for review. Submitted by Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club. Date of service: 06/01/2021. [12130372] [20−16401] (Paul, Aaron)
06/01/2021	39		Submitted (ECF) further excerpts of record. Submitted by Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club. Date of service: 06/01/2021. [12130375] [20−16401] (Paul, Aaron)
	39 ER Vol Index	1881	
	39 ER Vol 1	1884	
06/01/2021			Filed (ECF) UNDER SEAL Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club notice of intent to unseal previously sealed material. Material: excerpts of record. Date of service: 06/01/2021. [12130383] [20−16401] (Paul, Aaron)
06/02/2021	41 Main Document	2043	Filed (ECF) notice of intent to file document ([40]) publicly pursuant to Ninth Circuit Rule 27−13(f). Filed by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. Date of service: 06/01/2021. (Court−entered filing) [12130688] (LA)
06/02/2021			Submitted (ECF) provisionally UNDER SEAL further excerpts of record Volume 2. Submitted by Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. Date of service: 06/01/2021. (Court−entered filing, excerpts of record originally submitted in [40].) [12130699] (LA)
06/20/2021			Notice of Oral Argument on Monday, August 30, 2021 − 09:30 A.M. − Courtroom 1 − Scheduled Location: San Francisco CA. The hearing time is the local time zone at the scheduled hearing location. View the Oral Argument Calendar for your case **here**.

			NOTE: Although your case is currently scheduled for oral argument, the panel may decide to submit the case on the briefs instead. *See* Fed. R. App. P. 34. Absent further order of the court, if the court does determine that oral argument is required in this case, you will have the option to appear in person at the Courthouse or remotely by video. At this time, an election to appear remotely by video will not require a motion. The court expects and supports the fact that some attorneys and some judges will continue to appear remotely. If the panel determines that it will hold oral argument in your case, the Clerk's Office will contact you directly at least two weeks before the set argument date to review any requirements for in person appearance or to make any necessary arrangements for remote appearance. Please note however that if you do elect to appear remotely, the court **strongly prefers** video over telephone appearance. Therefore, if you wish to appear remotely by telephone you will need to file a motion requesting permission to do so. Be sure to review the GUIDELINES for important information about your hearing, including when to be available (30 minutes before the hearing time) and when and how to submit additional citations (filing electronically as far in advance of the hearing as possible). If you are the specific attorney or self−represented party who will be arguing, use the **ACKNOWLEDGMENT OF HEARING NOTICE** filing type in CM/ECF no later than 21 days before Monday, August 30, 2021. No form or other attachment is required. If you will not be arguing, do not file an acknowledgment of hearing notice.[12148285]. [20−16401] (KS)
06/23/2021			Filed (ECF) UNDER SEAL Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. motion to maintain document under seal. Date of service: 06/23/2021. [12152689] [20−16401] (Glass, Bradley)
06/23/2021	45 Main Document	2045	Filed Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. motion to maintain appellant's further excerpts of record Volume 2 UNDER SEAL. Deficiencies: None. Served on 06/23/2021. (Court−entered filing, motion originally filed in [44]) [12152742] (LA)
06/29/2021	46 Main Document	2064	Filed clerk order (Deputy Clerk: AF): Intervenor−Defendants−Appellees' Unopposed Motion to Seal PlaintiffsFurther Excerpts of Record is GRANTED. The Clerk shall publicly file the ReplyBrief and further excerpts of Volume 1, and shall file Volume 2 under seal. [12157521] (AF)
06/29/2021	47 ECF Brief and Excerpts Filed Order	2066	Filed clerk order: The reply brief [38] submitted by appellants is filed. Within 7 days of the filing of this order,

			filer is ordered to file 6 copies of the brief in paper format, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. Cover color: gray. The further excerpts of record [39], [42] submitted by appellants are filed. Volume 2 of the excerpts is filed UNDER SEAL. Within 7 days of this order, filer is ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers. The paper copies shall be submitted to the principal office of the Clerk. [12157855] (LA)
07/09/2021			Received 3 paper copies of further excerpts of record [39], [42] in 2 volumes (Volume 2 UNDER SEAL) and index volume filed by Appellants. (sent to panel) [12167992] (LA)
07/09/2021			Received 6 paper copies of Reply Brief [38] filed by Appellants. (sent to panel) [12168383] (SD)
07/23/2021			Filed (ECF) Acknowledgment of hearing notice by Attorney Thekla Hansen−Young for Appellees Heather Provencio and USFS. Hearing in San Francisco on 08/30/2021 at 09:30 A.M. (Courtroom: Courtroom 1). Filer sharing argument time: Yes. (Argument minutes: 15.) Special accommodations: NO. Filer admission status: I certify that I am admitted to practice before this Court. Date of service: 07/23/2021. [12181627] [20−16401] (Hansen−Young, Thekla)
07/28/2021			Filed (ECF) Notice of withdrawal of counsel. Filed by Attorney Neil Levine for Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. Party proceeding without counsel: No. Date of service: 07/28/2021. [12186101] [20−16401] (Levine, Neil)
07/28/2021			Terminated attorney Neil Levine for appellants Sierra Club, Grand Canyon Trust and Center for Biological Diversity in 20−16401. [12186136] (HH)
08/04/2021			Filed (ECF) Acknowledgment of hearing notice by Attorney Mr. Bradley J. Glass for Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. Hearing in San Francisco on 08/30/2021 at 09:30 A.M. (Courtroom: Courtroom 1). Filer sharing argument time: Yes. (Argument minutes: 5.) Special accommodations: NO. Filer admission status: I certify that I am admitted to practice before this Court. Date of service: 08/04/2021. [12191495] [20−16401] (Glass, Bradley)
08/06/2021			Filed (ECF) Acknowledgment of hearing notice by Attorney Mr. Aaron Matthew Paul for Appellants Center for Biological Diversity, Grand Canyon Trust and Sierra Club. Hearing in San Francisco on 08/30/2021 at 09:30 A.M. (Courtroom: Courtroom 1). Filer sharing argument time: No. (Argument minutes: 20.) Special accommodations: NO. Filer admission status: I certify that I am admitted to practice before this Court. Date of service:

			08/06/2021. [12193649] [20−16401] (Paul, Aaron)
08/30/2021			ARGUED AND SUBMITTED TO MARY M. SCHROEDER, JOHNNIE B. RAWLINSON and JAY S. BYBEE. [12215144] (WWP)
08/30/2021	56 Main Document	2068	Filed Audio recording of oral argument. **Note:** Video recordings of public argument calendars are available on the Court's website, at http://www.ca9.uscourts.gov/media/ [12215352] (BJK)
01/13/2022			Filed (ECF) notice of appearance of D. Lee Decker (Gallagher & Kennedy, P.A., 2575 East Camelback Road, #1100, Phoenix, AZ 85016) for Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. Substitution for Attorney Mr. Bradley J. Glass for Appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc.. Date of service: 01/13/2022. (Party was previously proceeding with counsel.) [12339833] [20−16401] (Decker, David)
01/13/2022			Attorneys Bradley J. Glass and Bradley J. Glass in 20−16401 substituted by Attorneys David Lee Decker and David Lee Decker in 20−16401 [12339850] (DJV)
02/22/2022	59		FILED OPINION (MARY M. SCHROEDER, JOHNNIE B. RAWLINSON and JAY S. BYBEE) The judgment of the district court is AFFIRMED. Judge: JSB Authoring. FILED AND ENTERED JUDGMENT. [12375690]−−[Edited (typographical corrections on pages 5, 10, and 24 n.5 per letter filed by counsel on 4/7/22) 04/08/2022 by AKM] (MM)
	59 Opinion	2069	
	59 WebCite	2094	
	59 Post Judgment Form	2139	
04/07/2022	60		Filed (ECF) Appellants Grand Canyon Trust, Center for Biological Diversity and Sierra Club Correspondence: re: typographical matters in opinion issued February 22, 2022. Date of service: 04/07/2022 [12415470] [20−16401] (Paul, Aaron)
	60 Main Document	2143	
	60 Enclosure − Notice of Appeal	2144	
04/18/2022	61 Mandate Order	2148	MANDATE ISSUED.(MMS, JBR and JSB) [12423439] (DJV)

Office of the Clerk
United States Court of Appeals for the Ninth Circuit
Post Office Box 193939
San Francisco, California 94119-3939
415-355-8000

Molly C. Dwyer
Clerk of Court

July 21, 2020

No.:	20-16401
D.C. No.:	3:13-cv-08045-DGC
Short Title:	Grand Canyon Trust, et al v. Heather Provencio, et al

Dear Appellants/Counsel

A copy of your notice of appeal/petition has been received in the Clerk's office of the United States Court of Appeals for the Ninth Circuit. The U.S. Court of Appeals docket number shown above has been assigned to this case. You must indicate this Court of Appeals docket number whenever you communicate with this court regarding this case.

Motions filed along with the notice of appeal in the district court are not automatically transferred to this court for filing. Any motions seeking relief from this court must be separately filed in this court's docket.

Please furnish this docket number immediately to the court reporter if you place an order, or have placed an order, for portions of the trial transcripts. The court reporter will need this docket number when communicating with this court.

The due dates for filing the parties' briefs and otherwise perfecting the appeal have been set by the enclosed "Time Schedule Order," pursuant to applicable FRAP rules. These dates can be extended only by court order. Failure of the appellant to comply with the time schedule order will result in automatic dismissal of the appeal. 9th Cir. R. 42-1.

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

JUL 21 2020

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERSITY; SIERRA CLUB,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

TIME SCHEDULE ORDER

The parties shall meet the following time schedule.

If there were reported hearings, the parties shall designate and, if necessary, cross-designate the transcripts pursuant to 9th Cir. R. 10-3.1. If there were no reported hearings, the transcript deadlines do not apply.

Tue., July 28, 2020	Appellants' Mediation Questionnaire due. If your registration for Appellate CM/ECF is confirmed after this date, the Mediation Questionnaire is due within one day of receiving the email from PACER confirming your registration.
Wed., August 19, 2020	Transcript shall be ordered.
Fri., September 18, 2020	Transcript shall be filed by court reporter.
Wed., October 28, 2020	Appellants' opening brief and excerpts of record shall be served and filed pursuant to FRAP 31 and 9th Cir. R. 31-2.1.
Mon., November 30, 2020	Appellees' answering brief and excerpts of record shall be served and filed pursuant to FRAP 31 and 9th Cir. R. 31-2.1.

The optional appellants' reply brief shall be filed and served within 21 days of service of the appellees' brief, pursuant to FRAP 31 and 9th Cir. R. 31-2.1.

Failure of the appellants to comply with the Time Schedule Order will result in automatic dismissal of the appeal. See 9th Cir. R. 42-1.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Ruben Talavera
Deputy Clerk
Ninth Circuit Rule 27-7

Office of the Clerk
United States Court of Appeals for the Ninth Circuit
Post Office Box 193939
San Francisco, California 94119-3939
415-355-8000

Molly C. Dwyer
Clerk of Court

ATTENTION ALL PARTIES AND COUNSEL
PLEASE REVIEW PARTIES AND COUNSEL LISTING

We have opened this appeal/petition based on the information provided to us by the appellant/petitioner and/or the lower court or agency. EVERY attorney and unrepresented litigant receiving this notice MUST immediately review the caption and service list for this case and notify the Court of any corrections.

Failure to ensure that all parties and counsel are accurately listed on our docket, and that counsel are registered and admitted, may result in your inability to participate in and/or receive notice of filings in this case, and may also result in the waiver of claims or defenses.

PARTY LISTING:
Notify the Clerk immediately if you (as an unrepresented litigant) or your client(s) are not properly and accurately listed or identified as a party to the appeal/petition. To report an inaccurate identification of a party (including company names, substitution of government officials appearing only in their official capacity, or spelling errors), or to request that a party who is listed only by their lower court role (such as plaintiff/defendant/movant) be listed as a party to the appeal/petition as an appellee or respondent so that the party can appear in this Court and submit filings, contact the Help Desk at http://www.ca9.uscourts.gov/cmecf/feedback/ or send a letter to the Clerk. If you or your client were identified as a party to the appeal/petition in the notice of appeal/petition for review or representation statement and you believe this is in error, file a motion to dismiss as to those parties.

COUNSEL LISTING:
In addition to reviewing the caption with respect to your client(s) as discussed above, all counsel receiving this notice must also review the electronic notice of docket activity or the service list for the case to ensure that the correct counsel are

listed for your clients. If appellate counsel are not on the service list, they must file a notice of appearance or substitution immediately or contact the Clerk's office.

NOTE that in criminal and habeas corpus appeals, trial counsel WILL remain as counsel of record on appeal until or unless they are relieved or replaced by Court order. *See* Ninth Circuit Rule 4-1.

REGISTRATION AND ADMISSION TO PRACTICE:
Every counsel listed on the docket must be admitted to practice before the Ninth Circuit AND registered for electronic filing in the Ninth Circuit in order to remain or appear on the docket as counsel of record. *See* Ninth Circuit Rules 25-5(a) and 46-1.2. These are two separate and independent requirements and doing one does not satisfy the other. If you are not registered and/or admitted, you MUST, within 7 days from receipt of this notice, register for electronic filing AND apply for admission, or be replaced by substitute counsel or otherwise withdraw from the case.

If you are not registered for electronic filing, you will not receive further notices of filings from the Court in this case, including important scheduling orders and orders requiring a response. Failure to respond to a Court order or otherwise meet an established deadline can result in the dismissal of the appeal/petition for failure to prosecute by the Clerk pursuant to Ninth Circuit Rule 42-1, or other action adverse to your client.

If you will be replaced by substitute counsel, new counsel should file a notice of appearance/substitution (no form or other attachment is required) and should note that they are replacing existing counsel. To withdraw without replacement, you must electronically file a notice or motion to withdraw as counsel from this appeal/petition and include your client's contact information.

To register for electronic filing, and for more information about Ninth Circuit CM/ECF, visit our website at http://www.ca9.uscourts.gov/cmecf/#section-registration.

To apply for admission, see the instructions and form application available on our website at https://www.ca9.uscourts.gov/attorneys/.

United States Court of Appeals
for the Ninth Circuit

P.O. Box 31478
Billings, Montana 59107-1478

CHAMBERS OF
SIDNEY R. THOMAS
CHIEF JUDGE

TEL: (406) 373-3200
FAX: (406) 373-3250

Dear Counsel:

I write to introduce you to the court's mediation program. The court offers you and your clients professional mediation services, at no cost, to help resolve disputes quickly and efficiently and to explore the development of more satisfactory results than can be achieved from continued litigation. Each year the mediators facilitate the resolution of hundreds of cases, from the most basic contract and tort actions to the most complex cases involving multiple parties, numerous pieces of litigation and important issues of public policy.

The eight circuit mediators, all of whom work exclusively for the court, are highly experienced attorneys from a variety of practices; all have extensive training and experience in negotiation, appellate mediation, and Ninth Circuit practice and procedure. Although the mediators are court employees, the court has adopted strict confidentiality rules and practices to ensure that what goes on in mediation stays in mediation. See Circuit Rule 33-1.

The first step in the mediation process is case selection. To assist the mediators in the case selection process, appellants/petitioners must file a completed Mediation Questionnaire within 7 days of the docketing of the case. See Circuit Rules 3-4, and 15-2. Appellees may also fill out and file a questionnaire. The questionnaire with filing instructions is available here. Once the Mediation Questionnaire is submitted, the parties will receive via NDA a link to a separate form that will allow them to submit **confidential** information directly to the Circuit Mediators. Counsel may also submit confidential information at any time to ca09_mediation@ca9.uscourts.gov.

In most cases, the mediator will schedule a settlement assessment conference, with counsel only, to determine whether the case is suitable for mediation. Be assured that participation in the mediation program will not slow down disposition of your appeal. Mediation discussions are not limited to the issues on appeal. The discussions can involve other cases and may include individuals who are not parties to the litigation, if doing so enables the parties to reach a global settlement.

Further information about the mediation program may be found on the court's website: www.ca9.uscourts.gov/mediation/. Please address questions directly to the Mediation Program at 415-355-7900 or ca09mediation@ca9.uscourts.gov.

Sincerely,

Sidney Thomas

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Office of the Clerk

After Filing an Appeal:
An Introduction for Attorneys

You have received this guide because you filed a notice of appeal in the U.S. Court of Appeals for the Ninth Circuit. It provides information you need to know to represent an appellant before the court.

For Habeas Appeals

If you are appealing the denial of a habeas corpus petition under 28 U.S.C. § 2254 or 2255, you are receiving this guide because the district court or court of appeals has granted a certificate of appealability (COA) on one or more of the specific issues in the case.

Read this guide carefully. If you don't follow instructions, the court may dismiss your case.

This Guide Is Not Legal Advice

Court employees are legally required to remain neutral; that means they can't give you advice about how to win your case. However, if you have a question about procedure—for example, which forms to send to the court or when a form is due—this packet should provide the answer. If it doesn't, you may contact the clerk's office for more information.

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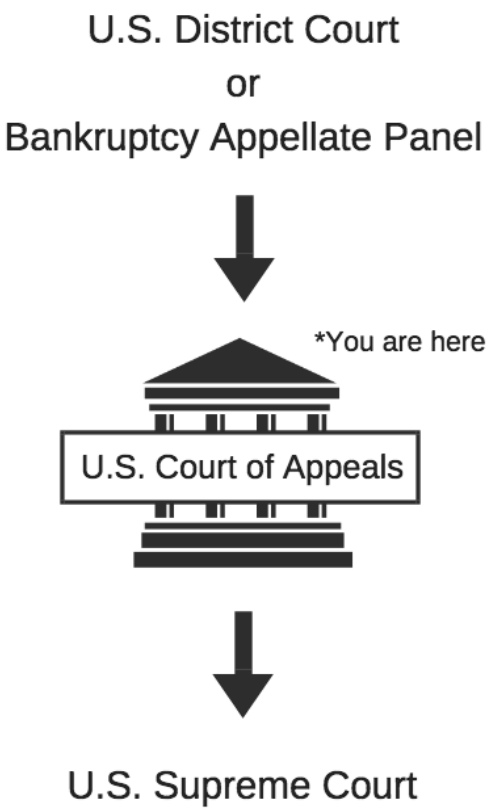
HOW AN APPEAL WORKS

The chart below shows the path of an appeal from the lowest federal court to the highest. Review these steps to make sure you understand where you are in the process.

U.S. District Court or Bankruptcy Appellate Panel. Your case in the U.S. Court of Appeals may come from a U.S. District Court or the Bankruptcy Appellate panel. In a very small number of cases, if the court of appeals gives you permission, you can appeal directly from the bankruptcy court to the court of appeals. (*See* 28 U.S.C. § 158(d) if you want more information about appealing directly from a bankruptcy court.)

U.S. Court of Appeals. When reviewing the lower court's decision in your case, the court of appeals (usually a panel of three judges) will carefully consider everything that has happened so far. The court will also read all the papers that you and opposing counsel file during your case. The court will look to see whether a lower court or agency has made a constitutional, legal, or factual mistake. You are not allowed to present new evidence or testimony in the court of appeals.

U.S. Supreme Court. If you do not agree with the decision of the court of appeals, you can ask the United States Supreme Court to review your case. The Supreme Court chooses which cases it wants to hear. It reviews only a small number of cases each year.



Your case may not go through all of the stages shown above. For example, if the U.S. Court of Appeals resolves your case the way that you want, you won't need to file a petition in the U.S. Supreme Court.

PRACTICE RULES AND RESOURCES

This guide highlights rules that you **absolutely must follow** after filing a case. You are also responsible for reviewing and following the Federal Rules of Appellate Procedure (Fed. R. App. P.), the Ninth Circuit Rules (9th Cir. R.), and the general orders. The Federal Rules and the Ninth Circuit Rules are available at www.ca9.uscourts.gov/rules.

Practice Guides

In addition to the rules above, the following guides can support your practice before this court. You can find these and other resources on the court's website under *Legal Guides*:

- **Appellate Practice Guide.** A thorough manual of appellate practice prepared by the Appellate Lawyer Representatives.
- **Perfecting Your Appeal.** You can view this video for free at www.ca9.uscourts.gov or purchase it from the clerk's office for $15.00.

Appellate Mentoring Program

The appellate mentoring program provides guidance to attorneys who are new to federal appellate practice or who would benefit from mentoring at the appellate level. Mentors are volunteers who have experience in immigration, habeas corpus, or appellate practice in general. If you are interested, a program coordinator will match you with a mentor, taking into account your needs and the mentor's particular strengths.

To learn more, email the court at mentoring@ca.9.uscourts.gov or go to www.ca9.uscourts.gov. On the website, select the "Attorneys" tab, look for "Appellate Mentoring Program," then choose "Information."

IMPORTANT RULES FOR ALL CASES

The rules in this section apply to all attorneys who file a notice of appeal in the Ninth Circuit. You must understand and follow each one.

Ninth Circuit Bar Admission

To practice before the court of appeals, you must be admitted to the Bar of the Ninth Circuit. For instructions on how to apply, go to www.ca9.uscourts.gov. Select the "Attorneys" tab, look for "Attorney Admissions," then choose "Instructions."

Register for Electronic Filing

Unless the court gives you an exemption, you must use the Ninth Circuit's electronic filing system, called CM/ECF (Case Management/Electronic Case Files). To learn more and to register, go to www.ca9.uscourts.gov then click "Filing a Document – CM/ECF."

For additional guidance on filing documents and making payments electronically, read the Ninth Circuit Rules, especially Rule 25-5. For a complete list of the available types of filing events, see the CM/ECF User Guide. To find the guide, go to "Filing a Document" as described just above, look for "Documentation & Training," then select "CM/ECF User Guide."

Complete a Mediation Questionnaire

You must complete a mediation questionnaire unless your appeal is a habeas case (28 U.S.C. §§ 2241, 2254 and 2255) or a petition for a writ (28 U.S.C. § 1651). (*See* 9th Cir. R. 3-4.) The court uses the questionnaire to assess settlement potential.

If you are required to complete a questionnaire, you must file it no later than **seven days** after the clerk's office dockets your case. To find the form, go to www.ca9.uscourts.gov/forms.

To request a conference with a mediator, call the Mediation Unit at (415) 355-7900, email ca09_mediation@ca9.uscourts.gov, or make a written request to the Chief Circuit Mediator. You may request conferences confidentially. For more information about the court's mediation program, go to www.ca9.uscourts.gov/mediation.

Meet Your Deadlines

Read all documents you get from the court. They will contain important instructions and deadlines for filing your court papers. **If you miss a deadline or fail to respond to the court as directed, the court may dismiss your case.**

Complete Your Forms Properly

Everything you send to the court must be clear and easy to read. If we can't read your papers, we may send them back to you. To make the clerk's job easier, please:

- ✓ Include your case number on all papers you send to the court or to opposing counsel.
- ✓ Number your pages and put them in order.
- ✓ If you are not filing electronically, use only one paper clip or a single staple to keep your documents organized. The clerk's office must scan your documents and extra binding makes that job difficult.

Deliver Papers the Right Way

When you deliver papers to the court or to opposing counsel, you must take certain steps to show you sent them to the right place on time.

✓ **Use the correct address.** Before you put anything in the mail, make sure the address is current and correct.

- To find current addresses for the court, see "How to Contact the Court," at the end of this guide. You may deliver a document to the court in person, but you must hand it to someone designated to receive documents in the clerk's office.
- To find the correct address for opposing counsel, see opposing counsel's notice of appearance. Opposing counsel should have sent a copy of this document to you after you filed your notice of appeal. The notice states opposing counsel's name and address.

✓ **Attach a certificate of service.** You must attach a signed certificate of service to each document you send to the court or to opposing counsel unless the document will be served on all parties electronically via CM/ECF.

✓ **Send a copy of *all* documents to opposing counsel.** When you send a document to the court, you must also send a copy (including any attachments) to opposing parties or counsel who are not registered for electronic filing.

Keep Copies of Your Documents

Make copies of all documents you send to the court or to opposing counsel and keep all papers sent to you.

Pay the Filing Fee or Request a Waiver

The filing fee for your case is $505.00. The fee is due when you file your notice of appeal. If you don't pay the fee, you will receive a notice informing you that you have **21 days** to either pay the fee or request a waiver because the appellant can't afford to pay.

- **If appellant can afford the fee.** Send a check or money order to the district court. **Do not send your payment to the court of appeals** unless you are appealing a Bankruptcy Appellate Panel decision (see the note just below). Please note that after you pay the fee, the court cannot refund it, no matter how your case turns out.

For Bankruptcy Appellate Panel Cases

Submit your payment to the court of appeals using the electronic filing system or send a check or money order to the court. Make your check out to "Clerk, U.S. Courts." Don't forget to include your case number.

- **If appellant can't afford to pay.** You may ask the court to waive the fee by filing a motion to proceed in forma pauperis. See "Filing Opening Motions," below.

If you do not pay the fee or submit a waiver request by the deadline, the court will dismiss your case. (9th Cir. R. 42-1).

If You Move, Tell the Court

If your mailing address changes, you must immediately notify the court in writing. (9th Cir. R. 46-3.)

- **CM/ECF.** If you registered for CM/ECF, update your information online at https://pacer.psc.uscourts.gov/pscof/login.jsf.

- **Exempt Filers.** If you are exempt from CM/ECF, file a change of address form with the court. You can find the form on the court's website at www.ca9.uscourts.gov/forms.

If you don't promptly change your address, including your email address, you could miss important court notices and deadlines. As noted above, missing a deadline may cause the court to dismiss your case.

HANDLING AN APPEAL: THREE STAGES

This section will help you understand and manage the different parts of your case. We describe the basic documents you must file with the court and the timing of each step.

To begin, review the chart below. It introduces the three stages of a case.

1 Opening

- You file a notice of appeal.
- The court sends you a case schedule.
- You pay filing fees or get a waiver.
- You start compiling excerpts of record.
- You order transcripts from the district court if you need them.
- You and opposing counsel may file motions.
- You respond to any court orders or motions from opposing counsel.

2 Briefing

- You submit an opening brief and excerpts of record.
- Opposing counsel submits an answering brief.
- You may submit a reply to opposing counsel's brief.

3 Decision

- The court decides your case.
- If you don't like the result, you decide whether to take further action.

Stage One: Opening a Case

By the time you receive this guide, you have already opened a case by filing a notice of appeal. In response, the clerk's office created the case record and gave you a case number and a briefing schedule.

If you haven't already paid the filing fee, you must do so now. See "Pay the Filing Fee or Request a Waiver," above.

The court may dismiss your case at any time. Even if you pay the fees and get a briefing schedule, the court may decide not to keep your case for a variety of legal reasons. If the court dismisses your case and you think the court was wrong, see "If You Don't Agree with a Court Decision," below.

Now is also the time to:

- start compiling excerpts of record
- order any transcripts you need from the district court, and
- file any opening motions with the court.

This section discusses each of these steps in turn.

Preparing Excerpts of Record

The Ninth Circuit Court of Appeals does not require an appendix of record. Instead, you must file excerpts of record with your opening brief. (*See* 9th Cir. R. 30-1.1.) Your excerpts of record should be clear and well-organized. They should include all the documents that the court will need to understand and decide the issues in your petition.

Start putting together your excerpts of record now, before you write your opening brief. Then, as you write the brief, you can mark each record page that you reference so you can easily add the marked pages to your excerpts.

To learn the rules that govern what your excerpts should and should not include, and how to format them, read 9th Cir. R. 30-1. We also recommend that you read Chapter X of Appellate Practice Guide; see "Practice Guides," above.

Ordering Transcripts

If your appeal will refer to matters discussed during district court hearings, you'll want to include a transcript of those hearings in your excerpts of record. To order transcripts, consult the district court where your case originated.

For Bankruptcy Appeals

If you are appealing a Bankruptcy Appellate Panel decision or a district court decision that began in bankruptcy court, your transcript designation form must also include any court orders or written pleadings—for example, motions and briefs filed earlier in your case—that you might want to include in your excerpts.

Filing Opening Motions

Here are two common motions that you might make at the beginning of your case.

Motion to Proceed in Forma Pauperis

File this motion to ask the court to waive the appellant's filing fee. To file your motion, you must complete and include Form 4: Motion and Affidavit for Permission to Appeal in Forma Pauperis. The form is available on the court's website at www.ca9.uscourts.gov/forms.

The court will grant your IFP motion only if it finds that:

- appellant has financial need, and
- your appeal is not frivolous.

If the court denies the IFP motion, you must then pay the fees or the court will dismiss your case. (*See* Ninth Circuit Rule 42-1.)

If Appellant Already Has IFP Status

If a district court gave appellant permission to proceed in forma pauperis and no one has revoked that status, you don't have to file again now. (*See* Federal Rule of Appellate Procedure 24(a).)

For Prisoners Filing Civil, Non-Habeas, Appeals

Even if the court grants your IFP motion, appellant must pay the filing fee if he or she has sufficient funds in a prison account. (*See* 28 U.S.C. § 1915(b).) If this applies to you, we will notify you that fees are due. You must then complete and return a form to allow prison officials to deduct the funds from appellant's prison account.

Motion for Transcripts at Government Expense

If the appellant has IFP status and you need to order transcripts from a district court, you might want to file a motion for transcripts at government expense. You must first file this motion in the district court. If the district court denies your motion, you may file the same motion in the court of appeals. (*See* 28 U.S.C. § 753(f).) If you do so, be sure to follow the instructions in "How to Write and File Motions," below.

Motion for Injunction Pending Appeal

You can also file a motion for injunction pending appeal, sometimes called a motion for injunctive relief. Be specific about what type of relief you are asking for, why the court should grant the relief, and the date by which you want the court to respond. In addition, be sure to follow the instructions in "How to Write and File Motions," below.

Stage Two: Preparing and Filing Briefs

During the second stage of your case, you and opposing counsel will prepare and file written briefs. The required components of a brief are set out in Fed. R. App. P. 28 and 32, and 9th Cir. R. 28-2, 32-1, and 32-2. You should familiarize yourself with those rules and follow them carefully. In this section, we cover some key points of briefing practice.

Opening Brief

You will write and file the first brief in your case. In the opening brief, you must:

- state the facts of the case
- describe the relief you are seeking for the appellant
- provide legal arguments to support your petition, and
- include citations to the excerpts of record.

Deadline for filing. You must file your opening brief and excerpts of record by the deadline stated in the briefing schedule.

If you do not file your brief on time or request an extension, the court will dismiss your case.

For Habeas Appeals

You are allowed to bring your appeal because a court gave you a certificate of appealability (COA) on one or more specific issues in your case. Before you write your opening brief, look closely at the court order granting your COA. It should list the specific issues on which you may appeal. You may discuss only those issues (the "certified issues") unless you make changes to your brief. To ask the court to consider other issues, you must do both of the following:

- ✓ Add a heading titled "Certified Issues" and then discuss the issues your COA covers.
- ✓ Add a heading titled "Uncertified Issues" and then discuss any issues your COA does not cover.

If you use these two headings, the court will read your "Uncertified Issues" section as a motion to expand the COA. For more information, read Ninth Circuit Rule 22-1(e).

Tips for Writing Your Briefs

Keep these points in mind to write a better brief:

Avoid unnecessary words. Don't use 20 words to say something you can say in ten.

Think things through. Make logical arguments and back them up with legal rules.

Be respectful. You can disagree without being disagreeable. Focus on the strengths of your case, not the character of others.

Tell the truth. Don't misstate or exaggerate the facts or the law.

Proofread. Before you file, carefully check for misspellings, grammatical mistakes, and other errors.

Answering Brief

In response to your opening brief, opposing counsel may file an answering brief. If opposing counsel files an answer, they must send a copy to you.

The time scheduling order sets the deadline for the answering brief. Please note that the opening and answering brief due dates are not subject to the rules for additional time described in Fed. R. App. P. 26(c). In particular, if you file your opening brief early, it does not advance the due date for your opponent's answering brief. (*See* 9th Cir. R. 31-2.1.)

Reply Brief

You are invited to reply to opposing counsel's answering brief, but you are not required to do so. If you write a reply brief, do not simply restate the arguments in your opening brief. Use the reply brief to directly address the arguments in opposing counsel's answering brief.

You must file your reply brief within **21 days** of the date the government serves you with its answering brief.

How to File a Brief

Rules for filing briefs depend on whether or not you are required to file electronically.

CM/ECF. After we review and confirm your electronic submission, we will request paper copies of the brief that are identical to the electronic version. Do not submit paper copies until we direct you to do so. (*See* 9th Cir. R. 31-1.) You must also send **two copies** of the brief to any exempt or unregistered opposing parties or counsel.

Exempt Filers Only. Please follow these steps:

- ✓ Send the original document and **six copies** of your brief to the court.
- ✓ Send **two copies** to opposing counsel.
- ✓ Attach a signed certificate of service to the original and to each copy for opposing counsel or party.
- ✓ Keep a copy for your records.

How to File Excerpts of Record

Submit your excerpts in PDF format using CM/ECF on the same day that you submit your brief. You must serve a paper copy of your excerpts on any unregistered party.

If the excerpts contain sealed materials, you must submit the sealed documents separately, along with a motion to file under seal. (9th Cir. R. 27-13(e).) You must serve sealed filings on all parties by mail or by email if they are registered for electronic filing, or if mutually agreed, rather than through CM/ECF.

After approving your electronic submission, the clerk will direct you to file individually bound paper copies of the excerpts of record with white covers.

To review the rules for filing excerpts, see 9th Cir. R. 30-1.

If You Need More Time to File

Usually, you may ask for one streamlined extension of up to 30 days from the brief's existing due date. (*See* 9th Cir. R. 31-2.2(a) for conditions and exceptions.)

- **CM/ECF.** Electronic filers do not need to use a written motion; you may submit your request using the "File Streamlined Request to Extend Time to File Brief" event on CM/ECF on or before your brief's existing due date.

- **Exempt Filers.** Make your request by filing Form 13 on or before your brief's existing due date. You can find Form 13 on the court's website at www.ca9.uscourts.gov/forms.

If you need more than 30 days, or if the court has already given you a streamlined extension, you must submit a written motion asking for more time. Your motion must show both diligence and substantial need. You must file your request at least **seven days** before your brief is due. The motion must meet the requirements of 9th Cir. R. 31-2.2(b). You may use Form 14 for this motion, or write your own motion.

Usually, in response to an initial motion for more time, the court will adjust the schedule. (*See* Circuit Advisory Committee Note to Ninth Circuit Rule 31-2.2.) If you followed the correct procedures to ask for more time but the court doesn't respond by the date your brief is due, act as though the court has granted your request and take the time you asked for.

What Happens After You File

After you and opposing counsel have filed your briefs, a panel of three judges will evaluate the case. Sometimes the court decides a case before briefing is complete (9th Cir. R. 3-6); if that happens, we will let you know.

Judges conduct oral hearings in all cases unless all members of the panel agree that oral argument would not significantly aid the decision-making process. (Fed. R. App. P. 34(a)(2).)

Notification of oral hearings. We will notify you of the potential dates and location of an oral hearing approximately 14 weeks in advance. After you receive notice, you have **three calendar days** to inform the court of any conflicts. We distribute calendars about ten weeks before the hearing date.

Changes to oral hearing dates or location. The court will change the date or location of an oral hearing only if you show good cause for the change. If you wish to submit a request to continue a hearing, you must do so within 14 days of the hearing. Note, however, that the court grants such requests only if you can show exceptional circumstances. (9th Cir. R. 34-2.)

Oral arguments are live streamed to YouTube. Viewers can access them through the court's website. Go to www.ca9.uscourts.gov and choose "Live Video Streaming of Oral Arguments and Events."

Stage Three: The Court's Final Decision

After the judges decide your case, you will receive a memorandum disposition, opinion, or court order stating the result. If you are happy with the outcome, congratulations.

If you or opposing counsel didn't get the final results you want, either of you may take the case further. We explain your options in the section called "After Your Case," below.

HOW TO WRITE AND FILE MOTIONS

This section provides general guidelines for writing and filing motions, including motions discussed elsewhere in this guide. The motion you want to make may have special rules—for example, a different page limit or deadline—so be sure that you also read its description, as noted below.

How to Write a Motion

If you want to file a motion with the court, follow these guidelines:

- ✓ Clearly state **what** you want the court to do.
- ✓ Give the legal reasons **why** the court should do what you are asking.
- ✓ Tell the court **when** you would like it done.
- ✓ For criminal appeals, include the defendant's bail status. (9th Cir. R. 27-2.8.1.)
- ✓ Tell the court what the opposing party's position is. (Circuit Advisory Committee Note to Ninth Circuit Rule 27-1(5); 9th Cir. R. 31-2.2(b)(6).)
- ✓ If you are filing a response requesting affirmative relief, include your request in the caption. (Fed. R. App. P. 27(a)(3)(B)) and use the correct filing type
- ✓ Don't write a motion that is more than 20 pages long unless you get permission from the court.

If you like, you may support your motion with an affidavit or declaration. (28 U.S.C. § 1746.) Do not submit a proposed order.

Cases Scheduled for Argument or Submitted to a Panel

If your case has been (1) scheduled for oral argument, (2) argued, or (3) submitted to or decided by a panel, then the first page or cover of your motion must include the date of argument, submission, or decision and, if known, the names of the judges on the panel. (9th Cir. R. 25-4.)

How to File a Motion

To file your motion, you must follow the rules described in "Deliver Papers the Right Way," at the beginning of this guide. Keep the following points in mind.

- **CM/ECF.** For electronic filing, follow instructions on CM/ECF. If there are any non-registered parties, you must send a hard copy to that party.
- **Exempt Filers.** Send the original document to the court and send a copy to opposing counsel. Remember to attach a signed certificate of service to the original and to any copies. Always keep a copy for your own records.

Note that you should not include a notice of motion or a proposed order with your motion. (Fed. R. App. P. 27(a)(2)(C)(ii) and (iii).)

What Happens After You File

The path of a motion depends on the details of your case. Certain motions—for example, a motion to dismiss the case—may automatically stay the briefing schedule. (*See* 9th Cir. R. 27-11.) The following steps are common after filing a motion.

Opposing counsel may respond. After you file a motion, opposing counsel has ten days to file a response. (*See* Fed. R. App. P. 27(a)(3)(A); Fed. R. App. P. 26(c).) In the response, opposing counsel will tell the court why it disagrees with the arguments in your motion.

You may reply to opposing counsel's response. If opposing counsel responds, you may tell the court why you think opposing counsel's view is incorrect. If you file a reply, don't just repeat the arguments in your original motion. Instead, directly address the arguments in opposing counsel's response. You usually have **seven days** to file a reply with the court, starting on the day opposing counsel serves you with their response. (*See* Fed. R. App. P. 27(a)(3)(B).) Normally, a reply may not be longer than ten pages.

The court decides your motion. After you and opposing counsel file all papers related to the motion, a panel of two or three judges will decide the issue.

How to Respond to a Motion from Opposing Counsel

Your opponent may also submit motions to the court. For example, opposing counsel may file a motion to dismiss the case or to ask the court to review the case more quickly than usual. If opposing counsel files a motion, you are allowed to respond with your arguments against it. Your response may not be longer than 20 pages.

Usually, you must file your response with the court no more than **ten days** from the day the motion is served on you.

Read More About These Motions

If you are making one of the following motions, read the section noted here:

Motion to proceed in forma pauperis in "Filing Opening Motions," above.

Motion for transcripts at government expense in "Filing Opening Motions," above.

Motion for injunctive relief pending appeal in "Filing Opening Motions," above.

Motion for extension of time to file a brief in "If You Need More Time to File," above.

Motion for reconsideration in "If You Don't Agree With a Court Decision," below.

Emergency Motions

An emergency motion asks the court to act within 21 days to avoid irreparable harm. Your motion must meet the requirements of 9th Cir. R. 27-3.

If you need emergency relief, you must notify the Emergency Motions department in San Francisco before you file the motion. Call them at 415-355-8020 or e-mail emergency@ca9.uscourts.gov. Please note that a request for more time to file a document with the court or any other type of procedural relief does *not* qualify as an emergency motion. (*See* Circuit Court Advisory Committee Note to 27-3(3).)

Finally, if you absolutely must notify the court of an emergency outside of standard office hours, call 415-355-8000. This line is for true emergencies that cannot wait until the next business day—for example, imminent removal from the United States.

IF YOU DON'T AGREE WITH A COURT DECISION

If you think the court of appeals made an incorrect decision about important issues in your case, you can ask the court to take a second look. You may do this during your case—for example, if you disagree with the court's ruling on a motion. Or you may ask the court to review its final decision at the end of your case.

During Your Case: Motion for Reconsideration

If you disagree with a court order or ruling during your case, you may file a motion for reconsideration stating the reasons why you think the court's ruling was wrong. Your motion may not be longer than 15 pages.

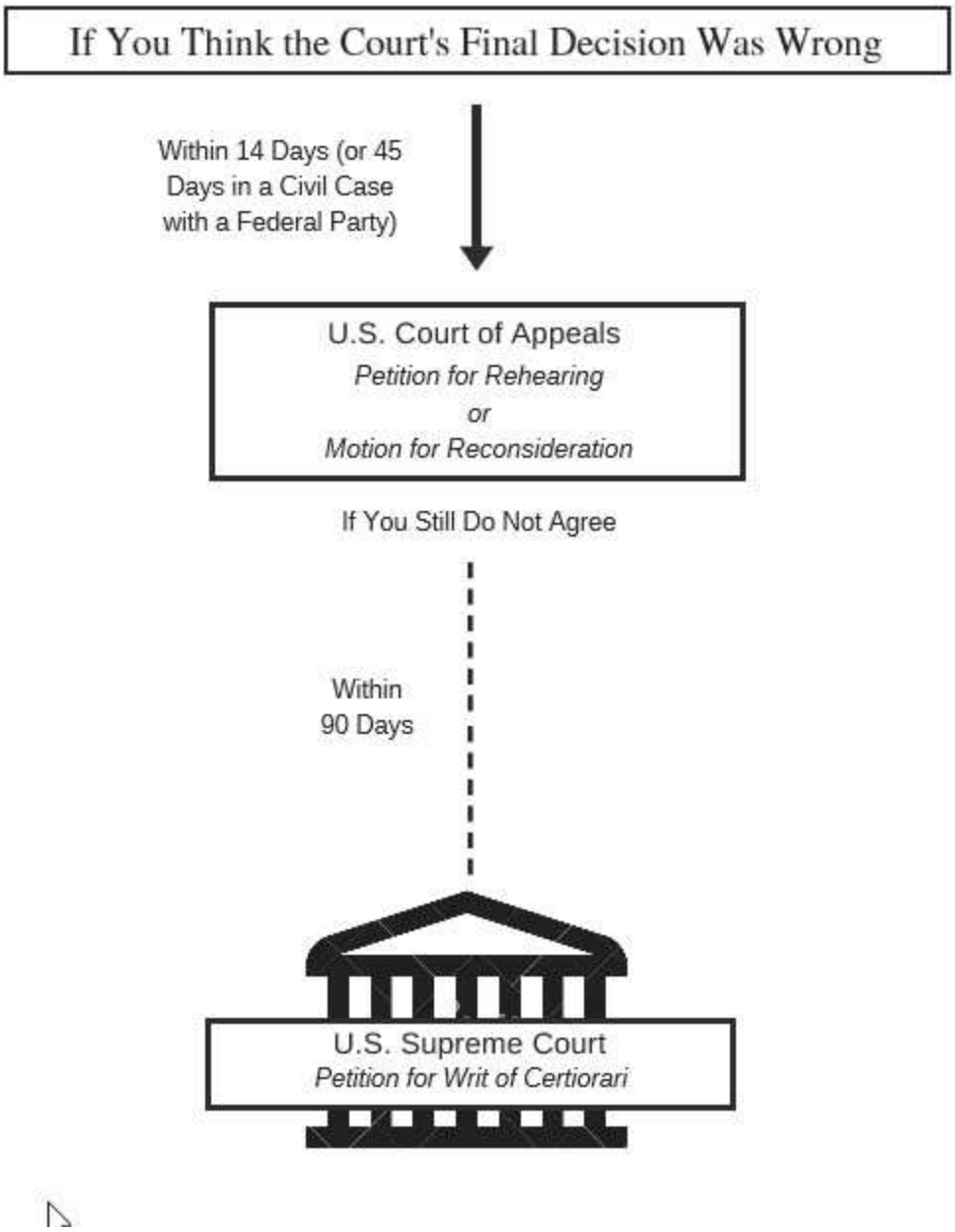
A motion for reconsideration of an order that does not end the case—that is, a non-dispositive order—is due **within 14 days** of the date stamped on the court order. (9th Cir. R. 27-10(a).) In addition to these rules, please follow the general guidelines in "How to Write and File Motions," above.

After Your Case: Motions and Petitions

If you think the court's final decision in your case was wrong and you want to take further action, you have two options:

- File a motion for reconsideration or petition for rehearing in this court.
  - If the court decided your case in an order, then you would file a motion for reconsideration, as discussed just above. In civil appeals involving a federal party, you have **45 days** (instead of 14 days) to file a motion for reconsideration of a court order that ends your case. In all other cases you have 14 days. (9th Cir. R. 27-10(a).)
  - If the court decided your case in a memorandum disposition or opinion, then you would file a petition for rehearing, discussed below.
- File a petition for writ of certiorari with the U.S. Supreme Court.

It is most common to do these things one after the other—that is, to file a petition for rehearing or motion for reconsideration in this court and then, if that doesn't succeed, petition the Supreme Court. It is technically possible to file both petitions at the same time but that is not the typical approach. Our discussion focuses on the common path.



Court of Appeals: Petition for Rehearing

To ask the court of appeals to review its final decision in your case, you must file a petition for rehearing. Before starting a petition, remember that you must have a legal reason for believing that this court's decision was incorrect; it is not enough to simply dislike the outcome. You will not be allowed to present any new facts or legal arguments in your petition for rehearing. Your document should focus on how you think the court overlooked existing arguments or misunderstood the facts of your case.

A petition for rehearing may not be longer than 15 pages. Your petition is due **within 14 days** of the date stamped on the court's opinion or memorandum disposition, except that in civil cases involving a federal party you have **45** days. To learn more about petitions for rehearing, see Fed. R. App. P. 40 and 40-1.

Most petitions for rehearing go to the same three judges who heard your original petition. It is also possible to file a petition for rehearing en banc. This type of petition asks 11 judges to review your case instead of three. The court grants petitions for rehearing en banc only in rare, exceptional cases. To learn more about petitions for rehearing en banc, see Fed. R. App. P. 35.

U.S. Supreme Court: Petition for Writ of Certiorari

If the court of appeals denies your petition for rehearing—or if it rehears your case and issues a new judgment you don't agree with—you have 90 days from the denial order or the new decision to petition the U.S. Supreme Court to hear your case. You do this by asking the Supreme Court to grant a writ of certiorari. You must file the petition with the Supreme Court directly. A writ of certiorari directs the appellate court to send the record of your case to the Supreme Court for review.

The Supreme Court is under no obligation to hear your case. It usually reviews only cases that have clear legal or national significance—a tiny fraction of the cases people ask it to hear each year. Learn the Supreme Court's Rules before starting a petition for writ of certiorari. (You can find the rules and more information about the Supreme Court at www.supremecourt.gov.)

HOW TO CONTACT THE COURT

Court Addresses: San Francisco Headquarters

Mailing Address for U.S. Postal Service	*Mailing Address for Overnight Delivery (FedEx, UPS, etc.)*	*Street Address*
Office of the Clerk James R. Browning Courthouse U.S. Court of Appeals P.O. Box 193939 San Francisco, CA 94119-3939	Office of the Clerk James R. Browning Courthouse U.S. Court of Appeals 95 Seventh Street San Francisco, CA 94103-1526	95 Seventh Street San Francisco, CA 94103

Court Addresses: Divisional Courthouses

Pasadena	*Portland*	*Seattle*
Richard H. Chambers Courthouse 125 South Grand Avenue Pasadena, CA 91105	The Pioneer Courthouse 700 SW 6th Ave, Ste 110 Portland, OR 97204	William K. Nakamura Courthouse 1010 Fifth Avenue Seattle, WA 98104

Court Website

www.ca9.uscourts.gov

The court's website contains the court's rules, forms, and general orders, public phone directory, information about electronic filing, answers to frequently asked questions, directions to the courthouses, bar admission forms, opinions and memoranda, live streaming of oral arguments, links to practice manuals, an invitation to join our pro bono program, and more.

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Form 7. Mediation Questionnaire

Instructions for this form: http://www.ca9.uscourts.gov/forms/form07instructions.pdf

9th Cir. Case Number(s)	20-16401
Case Name	Grand Canyon Trust, et al. v. Heather Provencio, et al.
Counsel submitting this form	Aaron M. Paul
Represented party/ parties	Grand Canyon Trust, Center for Biological Diversity, Sierra Club

Briefly describe the dispute that gave rise to this lawsuit.

In 2012, the U.S. Forest Service determined that a mining company called Energy Fuels had "valid existing rights" to run a uranium mine, known as Canyon Mine, in a national forest just south of the Grand Canyon despite a two-decade-long ban on uranium mining around Grand Canyon National Park. The core question this validity determination addressed was whether the uranium deposit to which Energy Fuels had staked a claim could be "extracted, removed and marketed at a profit." U.S. v. Coleman, 390 U.S. 599, 600–03 (1968).

The Forest Service concluded that the deposit could be profitably mined, but the agency reached that conclusion without considering all mining costs—like the expense of environmental monitoring, of wildlife-conservation measures, of mitigating other environmental harms as they arise, and the mining expenses incurred before the validity determination was performed, including the cost of building and monitoring a groundwater well. The agency's failure to consider these costs was contrary to federal law.

Briefly describe the result below and the main issues on appeal.

The district court granted summary judgment in favor of the defendants. The court concluded, first, that the Forest Service erred by failing to account for the costs of environmental monitoring and wildlife-conservation measures. Yet the court deemed this error to be harmless and consequently did not vacate the flawed validity determination. The court concluded, second, that it was not arbitrary and capricious for the Forest Service to exclude from its profitability calculations the costs of mitigating future environmental harm and the mining costs incurred before the validity determination was performed (which the Forest Service referred to as "sunk costs"). The court also concluded, in the alternative, that if the Forest Service erred by not accounting for "sunk costs," that error was harmless.

The court also denied plaintiffs' request for an order requiring Energy Fuels to disclose an estimate of the amount of "sunk costs" that Energy Fuels redacted in the administrative record. And the court granted a motion by Energy Fuels to seal mining-cost information included in plaintiffs' summary-judgment filings.

The main issues on appeal are whether the district court erred in making the foregoing rulings.

Describe any proceedings remaining below or any related proceedings in other tribunals.

None.

Signature s/ Aaron M. Paul **Date** July 27, 2020

(use "s/[typed name]" to sign electronically-filed documents)

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

AUG 11 2020

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants – Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The Mediation Program of the Ninth Circuit Court of Appeals facilitates settlement while appeals are pending. **See** Fed. R. App. P. 33 and Ninth Circuit Rule 33-1.

By August 25, 2020, counsel for all parties intending to file briefs in this matter are requested to inform Jonathan Westen, Circuit Mediator, by email at jonathan_westen@ca9.uscourts.gov, of their clients' views on whether the issues on appeal or the underlying dispute might be amenable to settlement presently or in the foreseeable future. **Counsel are requested to include the Ninth Circuit case number in the subject line.** This communication will be kept confidential, if requested, from the other parties in the case. This communication should not be filed with the court.

For more detailed information about the Mediation Program and its procedures generally, please see the Mediation Program website: **www.ca9.uscourts.gov/mediation.**

The existing briefing schedule remains in effect.

FOR THE COURT:

Beatriz L. Smith
Deputy Clerk

bls/mediation

FILED

OCT 19 2020

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

GRAND CANYON TRUST; et al.,

Plaintiffs-Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants-Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
District of Arizona,
Prescott

ORDER

This case is RELEASED from the Mediation Program.

The briefing schedule previously set by the court is amended as follows: appellants' opening brief is due December 14, 2020; appellees' answering brief is due January 14, 2021; appellants' optional reply brief is due within 21 days from the service date of the answering brief.

Counsel are requested to contact the Circuit Mediator should circumstances develop that warrant settlement discussions.

FOR THE COURT

By: Jonathan Westen
Circuit Mediator

JW/Mediation

FILED

OCT 20 2020

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

GRAND CANYON TRUST; et al.,

Plaintiffs-Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants-Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
District of Arizona,
Prescott

AMENDED ORDER

The court's order of October 19, 2020, is amended as follows:

This case is RELEASED from the Mediation Program.

The briefing schedule previously set by the court is amended as follows: appellants' opening brief is due December 14, 2020; appellees' answering brief is due January 28, 2021; appellants' optional reply brief is due within 21 days from the service date of the answering brief.

Counsel are requested to contact the Circuit Mediator should circumstances develop that warrant settlement discussions.

FOR THE COURT

By: Jonathan Westen
Circuit Mediator

JW/Mediation

Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

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December 22, 2020

RULE 26.1 DISCLOSURE STATEMENT

Appellants, Grand Canyon Trust, Sierra Club, and Center for Biological Diversity, are non-profit corporations that do not have corporate parents and have not issued stock.

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STATEMENT OF JURISDICTION

The district court had subject-matter jurisdiction under 28 U.S.C. § 1331. The judgment appealed from disposed of all pending claims and is final under Rules 54 and 58 of the Federal Rules of Civil Procedure. 1-ER-2. This Court has jurisdiction under 28 U.S.C. § 1291. The district court's judgment was entered on May 22, 2020, 1-ER-2, Appellants' notice of appeal was filed on July 20, 2020, 3-ER-506, and this appeal is thus timely under Federal Rule of Appellate Procedure 4(a)(1)(B).

STATEMENT OF THE ISSUES

1. A mining claim is valid under federal law only after discovery on the claim of a mineral deposit that can be extracted, removed, and marketed at a profit. In 2012, the government deemed two claims to be valid after projecting that mining revenues would exceed costs in the future, disregarding millions spent in past decades to develop a yet-unproductive mine. Did the government err by determining that the deposit could be extracted, removed, and marketed at a profit without considering past costs?

2. In administrative-procedure cases, an error is harmless only if it clearly had no bearing on the substance of the decision reached. Accounting for pre-2012 costs may have rendered the mining claims

invalid. Was omitting those costs a harmless error?

STATEMENT ABOUT THE ADDENDUM

An addendum containing pertinent statutes is appended.

STATEMENT OF THE CASE

I. The Mining Law of 1872

The Mining Law of 1872 allows citizens to go onto unappropriated federal public lands to prospect for "valuable mineral deposits." 30 U.S.C. § 22 ("Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States … shall be free and open to exploration and purchase…."). Under the law, a mining claim may be staked, or "located," to gain possessory rights against rivals. *See Union Oil Co. v. Smith*, 249 U.S. 337, 347–48 (1919). But a claim is valid only after "discovery" of a "valuable mineral deposit" on the claim. *Id.*; 30 U.S.C. § 26 (granting a possessory interest for mining purposes if the law's requirements are met). The Mining Law confers no right to mine deposits that are not valuable. *See Cameron v. United States*, 252 U.S. 450, 460 (1920) ("[N]o right arises from an invalid claim….").

II. The Canyon Mine

In the late 1970s, in a national forest a few miles south of Grand Canyon National Park, a uranium-mining company staked two mining

claims in a meadow and named the site the Canyon Mine. 2-ER-213. In the ensuing years, the company spent millions drilling holes on the claims to investigate the extent of the uranium deposit. 3-ER-350. It then sought approval from the U.S. Forest Service of a proposed plan for operating a mine. 3-ER-361.

In 1986, the Forest Service approved the plan. 3-ER-374. In so doing, the agency did not inquire whether the mining claims were invalid for failure to discover a valuable mineral deposit. 3-ER-384–85. It did, however, require several revisions to the plan before approving it. Recognizing that the mine could squander and pollute groundwater, as well as irradiate its surroundings, the agency required the mine's owner to monitor groundwater and radionuclides in the nearby area. 3-ER-373 (requiring monitoring); 3-ER-437 (discussing measures for handling groundwater contamination); 3-ER-474–75, 481 (explaining that groundwater is likely to be found in perched aquifers). The plan also directed the owner to replace dozens of acres of big-game-foraging habitat and a key watering source the mine would spoil. 3-ER-370.

In the next few years, the company built the mine's "major surface structures"—an office, a warehouse, a head frame, a hoist, power lines,

a waste pond, and a groundwater well. 2-ER-289; *see also* 2-ER-205, 213, 226. But in the early 1990s, after digging fifty feet of the mineshaft, the company shuttered the mine, for it became evident that the price of uranium was too low to justify further expenditure of time and money. *See* 2-ER-205, 290. The company by then had spent at least $8.2 million developing the mine and had neither recovered nor sold any uranium ore. 3-ER-353 (attesting in October 1987, in a declaration by the company's vice president of operations, that "$8,200,000 will be expended in exploration and site preparation activities through December, 1987"). A bankruptcy sale of the mine followed. 2-ER-254.

III. The Grand Canyon Mineral Withdrawal

In 2007, a short-lived spike in the price of uranium set off a rush to stake uranium-mining claims around the Grand Canyon. 2-ER-282–83 (explaining, in a government analysis, that uranium prices were relatively constant since 1980, save for a spike around 2007). Back then, the public lands surrounding Grand Canyon National Park were still open to prospectors under the 1872 Mining Law.

In response to this claim rush, the Secretary of Interior chose in 2009 to forbid the filing of new uranium-mining claims for two years on

about a million acres around the Park while studying whether to withdraw the area from the Mining Law's open-entry system. 74 Fed. Reg. 35,887 (July 21, 2009). A secretarial "withdrawal" like this can be made under the Federal Land Policy and Management Act of 1976 to foreclose mining on designated public lands for up to two decades, "subject to valid existing rights." 43 U.S.C. § 1714(a), (c)(1); Pub. L. 94-579 § 701(h). Under this proviso, valid mining claims survive a withdrawal, while invalid claims—those on which a "valuable mineral deposit" has not been discovered—are extinguished.

In January 2012, subject to that proviso, and after more than two years of study, the Secretary made the proposed withdrawal. 77 Fed. Reg. 2,317 (Jan. 17, 2012). He did so after finding that radioactive-contamination risks to water sources and wildlife around the Grand Canyon were "unacceptable," and that "[a]ny mining within the sacred and traditional places of tribal peoples may degrade the values of those lands to the tribes that use them" in a way that likely "could not be mitigated." 2-ER-265–66.[1]

[1] Confronted with mining-industry objections, this Court upheld the withdrawal. *Nat'l Mining Ass'n v. Zinke*, 877 F.3d 845 (9th Cir. 2017).

IV. The Forest Service's Validity Determination

Based on the Secretary's findings, the meadow in the Kaibab National Forest that Canyon Mine had overtaken—a place sacred to the Havasupai Tribe—was withdrawn. 2-ER-212; 3-ER-368. And that raised a question: Did the withdrawal extinguish the decades-old and yet-nonproducing Canyon Mine claims? To answer that question, the Forest Service set about preparing a "validity determination," whose purpose was to ascertain whether a "valuable mineral deposit" had been discovered on the claims. 2-ER-212. At its core, that inquiry depended on whether the uranium deposit on the claims could be "extracted, removed and marketed at a profit." *United States v. Coleman*, 390 U.S. 599, 600–03 (1968); 2-ER-212.

So, in the validity determination, the Forest Service used a model to evaluate the mine's finances. That model first projected total future gross revenues of mining by multiplying the amount of uranium the company thought it could mine by a projected selling price of $56 per pound, an estimate boosted by the market spike, which was continuing to fade at the time. 2-ER-228–31 (explaining that this price was calculated based on the three prior years' spot markets and existing

contracts); 2-ER-283 (showing continuing decline in uranium prices after 2007). From that estimate of gross revenues, the model then subtracted some mining expenses and future taxes, and calculated total future net cash flows of about $29 million. 2-ER-231. The Forest Service then discounted these future cash flows at a range of rates to reflect their value as of the examination date—January 11, 2012—assigning them a "net present value" ranging from $16.8–$22.3 million. *Id.*

Based on this range and the consequent internal rate of return (a measure of how much an investment is projected to gain or lose over a period of time), the Forest Service concluded that the mine's owner—Energy Fuels Resources (USA) Inc., an intervenor in this lawsuit—had valid existing rights to mine the Canyon Mine claims despite the Grand Canyon withdrawal. 2-ER-231–32. Had the conclusion been otherwise, and had Energy Fuels refused to abandon the claims, Forest Service policy would have called for legal proceedings to eject the company from the national forest. 3-ER-337–38 (if negotiation to "terminate unauthorized use" fails, "appropriate legal action is required").

Summarily excluded from the Forest Service's profitability calculations were all the expenses incurred to develop the mine before

the 2012 validity determination. 2-ER-226 (excluding a host of "surface development" expenses because they "are considered 'sunk' costs"). These pre-2012 expenses likely amounted to an inflation-adjusted sum of at least $16.1–$22.1 million, possibly much more. *See* 3-ER-353 (declaring that $8.2 million would be spent by the end of 1987, the inflation-adjusted equivalent of $16.1 million in January 2012[2]); 2-ER-205–06 (attesting in 2013, that another $6 million-plus had been spent by the mine's owners since 1997). Also left out of the agency's profitability calculations were the costs of environmental monitoring and wildlife-conservation measures. *See* 2-ER-208–32.

Neither these cost calculations nor any other element of the validity determination was put before the public for review or comment.

V. This Lawsuit

After the Forest Service published its validity determination, the Grand Canyon Trust, Sierra Club, Center for Biological Diversity, and Havasupai Tribe filed this lawsuit to assert, among other claims, that neglecting to account for all mining costs violated federal law. *See*

[2] *See* Bureau of Labor Statistics, CPI Inflation Calculator (Dec. 20, 2020) *available at* https://www.bls.gov/data/inflation_calculator.htm.

2-ER-198–99. On summary judgment, the district court rejected that claim on the grounds that the Trust and other plaintiffs[3] had not satisfied the zone-of-interests test. 2-ER-146–50. The Trust appealed, and on that issue, this Court reversed. *Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1165–67 (9th Cir. 2018).

On remand, a dispute arose about mining-cost information that the Forest Service had withheld from the administrative record on confidentiality grounds. *See* 3-ER-538 (describing dispute generally in docket entry 201). A stipulated protective order resulted, which required the Forest Service to produce the disputed documents, while allowing the agency to redact "sensitive information" it believed to be irrelevant, subject to the court's review. 2-ER-128. Under that order, the Forest Service redacted an estimate that Energy Fuels had made of pre-2012 mining costs, arguing that these costs were not relevant. *See* 1-ER-40. The court agreed, over the Trust's objection. 1-ER-40.

After summary judgment on the remaining claim was then briefed, the court ruled against the Trust on the merits after

[3] For simplicity's sake, this brief refers to the Grand Canyon Trust, Sierra Club, and Center for Biological Diversity as "the Trust."

confirming, again, that the Trust had standing. 1-ER-4–39. The court first agreed with the Trust that the Forest Service's validity determination should have, but did not, account for the costs of environmental monitoring and wildlife-conservation measures. 1-ER-21–24. Yet the court concluded that this error was harmless, an issue the parties did not brief but addressed at oral argument at the court's request. 1-ER-26–31; 2-ER-98.

The court then held that the Forest Service did not err by disregarding all pre-2012 mining costs, regardless of whether, due to those costs, the uranium deposit at Canyon Mine could not be extracted, removed, and marketed at a profit. *See* 1-ER-31–37. In so holding, the court reasoned that it was not arbitrary and capricious for the Forest Service to rely on guidance in an Interior Department handbook allowing for "sunk costs" to be ignored, 1-ER-34, guidance that was based on an administrative decision in 1980 by the Interior Board of Land Appeals. *See United States v. Mannix*, 50 IBLA 110, 119 (1980). The court held further that, even if the agency's treatment of pre-2012 costs was erroneous, the error was harmless, reasoning that the Trust had not shown that "sunk costs at the Canyon Mine would, if

considered, render the mine unprofitable." 1-ER-37.

The district court's order did not address how the Trust should have made this showing when the administrative record lacked a full accounting of pre-2012 costs because of the Forest Service's decision to ignore those costs. *See* 1-ER-37; 2-ER-51, 54–57 (raising this point at oral argument after the district court put harmless error into issue). The order also did not address the court's prior ruling withholding from the Trust for lack of relevance Energy Fuels' "confidential" estimate of "sunk costs." *See* 1-ER-37; 1-ER-40. Nor did the order address the affidavit in the record attesting that mining expenses through 1987 were the inflation-adjusted equivalent of $16.1 million by 2012, 3-ER-353, a figure that, without considering costs between 1987 and 2012, nearly equaled the low end of the estimated 2012 value of the mine's future cash flows ($16.8 million). *See* 1-ER-37; 2-ER-231; 2-ER-54–55 (directing the court to this affidavit).

SUMMARY OF THE ARGUMENT

The Forest Service erred when it omitted all pre-2012 costs from the validity determination's profit calculations. Under Supreme Court precedent, a mining claim is valid only when the claimed deposit can be

"extracted, removed and marketed at a profit." *Coleman*, 390 U.S. at 600. Excluding, as a rule, all costs of extraction that pre-date a validity determination is incompatible with this standard, for answering whether a deposit can be mined at a profit depends on all amounts that must be spent to extract that deposit, regardless of when they are incurred. Reading *Coleman* otherwise would contradict the Mining Law's text, which asks not whether a mining business will report future profits, but whether the claimant has discovered a valuable mineral "deposit." 30 U.S.C. § 22. A contrary reading of *Coleman* would also contradict the Mining Law's purpose by allowing miners to speculatively tie up federal public lands and possibly acquire property rights on those lands even when the deposit they have claimed cannot be mined and marketed at a profit.

The district court thus erred when it found that it was not arbitrary and capricious for the Forest Service to follow Interior Department guidance directing past mining costs to be zeroed out. And yet, even if following that guidance were permissible, excluding those costs was unlawful here: Under the Department's precedent, on lands that are withdrawn, mining costs already incurred must be considered.

Because the Forest Service unlawfully ignored all pre-2012 costs, its determination that the Canyon Mine claims were valid was arbitrary, capricious, and not in accordance with the law.

This was not a harmless error. In an Administrative Procedure Act case, an error is harmless only if it clearly had no bearing on the substance of the agency's decision. That standard is not satisfied here. The administrative record reveals that accounting solely for expenses incurred through 1987 would have reduced the Forest Service's cash flow projections by well over half, even before adjusting them further downward to a 2012 value. How much more was spent from 1988 until 2012 cannot be determined from the administrative record. And the absence of cost information for those two-plus decades—a product of the Forest Service's error—weighed together with the substantial amount spent through 1987, is sufficient to defeat a conclusion that excluding pre-2012 costs clearly had no bearing on the outcome. If those costs had been considered, the outcome may have changed.

Even so, other considerations confirm that the error was not harmless. A declaration Energy Fuels filed early in this lawsuit indicates that the amount spent from 1997 to 2012 ran into the many

millions. Another million in costs may have been counted if the Forest Service had not unlawfully overlooked the post-2012 expense of environmental safeguards. And the accounting method the Forest Service would choose to add past costs into its financial analysis would further sway the result.

Considering the record as a whole, excluding pre-2012 costs was not a harmless error. The district court's judgment should be reversed, the validity determination should be vacated, and the matter should be remanded to the Forest Service to correct its error in a new validity determination. *See* 5 U.S.C. § 706(2).

ARGUMENT

I. Standard of Review

Review of the Forest Service's validity determination is governed by the Administrative Procedure Act. 5 U.S.C. § 706(2). Under the APA, if the validity determination was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," it must be set aside. *Id.* This Court applies that standard de novo when reviewing the district court's judgment. *Turtle Island Restoration Network v. U.S. Dep't of Commerce*, 878 F.3d 725, 732 (9th Cir. 2017).

An agency falls short of this standard if it "entirely failed to

consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or if the agency's decision is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.* (quoting *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). When judging an agency action under the APA, questions of law are reviewed de novo, with statutory interpretations sometimes earning *Chevron* deference. *See Connors v. Nat'l Transp. Safety Bd.*, 844 F.3d 1143, 1145 (9th Cir. 2017).

II. The Forest Service erred by determining the Canyon Mine claims to be valid while disregarding pre-2012 costs.

A. A mining claim is valid only if the claimed deposit can be mined at a profit.

For a mining claim to survive a withdrawal, the claimant must have discovered a valuable mineral deposit before the withdrawal, and that deposit must remain valuable whenever the claim's validity is examined. *Lara v. Sec'y of Interior*, 820 F.2d 1535, 1542 (9th Cir. 1987).

A valuable deposit is one that a prudent person would mine. *Cameron*, 252 U.S. at 459. This test, in its initial formulation, asked only whether a deposit was "of such a character 'that a person of ordinary prudence would be justified in the further expenditure of his

labor and means, with a reasonable prospect of success, in developing a valuable mine.'" *Coleman*, 390 U.S. at 602 (quoting *Castle v. Womble*, 19 L.D. 455, 457 (1894)). But in the late 1960s, the Supreme Court refined this test by approving a complementary "marketability" requirement. *Id.* at 603. Under the Mining Law, the Court reasoned, "valuable mineral deposits" are those that "are valuable in an economic sense," meaning there is "demand for them at a price higher than the costs of extraction and transportation….' *Id.* at 602. In other words, a valuable deposit is one that can be "extracted, removed and marketed at a profit." *Id.* at 600.

This is an objective test. *Id.* at 602 (approving of the test's "objectivity"). It looks at what a prudent person must do to mine the deposit claimed and not at a given miner's unique situation. *See United States v. Pass Minerals, Inc.*, 168 IBLA 115, 121 (2006) (holding that the "objective standard" focuses on "the nature of the mineral deposit disclosed on the claim, and not on the attributes or circumstances of the claimant"); *Chrisman v. Miller*, 197 U.S. 313, 322 (1905) (rejecting the idea that "a mere willingness on the part of the locator to further expend his labor and means was a fair criterion" for discovery).

This test is also one of "present marketability," a limitation imposed by the courts both to thwart speculative claims based on hoped-for future profits and to extinguish once-valid claims based on past profitability that has abated. *See Ideal Basic Indus., Inc. v. Morton*, 542 F.2d 1364, 1370 (9th Cir. 1976) ("The test of marketability is not satisfied by the existence of a possible market for the mineral at some future date under altered economic conditions."); *Mulkern v. Hammitt*, 326 F.2d 896, 898 (9th Cir. 1964) (holding that "changed economic conditions" can nullify a mining claim); *see also Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 336 (1963) (explaining that failing to seek ownership of a claim by a patent creates the "risk that [the] claim will no longer support the issuance of a patent.").

B. Answering whether a deposit can be mined at a profit is not possible if past costs, as a rule, are ignored.

1. Summarily excluding past costs is incompatible with Coleman.

Coleman's marketability standard, as a matter of law, does not allow the government to disregard costs of extracting a mineral deposit simply because they were incurred before a validity determination. This conclusion follows from the plain meaning of the term profit: "the excess of returns over expenditure in a transaction or series of transactions."

Webster's Third New Int'l Dictionary 1811 (1961) ("Webster's Third"); *see also Profit*, Black's Law Dictionary 1376 (4th ed. 1957) ("The gain made by the sale of produce or manufactures, after deducting the value of the labor, materials, rents, and all expenses, together with the interest of the capital employed."). The marketability test asks whether returns will exceed expenditures in the transaction or series of transactions to extract, remove, and market a mineral deposit. *See Coleman*, 390 U.S. at 600. In other words, will there be a "gain made" by the sale of the mineral after deducting for "labor, materials, rents, and *all* expenses, together with the interest of the capital employed"? Black's Law Dictionary at 1376 (emphasis added). Indeed, these customary definitions of the word "profit" reflect precisely the Court's framing of the marketability test in *Coleman*: "Minerals which no prudent man will extract because there is no demand for them at a price higher than the costs of extraction and transportation are hardly economically valuable." 390 U.S. at 602.

On the facts, the Court in *Coleman* itself drew no distinctions based on when mining expenses had been incurred. *Coleman* arose from an administrative proceeding before the Department of the Interior

about the validity of the mining claims in question. *See Coleman v. United States*, 363 F.2d 190, 193–94 (9th Cir. 1966) *rev'd by* 390 U.S. 599. In that proceeding, the claimant, Mr. Coleman, testified that he had spent eight or nine years working his claims, which was equivalent to a labor expense of $157,500. *Id.* at 202. Placing "great weight" on this testimony about past mining expenses, the Department "concluded that Coleman could not conceivably have made a profit" and declared his mining claims invalid. *Id.* at 202, 193–94. The Supreme Court agreed with this analysis. 390 U.S. at 601–02 ("We … believe that the rulings of the Secretary of the Interior were proper.").

That holding cannot be squared with the policy the Forest Service followed here of summarily disregarding all mining expenses predating a validity determination. After all, the government cannot reliably answer whether minerals can be sold "at a price higher than the costs of extraction and transportation" if an entire category of extraction costs are ignored as a rule. *Coleman*, 390 U.S. at 602. If, for example, Energy Fuels spent $22 million to build out Canyon Mine before 2012, and the mine stood in 2012 to generate $17 million of future revenues in excess of future costs, mining the deposit would yield a $5 million loss, not a

profit. True enough, in that example, Energy Fuels' accountants would report periodic business profits for some time after 2012. But no accountant would agree that "the deposit" at the mine would be "extracted, removed and marketed at a profit," for the returns of mining the deposit would not exceed the expenditures. *Coleman*, 390 U.S. at 602; Webster's Third at 1811.

2. The Mining Law's text precludes an interpretation of Coleman *that zeroes out past costs.*

Interpreting *Coleman* to allow past costs to be ignored would contradict the Mining Law's text. The touchstone for acquiring rights under the Mining Law is the discovery of a valuable mineral "deposit." 30 U.S.C. § 22. Thus, the marketability test asks not about the episodic profitability of a mining "business," but whether "the deposit" or the "the mineral" can be extracted, removed, and marketed at a profit. *Coleman*, 390 U.S. at 600–602 (repeatedly framing the test as one asking about the value of the "[m]inerals" or "mineral deposits"). As this Court has said, "profit over cost must be realizable from the material itself and it is that profit which must attract the reasonable man." *Ideal Basic Indus., Inc. v. Morton*, 542 F.2d 1364, 1369 (9th Cir. 1976); *United States v. Springer*, 491 F.2d 239, 243 (9th Cir. 1974) ("The evidence

must show that the minerals taken intrinsically satisfy the prudent man test and the marketability test established by the cases."). The question is whether, according to the government's best estimates in a validity determination, all revenues from mining the deposit will exceed all costs of mining the deposit by a margin that would justify mining. *See United States v. Garcia*, 184 IBLA 255, 270 (2013) ("[E]ven when a claimant is actually mining a claim at a small profit, a finding of no discovery may be justified because 'a prudent man would not develop a mine which promised a profit below the return for a commercial venture.'") (quoting *United States v. Kottinger*, 14 IBLA 10, 16 (1973)).

3. Ignoring past costs conflicts with the present-marketability rule.

Asking only whether a mining business's future revenues will exceed its future costs is also at odds with the "present marketability" rule that courts have embraced to prevent speculators from tying up federal public lands. That time-honored limitation ensures that "[t]he test of marketability is not satisfied by the existence of a possible market for the mineral at some date under altered economic conditions." *Ideal Basic Indus.*, 542 F.2d at 1370; *Barrows v. Hickel*, 447 F.2d 80, 83 (9th Cir. 1971) ("Locations based on speculation that there

may at some future date be a market for the discovered material cannot be sustained."); *Hallenbeck v. Kleppe*, 590 F.2d 852, 859 (10th Cir. 1979) (affirming that a miner "cannot locate claims upon public lands and then simply wait until the minerals are in sufficient demand to be marketed at a profit"). And yet, expunging all pre-determination expenses rewards speculators who imprudently fund mining work hoping for a future bonanza market, since excluding those expenses may tilt the ledgers just enough for speculators' claims to survive a validity examination.

Take Canyon Mine as an example. For over forty years, the mine has occupied public lands next to the Grand Canyon while its owner hopes for the price of uranium to rise enough to justify mining the uranium deposit.[4] All the while, the mine's owner has spent great sums building mine infrastructure without recouping those outlays with any

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[4] *See* U.S. Forest Service, "Canyon Uranium Mine" *available at* https://www.fs.usda.gov/detail/kaibab/home/?cid=FSM91_050263 ("Energy Fuels has advised the Kaibab National Forest that ore production will not occur imminently due to current uranium prices not favoring new production.") (December 19, 2020). The lack of ore production at the mine is a fact of which the Court may take judicial notice. Fed. R. Evid. 201(b); *Daniels-Hall v. Nat'l Educ. Ass'n*, 629 F.3d 992, 998–99 (9th Cir. 2010) (taking judicial notice of facts published on government web sites that were not reasonably subject to dispute).

uranium sales. Yet the government's treatment of "sunk costs" means that, as time has passed, more and more of these expenses have vanished from the government's accounting ledgers, perpetually improving the odds that the mine will survive a validity examination, as the Forest Service concluded it did in 2012.

4. Excluding past costs is at odds with the Mining Law's purpose.

Skewing the ledgers by ignoring past costs could also enable miners to acquire fee title to federal public lands even if, contrary to *Coleman*, "the mineral" cannot be "extracted, removed and marketed at a profit." 390 U.S. at 600. By what is known as a patent, the Mining Law allows miners to acquire ownership of the mineral and surface estates within the boundaries of valid mining claims. 30 U.S.C. §§ 22, 29. Congress has suspended the patenting process since the mid-1990s by successive appropriation riders. *See R.T. Vanderbilt v. Babbitt*, 113 F.3d 1061, 1064 (9th Cir. 1997); *see also, e.g.*, Pub. L. 116-94 § 404(a) (Dec. 20, 2019). Yet were that suspension to lapse, someone who, before taking a claim to patent, were to spend more to extract a mineral than can be made selling it could nonetheless establish a valid claim, so long as mining revenues were forecasted to exceed costs *after* patenting.

Once land is taken out of public ownership, it can be used for purposes other than mining. And in that way, disregarding "past costs" could promote abuse of the Mining Law.

That sort of abuse is not idle conjecture. The mining claims whose validity Mr. Coleman took to the Supreme Court, for example, were "in a highly scenic national forest … two hours from Los Angeles" where Mr. Coleman had spent "thousands of dollars and hours … building a home." 390 U.S. at 603. Like examples abound. *See Andrus v. Charlestone Stone Products Co.*, 436 U.S. 604, 616 (1978) (observing that by 1955, "many used the guise of mining locations for non-mining purposes, [like] filling stations, curio shops, cafes, residences, and summer camps.") (internal quotation omitted); *United States v. Locke*, 471 U.S. 84, 86 (1985) ("By the 1960's," the mining law's "19th-century laissez-faire regime had created virtual chaos with respect to the public lands."); *Springer*, 491 F.2d at 242–43 (affirming invalidation of mining claim used "primarily [as] a health spa").

* * *

Expunging past costs contradicts the marketability standard adopted in *Coleman*, the text of the Mining Law, and the

complementary judicial rules for identifying valuable mineral deposits, like the present-marketability test. It was consequently arbitrary, capricious, and not in accordance with law for the Forest Service to deem the Canyon Mine claims valid while unlawfully disregarding all pre-2012 costs. *See* 5 U.S.C. § 706(2)(A).

C. The district court erred in its analysis of pre-2012 costs.

1. The district court used an incorrect standard of review.

The district court concluded *sua sponte* that the question before it was not whether the Forest Service's decision to ignore pre-2012 costs was "incorrect," but whether it was arbitrary and capricious for the agency to rely on the Interior Department's administrative guidance on "sunk costs." 1-ER-32. For this proposition, the court pointed to cases embracing the notion that "[a]gencies are entitled to rely on the expertise of another agency without forgoing deferential review." *Id.* (citing *Bellion Spirits, LLC v. United States*, 393 F. Supp. 3d 5, 13 (D.D.C. 2019)). But these cases are inapt. They each arose from a single matter under adjudication in which one agency relied on another agency's factual determinations, not another agency's pronouncement about a pure question of law.

The main case highlighted by the district court, *Pyramid Lake*

Paiute Tribe of Indians v. U.S. Department of the Navy, 898 F.2d 1410 (9th Cir. 1990), illuminates this distinction. In that case, the Navy, following the Endangered Species Act's requirements, sought a "biological opinion" from the U.S. Fish and Wildlife Service about whether a Navy leasing program was likely to jeopardize the continued existence of an endangered species of fish. *Id.* at 1415. In the biological opinion, the Fish and Wildlife Service analyzed how the leasing program would affect the fish, and concluded that they would not be jeopardized. *Id.* The Navy then relied on the biological opinion to reach the same conclusion. *Id.* When only the Navy was sued, the court declined to scrutinize whether the biological opinion was arbitrary and capricious as if the Fish and Wildlife Service were a defendant. *Id.* It instead asked only whether the Navy's decision to rely on the biological opinion was arbitrary and capricious. *Id.* What passed muster was the Navy's decision not to redo an expert agency's analysis of the facts, and the law's application to those facts.[5]

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[5] The other cases the district court cited, 1-ER-32–34, also involved one agency's reliance on another agency's expert input on factual matters. *See Bellion Spirits*, 393 F. Supp. 3d at 13–17 (finding no error in an agency's reliance, when resolving a petition about federal advertising rules, on "scientific fact-finding" by the Food and Drug Administration);

The question presented here, in contrast, is one of law. It does not call for review of the Forest Service's analysis of the facts, let alone its reliance on another agency's judgment about factual matters. The issue before the Court is whether discovery of a "valuable mineral deposit" can occur even if, due to mining costs predating a validity determination, the deposit cannot be mined and marketed at a profit.

Another decision of this Court under the Endangered Species Act, *Defenders of Wildlife v. U.S. Environmental Protection Agency*, 420 F.3d 946, 976 (9th Cir. 2005), *rev'd on other grounds by* 551 U.S. 644 (2007), squarely embraces this fact-versus-law distinction. The question in *Pyramid Lake*, this Court explained, was about how to resolve "*factual*

City of Boston Delegation v. Fed. Energy Reg. Comm'n, 897 F.3d 241, 254–55 (D.C. Cir. 2018) (approving of one agency's reliance on another's "expert conclusion" about the safety risks of routing a gas line near a nuclear generating station); *WildEarth Guardians v. U.S. Forest Serv.*, 828 F. Supp. 2d 1223, 1237–38 (D. Colo. 2011) (approving of the Forest Service's reliance on another expert agency's assertion that extensive testing of a methane-flaring system would be needed); *Defs. of Wildlife v. U.S. Dep't of Navy*, 895 F. Supp. 2d 1285, 1318 (S.D. Ga. 2012) (approving of an agency's reliance on an expert agency's biological opinion, citing to *Pyramid Lake*); *City of Tacoma v. Fed. Energy Reg. Comm'n*, 460 F.3d 53, 75–76 (D.C. Cir. 2006) (same); *Aluminum Co. of Am. v. Bonneville Power Admin.*, 175 F.3d 1156, 1160–61 (9th Cir. 1999) (same); *Stop H-3 Ass'n v. Dole*, 740 F.2d 1442, 1459–60 (9th Cir. 1984) (same, without citation to *Pyramid Lake*).

objections" under the arbitrary-and-capricious standard of review, recognizing that "action agencies should be able to rely on the expert judgments that underlie most Biological Opinions." *Id.* (emphasis in original). But flaws that are "*legal* in nature" can be discerned by any agency, and acting despite legal error is "'not in accordance with law' and is thus arbitrary and capricious." *Id.* (citing 5 U.S.C. § 706(2)(A)) (emphasis in original); *see also Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010) (reaffirming this principle).

This analysis tracks a basic feature of the Administrative Procedure Act, which provides that, "[t]o the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law [and] interpret constitutional and statutory provisions…." 5 U.S.C. § 706. And thus, questions of law are reviewed de novo under the APA, with agencies' statutory interpretations sometimes receiving *Chevron* deference. *See Connors*, 844 F.3d at 1145; *Sauer v. Dep't of Educ.*, 668 F.3d 644, 650 (9th Cir. 2012).

Under this framework, the district court should have approached the issue of past costs as a question of law to be answered de novo by interpreting the Mining Law's "valuable mineral deposit" requirement

and the body of cases construing that text. The court erred by asking only whether it was arbitrary and capricious for the Forest Service to adhere to the Interior Department's handbook.

2. Chevron *deference is unwarranted.*

As a product of statutory interpretation, the Interior Department's sunk-cost precedent that the Forest Service followed raises a question of whether *Chevron* deference may be due.[6] For two reasons, it is not.

First, a threshold requirement for *Chevron* deference is not met here because of the Department's failure to provide a "minimal level of analysis" to support its treatment of sunk costs. *Encino Motorcars, LLC v Navarro*, 136 S.Ct. 2117, 2125 (2016). Regardless of whether other requirements of *Chevron* are met, an agency's statutory interpretation is not eligible for deference if the "agency's explanation" is not "clear enough that its path may reasonably be discerned." *Id.* (internal quotation omitted).

The Department's statutory interpretation in question here begins

[6] Because Congress has entrusted the Department of the Interior with administering the Mining Law, *see Best*, 371 U.S. at 337, it is only the Department's interpretation of that law that may be eligible for deference, *see United States v. Mead Corp.*, 533 U.S. 218, 226–27 (2001).

and ends with *United States v. Mannix*, 50 IBLA at 119. Every other reference to "sunk costs" in the Department's guidance and administrative decisions merely cites back to *Mannix* without more. *See United States v. Copple*, 81 IBLA 109, 129 (1984); *United States v. Collord*, 128 IBLA 266, 288 n.24 (1994); *United States v. Clouser*, 144 IBLA 110, 131–32 (1998); 3-ER-325 (citing to *Mannix* and *Clouser* in BLM handbook guidance on "sunk costs").[7] But the Interior Board of Land Appeals did not provide in *Mannix* a "minimal level of analysis" to support its conclusion. *Encino Motorcars*, 136 S.Ct. at 2125.

That conclusion was that "[a]bsent a prior withdrawal, if the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met." 50 IBLA at 119. The only reason for that holding appeared in a single sentence asserting that "no case law … compels consideration of [earlier] development costs in determining if an ongoing operation is presently

[7] The Department's handbook lacks the force of law and deserves no deference. *See Christensen v. Harris Cty.*, 529 U.S. 576, 587 (2000) ("[I]nterpretations contained in … agency manuals … lack the force of law [and] do not warrant *Chevron*-style deference.").

profitable." *Id.* (citing *Andrus v. Shell Oil*, 446 U.S. 657 (1980)). But this barebones observation is not a reasoned basis for the Board's holding.

As an initial matter, *Mannix* did not square its holding with *Coleman*, which did not make an exception for "earlier development costs" when describing profit to mean demand for minerals "at a price higher than the costs of extraction and transportation." *Coleman*, 390 U.S. at 602.

The Board's citation to *Andrus v. Shell Oil*, furthermore, does not support the Board's conclusion. By that citation and the phrase "presently profitable," the Board appears to have reasoned that the present-marketability test asks whether a "present profit" can be made in excess of ongoing costs. 50 IBLA at 119. But the point of requiring present marketability is to void mining claims that are based on a speculative future market or on a past market that has ebbed. *See Ideal Basic Indus.*, 542 F.2d at 1370; *Mulkern*, 326 F.2d at 898. The test asks whether the mineral can be extracted, removed, and marketed at a profit under present "economic conditions," as opposed to conditions in some future or past market with a better price or lower extraction costs. *Ideal Basic Indus.*, 542 F.2d at 1370. It does not follow that this

constraint on how to make reasonable forecasts about the future somehow obviates actual past expenses when calculating profitability.

Andrus does not suggest otherwise. The Supreme Court's holding in that case "liberalized the traditional valuable mineral test" by preserving a unique exemption from the present-marketability rule for pre-1920 oil-shale claims. 446 U.S. at 660–63. Claims for oil shale could be made under the Mining Law until Congress ended that practice, subject to valid existing rights, in the Mineral Leasing Act of 1920. *Id.* at 659. Yet in 1920, as now, oil shale was not a marketable resource. *Id.* at 666. So, the Interior Department in 1927 carved out what became a special rule allowing pre-1920 oil-shale claims to be deemed valid based on speculation about oil-shale's future marketability. *Id.* at 661–62, 667.

In *Andrus*, the Court affirmed this exception, holding that the government could not "impos[e] a present marketability requirement on oil-shale claims." *Id.* at 673. Yet the Court also reaffirmed that the present-marketability requirement continued to apply to "other minerals." *Id.* at 672–73 n.11. And the Court did not rule that the test of present marketability allows past costs to be ignored, even for oil-shale claims. The Court was concerned with the future market for oil

shale, not with accounting for past mining costs.

Particularly when scrutinized against federal case law, the threadbare reasoning in *Mannix* does not provide the "minimal level of analysis" necessary to receive deference. *See Encino Motorcars*, 136 S.Ct. at 2125; *Montgomery Cty. v. Fed. Comm. Comm'n*, 836 F.3d 485, 491 (6th Cir. 2017) ("[I]f an agency wants the federal courts to adopt (much less defer to) its interpretation of a statute, the agency must do the work of actually interpreting it.").

Second, even if *Chevron* deference were not otherwise precluded, deference is unwarranted under *Chevron* step two. Once a statute has been deemed ambiguous, the question is whether the government's interpretation of the statute is a "permissible" one. *See Nat. Res. Def. Council, Inc. v. Nat'l Marine Fisheries Serv.*, 421 F.3d 872, 879 (9th Cir. 2005). But the holding in *Mannix* falls short of this standard, for "it is directly at odds with the text and purpose" of the Mining Law. *Id.*

Again, it is the discovery of a valuable mineral *deposit* that allows miners to acquire rights under the Mining Law. 30 U.S.C. § 22. Textually, the question of value concerns the deposit, and "what is required to extract, process, and market the mineral on a particular

claim is the same no matter who mines it." *United States v. Armstrong*, 184 IBLA 180, 218 (2013). Yet zeroing out past expenses reveals only whether a specific mining business is likely to report future profits, even if those profits would fall far short of the cost to mine the deposit.

And again, disregarding past expenses contradicts the Mining Law's purpose. "Under the mining laws[,] Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes." *Coleman*, 390 U.S. at 602. Thus, "[t]he obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense." *Id.* Yet if "sunk costs" are ignored, a validity determination or patent examination may deem a mining claim valid even when mining the deposit claimed will generate less revenue than it will cost to mine, and the deposit is thus *not* valuable in an economic sense. That would "work an unlawful private appropriation in derogation of the rights of the public." *Cameron*, 252 U.S. at 460.

By failing to honor the text and intent of the Mining Law, *Mannix*'s holding is not a permissible interpretation of the statute, and deference to that interpretation is consequently unjustified. *See Nat.*

Res. Def. Council, 421 F.3d at 879.

3. The "further expenditure" language in the prudent-person test does not imply that past costs should be ignored.

In addition to deferring to the Forest Service's reliance on the Department's "sunk cost" precedent, the district court construed federal case law to allow pre-determination costs to be ignored, reasoning that the words "further expenditure" in the prudent-person test suggest that the profitability analysis "looks forward." 1-ER-35–36. There are two flaws in that reasoning.

First, this gloss on the words "further expenditure" divests the rest of the prudent-person test of its meaning by ignoring what must result from further expenditure. The test is whether "the discovered deposits [are] of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of *success*, in developing a *valuable mine*." *Coleman*, 390 U.S. at 602 (emphasis added) (internal quotation omitted). In other words, is a "valuable mine" likely to result with further expenditure of time and money? In *Coleman*, the Supreme Court clarified what qualifies as a "valuable mine"—one at which "the mineral can be extracted, removed and marketed at a profit." 390 U.S.

at 600. The inquiry is thus whether there is a reasonable likelihood that, if further expenditures are made, the deposit can be mined "at a profit." And the answer to that question depends on all mining revenues and all mining costs. After all, someone who has spent $20 million on a mine that had yet earned nothing would not boast of forthcoming success in developing a valuable mine if further expenditure would yield only $100,000 in future "profits."

Second, the district court's reading of the words "further expenditure" in the prudent-person test inverts the Supreme Court's case law by treating the prudent-person standard as if it refined the marketability test, when the opposite is true. *See* 390 U.S. at 602 ("[T]he marketability test is an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is 'valuable.'"). If the Supreme Court thought the age-old words "further expenditure" signified, as the district court put it, that "the comparison of costs and revenue to determine profitability looks forward from the marketability date," 1-ER-35, the Court would have said so. This is especially true given the "great weight" placed on past mining costs in the validity determination at issue. 363 F.2d at

202. With a few words, the Court could have framed the marketability test to ask whether the mineral can be extracted, removed and marketed at a profit "looking forward," or "in the future," or "after the marketability date." *Coleman* did not use those words, and there is no justification for tacking them on to its holding.

4. Even if following Mannix *was lawful, neglecting its exception for "a prior withdrawal" was not.*

Even if it were correct to adhere to *Mannix*, the Forest Service nonetheless erred by not recognizing that *Mannix* consented to zeroing out sunk costs only "[a]bsent a prior withdrawal." *Mannix*, 50 IBLA at 119. Because the public lands fenced off for the Canyon Mine were withdrawn at the time of the validity determination, *Mannix* provides no basis for expunging "earlier expenses" of mining. *Id.*

This exception to *Mannix*'s holding was discussed at length in a 1994 concurring Board opinion by Administrative Judge Burski, who was on the three-judge panel in *Mannix*. "While not clearly explained," he wrote, "the non-existence of a withdrawal was critical to the Board's ruling in the *Mannix* case." *Collord*, 128 IBLA at 304 (Burski, J., concurring). "[T]he Board reasoned that while it might be argued that the specific claims at issue were invalid, nothing would prevent the

appellants from relocating new claims upon the receipt of the Board's decision." *Id.* And since those new claims "would not be burdened with the necessity of recouping past expenditures made under prior locations," the Board, "bowing to practicality," entertained the fiction that past expenditures were zero. *Id.*

Yet a withdrawal would have changed that outcome, "[s]ince no future location could be made…." *Id.* In that case, the Board's "practical concerns" would have been allayed, and it would have examined the claim's validity "in light of the expenditures both anticipated and *already incurred*." *Id.* (emphasis added).

The Forest Service did not heed this exception. Instead, the agency zeroed out pre-2012 costs despite the Grand Canyon mineral withdrawal, without acknowledging the absent-a-prior-withdrawal proviso in *Mannix*. *See* 2-ER-226. The district court's decision did not acknowledge the proviso either, despite the court's discussion of it at oral argument, 2-ER-89–91, replacing it instead with an ellipsis when quoting the holding in *Mannix*. 1-ER-31 (". . . [I]f the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements

of discovery have been met."). This was a reversible error. If adhering to *Mannix* was the correct course, the Forest Service's exclusion of pre-2012 mining costs despite the withdrawal was still arbitrary, capricious, and not in accordance with law. 5 U.S.C. § 706(2).

III. Omitting pre-2012 costs was not a harmless error.

After concluding that the Mining Law did not require past costs to be considered, the district court went further and held that, even if excluding past costs was an error, the error was harmless. 1-ER-37. This ruling was unwarranted and should be reversed.

A. Accounting for past costs may have changed the result.

An error is harmless in an Administrative Procedure Act case only if it "clearly had no bearing on the procedure used or the substance of [the] decision reached." *Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631 F.3d 1072, 1090 (9th Cir. 2011); 5 U.S.C. § 706 ("[D]ue account shall be taken of the rule of prejudicial error"). This standard recognizes that, in APA cases, "the role of harmless error is constrained." 631 F.3d at 1091 (citing *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1071 (9th Cir. 2004)). While plaintiffs bear the burden under this standard, it is not "a particularly onerous requirement." *Id.* at 1091 (quoting *Shinseki v. Sanders*, 556 U.S. 396, 410 (2009)).

Accounting for pre-2012 costs may have led the Forest Service to determine that the uranium deposit at Canyon Mine could not be mined at a profit as of 2012. As explained below, considering both what the record reveals about the expenses the Forest Service disregarded and what the record omits, the agency's profitability forecast would at least be a close call, one whose outcome may turn on the methodology the agency would use to fit pre-2012 expenses into its financial model. Under these circumstances, it is not clear that the agency's error had no bearing on its decision. *See Cal. Wilderness Coal.*, 631 F.3d at 1090.

1. An affidavit about mining costs through 1987 is sufficient to find that the Forest Service's error was not harmless.

Only some pre-2012 costs can be estimated from the record, but taking account of those estimates along with the record's silence about other pre-2012 costs is enough to conclude that the Forest Service's error was not harmless.

In an affidavit filed in October 1987 during an administrative appeal over the mine's operating plan, a vice president of the mine's then-owner attested that the company was on track to spend $8.2 million by the end of that year. 3-ER-353 (declaring that "$8,200,000 will be expended in exploration and site preparation activities through

December, 1987"). If those expenses were conservatively adjusted solely for inflation as if they had all been incurred in December 1987 (though many were incurred far earlier), they would equate to $16.1 million as of January 2012.[8] Comparing that figure to the results of the Forest Service's cash flow analysis indicates, at a minimum, that accounting solely for those pre-1988 costs would have reduced total future cash flows by more than half, from $29.4 million to $13.3 million. 2-ER-231. Discounting $13.3 million to a net present value as of 2012 at the rates the Forest Service used would reduce that amount further still (discussed more below at pp. 47–50). And that does not consider costs in the 24 years between 1987 and 2012.

How much was spent in that 24-year period, however, cannot be discerned from the administrative record. It is thus not possible to answer precisely how those additional costs would have affected the profitability forecast. And this record gap is significant, for it exists precisely because of the Forest Service's erroneous decision not to account for pre-2012 costs.

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[8] *See* Bureau of Labor Statistics, CPI Inflation Calculator (December 20, 2020) *available at* https://www.bls.gov/data/inflation_calculator.htm.

This deficiency in the record, together with the evidence that costs through 1987 were substantial, is an adequate basis to conclude that excluding pre-2012 costs was not a harmless error. The Third Circuit's decision in *Wensel v. Director, Office of Workers' Compensation Programs*, 888 F.2d 14 (3d Cir. 1989), is illustrative. In that appeal, the appellate court reversed the government's denial of a claim for black-lung benefits. *Id.* at 15. The government erred, the court found, when it concluded, based solely on the absence in the record of some social security files, that the claimant had worked as a coal miner for only twelve years, rather than eighteen. *Id.* at 15, 17. Recognizing the "established relation" between black-lung disease and the duration of exposure to coal dust, the court reasoned that five or six more years of coal-mine work, "if it is shown, *could* be evidence that supports [the] claim." *Id.* (emphasis added). It thus held that "we cannot decide whether this error was harmless." *Id.*

So too here, the absence of record evidence about mining costs between 1987 and 2012 provides no basis for concluding that those costs were zero. And adding the actual amounts spent in that period to the many millions spent through 1987 may reveal that the uranium deposit

at Canyon Mine could not be mined at a profit as of 2012. The record thus does not support a finding that the government's error "clearly had no bearing" on the substance of its decision. *Cal. Wilderness Coal.*, 631 F.3d at 1090; *Alliance for the Wild Rockies v. Savage*, 897 F.3d 1025, 1036 (9th Cir. 2018) (holding that the "error cannot be treated as harmless in light of the ambiguity in the record" about how the Forest Service's calculations may change if the error were corrected). Indeed, any other conclusion would place plaintiffs like the Trust in a Catch-22, in which the showing required to force the government to complete a legally sufficient analysis likely cannot be made because of the government's legally insufficient analysis. *See Oglala Sioux Tribe v. U.S. Nuclear Reg. Comm'n*, 896 F.3d 520, 534–35 (D.C. Cir. 2018) (rejecting argument that government had erred harmlessly when it failed in an environmental analysis to adequately evaluate potential damage to cultural resources, reasoning that the government's "inadequate" analysis may well make showing harm "impossible"); *Cf. Atieh v. Riordan*, 727 F.3d 73, 77 (1st Cir. 2013) (concluding that a failure to file the administrative record was not harmless error when the materials presented to the court lacked "crucial" parts of the record,

undermining the "court's ability to perform meaningful review").

2. Evidence submitted by Energy Fuels illuminates the administrative record's deficiencies.

A declaration that Energy Fuels submitted during this lawsuit highlights how the gap in the administrative record precludes a finding of harmless error. *See* 2-ER-203–07.

That declaration asserted in April 2013 that Energy Fuels "has spent in excess of $6 million acquiring, developing, permitting, and operating" the mine. 2-ER-206–07. While this statement is imprecise about the timing of these expenditures, a careful reading of the declaration leads to the conclusion that it is referring to the period from 1997 until 2013. After all, the declarant says that Energy Fuels' "predecessors" spent much more than $6 million exploring and developing the mine. 2-ER-206. The declaration elsewhere defines "predecessors" to mean "(EFN and previous owners)." 2-ER-204 (referring to Energy Fuels Nuclear, Inc. as "EFN"). And it is from those entities that Energy Fuels purchased the mine in 1997 (though Energy Fuels was then named Denison Mines). 2-ER-205. Taken together, the only fair interpretation of the declaration is that it asserts that more than $6 million was spent at the mine from 1997 to 2013, in addition to

the even greater sum that had been spent by 1987, and in addition to whatever amount was spent between 1987 and 1997.

It is true that some fraction of this $6 million in expenditures may have been incurred after the validity determination was completed in 2012 and before the declaration was submitted in April 2013. But even so, the 2013 declaration indicates that total, inflation-adjusted mining costs had grown from $16.1 million in 1987 to as much as $22.1 million by 2012, without accounting for costs between 1987 and 1997. In short, the declaration indicates that post-1987 costs were immense.[9]

3. Accounting for the post-2012 expense of environmental safeguards adds to the cost ledger.

Accounting for a separate error in the Forest Service's cost calculations further underscores that the agency's erroneous treatment of pre-2012 costs was not harmless.

The district court correctly concluded that the Forest Service improperly omitted from its calculations the costs of environmental

[9] If the Court finds that it must consider this declaration to resolve the question of harmless error, supplementation of the record would be permissible on the grounds that reviewing the declaration is "necessary to determine whether the agency has considered all relevant factors." *See Lands Council v. Powell*, 395 F.3d 1019, 1030 (9th Cir. 2005) (internal quotation omitted).

monitoring and wildlife-conservation measures. 1-ER-21–24. But after examining these expenses in isolation, the court held that failing to consider them was a harmless error. 1-ER-29–30. In so holding, the court concluded that estimates of these costs made by the Forest Service in 1986 would have been equivalent to about $261,000 in 2012, if adjusted for inflation. 1-ER-30. The court then recognized that the Forest Service had qualified its estimates by observing that "actual costs could vary significantly." *Id.* But the court reasoned that "even if the costs were to increase four-fold, to approximately $1 million, they would not come close to making the Canyon Mine unprofitable." *Id.*

Yet that conclusion did not consider these expenses *in combination* with pre-2012 costs. Taking the district court's line of reasoning, adding $1 million for these post-2012 environmental costs to the inflation-adjusted estimate of costs through 1987 ($16.1 million) would total $17.1 million. That figure exceeds the low end of the 2012 value the Forest Service assigned to future cash flows ($16.8 million). *See* 2-ER-231. If $6 million more in expenses were incurred after 1997 but before the validity determination, *see* 2-ER-206, that would bring total pre-2012 expenses to $23.1 million, again without considering

costs between 1987 and 1997. And that figure exceeds the high end of the 2012 value that the Forest Service forecasted for the mine's total future cash flows ($22.3 million). *See* 2-ER-231.

4. Doubt about how the Forest Service would fit past costs into its analysis further rules out a harmless-error finding.

If the Forest Service had considered pre-2012 costs, it would have faced a question about how to account for differences in the value of amounts spent and earned decades apart—the time value of money. Because the agency's answer would affect its profitability calculations, uncertainty about the method it would use further precludes a finding of harmless error.

The Forest Service's financial model recognized the importance of reconciling the values of revenues earned and costs incurred at different times. It did that by discounting total post-2012 mining cash flows ($29 million) at three different rates to a range of estimated values as of 2012 ($16.8 to $22.3 million). *See* 2-ER-231 ("The cash flow is then discounted at a specific discount rate to determine the net present value."). This procedure, at root, acknowledged the idea that receiving $1,000 today is better financially than receiving $1,000 in five years, owing to inflation and the interest or other returns that can be earned

in those five years. *See generally Hurlic v. S. Cal. Gas Co.*, 539 F.3d 1024, 1031 (9th Cir. 2008) (discussing time-value-of-money principles).

For the Forest Service to add pre-2012 costs into its discounted-cash-flow model, the agency would need determine how to adjust those costs to be commensurable with post-2012 costs and revenues. And the effect of that adjustment could be dramatic given the many decades at issue. For example, a multi-million-dollar net loss would result if $8.2 million in expenses were added in 1987 into the agency's existing cash flow forecasts and then the total cash flows were discounted at a rate of 10 percent annually—the most conservative rate the Forest Service used—to reflect their value as of 1987.[10]

Indeed, the mine's owner made the same sort of calculation in 1987 when urging the Forest Service not to stay the mine's development because of financial losses that would flow from delay. *See* 3-ER-354. That calculation forecasted "carrying costs" at an annual rate of ten percent per year based on the $8.2 million already spent. *Id.* Carrying

[10] This can be predicted, even without access to the Forest Service's model results (which were withheld from the administrative record), by assuming conservatively that cash flows would be $30,000,000 in 2012, discounting that figure at a rate of 10 percent over a 24-year period ($30,000,000 ÷ 1.1^24), and then subtracting $8,200,000.

that computation forward to 2012 would result in a cost of over $80 million,[11] dwarfing by far the Forest Service's estimates of post-2012 cash flows.

Other approaches to account for pre-2012 costs could lead to a similar result. If, for example, pre-2012 costs were adjusted solely for inflation and then treated as if they would be incurred in or shortly after 2012, a net loss would result if accounting for those expenses were to yield negative net future cash flows. Or, a net loss could be forecasted by using market rates as of 2012 to reckon the expense of *all* the work necessary to mine the deposit at Canyon Mine—including work performed before 2012. Or, depending on the discount rate, adding in all the disregarded costs (in one manner or another) could yield small, positive total cash flows but reduce the internal rate of return below 12 percent, which the Forest Service described as the "minimum rate of return for the mining industry." 2-ER-231. And that too would justify finding the Canyon Mine claims invalid as of 2012. *See Garcia*, 184 IBLA at 270 (explaining that a claim may be invalid if mining would yield "a profit below the return for a commercial venture").

[11] $8,200,000 * 1.1^24.

The upshot is that, depending on the total amount of pre-2012 costs, the methods and rates used to account for the time value of money could be determinative of the agency's profitability forecast. And that additional uncertainty precludes a finding that the agency's error *clearly* had *no bearing* on the result it reached. *Cal. Wilderness Coal.*, 631 F.3d at 1090; *Shinseki*, 556 U.S. at 414 (declining to find error harmless "[g]iven the uncertainties"); *Savage*, 897 F.3d at 1036 (rejecting harmless-error defense "in light of the ambiguity in the record"); *SW Gen., Inc. v. Nat'l Labor Relations Bd.*, 796 F.3d 67, 80 (D.C. Cir. 2015) ("Our uncertainty is sufficient to conclude that [the petitioner] has carried its burden of demonstrating that the [statutory] violation is non-harmless….").

B. The district court's harmless-error analysis was flawed.

The district court's harmless-error analysis went astray on multiple counts, with a common theme running throughout: a heightened expectation about what the Trust needed to prove, coupled with an absence of acknowledgment about the evidence the Trust put forward and about the unreasonable evidentiary burden the court's approach put up.

First, the court overstated the Trust's burden of proof. The court recited the correct legal standard in an earlier section of its order. *See* 1-ER-27. Yet it framed its sunk-costs analysis differently, concluding that the Trust had not shown that pre-2012 costs "would" render the mine unprofitable had they been considered. 1-ER-37. The clearly-had-no-bearing standard, however, does not require a plaintiff to show that the government's decision "would" change. The logical corollary of this standard is that an error is not harmless if it "may" or "could" have changed the decision reached. *See Cal. Wilderness Coal.*, 631 F.3d at 1093 (holding that error was not harmless when the court had "substantial doubt" about whether the outcome would change on remand); *Savage*, 897 F.3d at 1036 (holding that "ambiguity in the record" precluded harmless-error finding); *Shinseki*, 556 U.S. at 414 (holding that error could not be deemed harmless where, among other things, examination of additional evidence "might" have revealed further injury); *PDK Labs. Inc. v. U.S. Drug Enf't Agency*, 362 F.3d 786, 799 (D.C. Cir. 2004) (holding that error was not harmless when it was "entirely possible" that the outcome would change on remand).

Second, the court took no account of the 1987 declaration

asserting that $8.2 million would be spent mining by the end of that year. 1-ER-37. The Trust stressed the importance of this declaration at oral argument, responding to the court's *sua sponte* order days earlier placing harmless error into issue. *See* 2-ER-98; 2-ER-55 ("I … want to stress that, … if you don't do what you suggested and rule against us on [sunk] costs, that number is very significant."). And yet the court did not mention this declaration in its ruling on harmless error. 1-ER-37.

Third, the court did not consider whether pre-2012 costs combined with the expense of post-2012 environmental-conservation measures that the Forest Service left out of its analysis may have cumulatively changed the agency's profitability forecast. *Id.*

Fourth, the court misconstrued the Forest Service's financial model when it treated the agency's post-2012 cash flow forecasts as equivalent to profits of $29 million. 1-ER-20, 29–30, 37. That amount represented future cash flows, without adjustment for when funds would be spent and received. *See* 2-ER-231. While the Forest Service explained that undiscounted cash flows indicate *whether* a profit or loss could be expected, it did not treat those cash flow as a *measure* of profit. *Id.* ("The sum of cash flows shows whether the proposed mining

operation would result in a profit or loss."). Instead, the agency assessed the mine's economic viability by calculating the net present value of future cash flows and the associated internal rate of return. *Id.* (treating the internal rate of return as a measure of whether mining would be "profitable"). That makes sense, given that an insufficient rate of return could make a claim invalid by "promise[ing] a profit below the return for a commercial venture." *Garcia*, 184 IBLA at 270.

And finally, the court's analysis took no account of how the government's error was to blame for the gap in the administrative record hindering the proof the court expected the Trust to make. 1-ER-37. Instead, the court restricted its analysis to the administrative record while calling on the Trust to adduce record evidence about pre-2012 costs that the Forest Service had purposely omitted or redacted.

The court concluded, for example, that it could not consider the $6 million cost estimate in Energy Fuels' 2013 declaration because that declaration was not part of the administrative record. 1-ER-37 n.20. The court further reasoned that, if the declaration were considered, pre-2012 costs of "*more* than $6 million … would not render the Canyon Mine unprofitable." *Id.* (emphasis added). Yet the court did not

acknowledge that there was no basis for reaching that conclusion without evidence in the record of precisely *how much more* than $6 million those costs were. *Id.* This is especially true given that the Trust had pointed to evidence that the costs were at least $16 million more. 2-ER-55 (citing Doc. 215, which appears at 3-ER-340–59).

The district court likewise took no account of the earlier ruling it had made affirming the Forest Service's redaction in the administrative record of Energy Fuels' estimate of "sunk costs." 1-ER-37. That estimate appeared in a letter that Energy Fuels wrote to the Forest Service in March 2012 to convey the company's cost estimates for use in the validity determination:

- The [redacted] in sunk costs at the Canyon Mine are excluded from the NPV analysis. Sunk costs are not relevant to the decision process for determining the economic viability of the Canyon Mine at this time.

See 2-ER-101.

When the Trust objected to this redaction, the district court declined to order its removal, reasoning that the amount of pre-2012 expenses was not relevant if the law allowed the Forest Service to disregard "sunk costs." 1-ER-40. Yet when the court later put harmless error into issue, 2-ER-98, it did not revisit its redaction ruling, despite

having characterized it as provisional, *id.* Instead, the court reasoned that the Trust had "not met [its] burden," even though the court had denied the Trust access to the kind of information it faulted the Trust for failing to produce. 1-ER-37.

By limiting its review to the administrative record while expecting the Trust to point to evidence that the record lacked—evidence missing from the record because of the government's error, evidence that the Trust had no chance to put into the record for want of a comment period when the validity determination was prepared, evidence that in any event was primarily in defendants' possession, and evidence that the Trust was given no chance to acquire through discovery and to submit to the court—the district court put up an unreasonable evidentiary burden. And that is precisely one of the problems the Supreme Court warned against in *Shinseki*, 556 U.S. at 408.

Examined as a whole, the record shows that mining costs through 1987 were substantial, that over two decades' worth of additional costs were unaccounted for, and that the profitability determination therefore may have come out the other way had all pre-2012 costs been considered. The record does not support a finding that the Forest

Service's error "clearly had no bearing on … the substance of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1090.

C. The district court's redaction order should be reversed.

For the reasons set out above, pp. 39–50, Energy Fuels' redacted estimate of "sunk costs," though relevant, need not be considered to conclude that the Forest Service's error was not harmless. It is enough to weigh the available record evidence and gaps together to conclude that the error was not harmless. If the Court believes, however, that the administrative record's insufficiencies do not allow the Court to conclude that the Forest Service's error was not harmless, the district court's redaction order, 1-ER-40, should be reversed, and the case should be remanded to the district court to reconsider the question of harmless error.

Because it was not lawful for the Forest Service to disregard pre-2012 costs, *see* above at pp. 15–25, the district court erred when it approved of Energy Fuels' redaction of its "sunk costs" estimate. 1-ER-40.[12] And regardless, once the court put the question of harmless

[12] Because resolution of a legal issue drove the lower court's relevancy ruling, review here is de novo. *See United States v. Fryberg*, 854 F.3d 1126, 1130 (9th Cir. 2017).

error into issue, there was no longer any possible question that Energy Fuels' estimate of sunk costs was "relevant" and thus improperly withheld under the stipulated protective order. *See* 2-ER-128 (allowing for redactions that are "not relevant to the claims in dispute"); Fed. R. Evid. 401. After all, that estimate is precisely the sort of information the district court expected the Trust to marshal. 1-ER-37.

If the current administrative record is deemed inadequate to conclude that the government's error was not harmless, moreover, it necessarily follows that extra-record evidence may be necessary to determine whether the amount of pre-2012 costs was a "relevant factor" that the Forest Service should have considered. *See Animal Def. Council v. Hodel*, 840 F.2d 1432, 1436 (9th Cir. 1988). A remand under those circumstances, therefore, should instruct the district court to afford the Trust an opportunity to seek leave to conduct discovery, so that the Trust may learn the basis of Energy Fuels' redacted cost estimate and gather additional evidence about pre-2012 costs that is in the defendants' possession but was omitted from the record. *Id.*

CONCLUSION

The Forest Service erred by disregarding pre-2012 mining costs, and that error was not harmless. Had the agency considered those costs, it may have determined that the Canyon Mine claims were invalid. The district court's summary-judgment order should be reversed, the validity determination should be vacated, and the matter should be remanded to the Forest Service to correct its error in a new validity determination. 5 U.S.C. § 706(2).

If the Court concludes, however, that the administrative record does not allow for a finding that the Forest Service's error was not harmless, the Court should reverse the district court's summary-judgment order, reverse the court's redaction order, and remand to the district court to allow the Trust an opportunity to request discovery and offer extra-record evidence on the subject of pre-2012 mining costs.

Respectfully submitted this 22nd day of December 2020.

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FOR THE NINTH CIRCUIT

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ADDENDUM

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Mining Law of 1872

30 U.S.C. § 22. Lands open to purchase by citizens.

> Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

30 U.S.C. § 26. Locators' rights of possession and enjoyment.

> The locators of all mining locations made on any mineral vein, lode, or ledge, situated on the public domain, their heirs and assigns, where no adverse claim existed on the 10th day of May 1872 so long as they comply with the laws of the United States, and with State, territorial, and local regulations not in conflict with the laws of the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations. But their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges. Nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim to enter upon the surface of a claim owned or possessed by another.

30 U.S.C. § 29. Patents, etc.

A patent for any land claimed and located for valuable deposits may be obtained in the following manner: Any person, association, or corporation authorized to locate a claim under sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title and section 661 of Title 43, having claimed and located a piece of land for such purposes, who has, or have, complied with the terms of sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title, and section 661 of Title 43, may file in the proper land office an application for a patent, under oath, showing such compliance, together with a plat and field notes of the claim or claims in common, made by or under the direction of the Director of the Bureau of Land Management, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat previous to the filing of the application for a patent, and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in such land office, and shall thereupon be entitled to a patent for the land, in the manner following: The register of the land office, upon the filing of such application, plat, field notes, notices, and affidavits, shall publish a notice that such application has been made, for the period of sixty days, in a newspaper to be by him designated as published nearest to such claim; and he shall also post such notice in his office for the same period. The claimant at the time of filing this application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the Director of the Bureau of Land Management that $500 worth of labor has been expended or improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by such reference to natural objects or permanent monuments as shall identify the claim, and furnish an accurate description, to be incorporated in the patent. At the expiration of the sixty days of publication the claimant shall file his affidavit, showing that the plat and notice have been posted in a conspicuous place on the

claim during such period of publication. If no adverse claim shall have been filed with the register of the proper land office at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent, upon the payment to the proper officer of $5 per acre, and that no adverse claim exists; and thereafter no objection from third parties to the issuance of a patent shall be heard, except it be shown that the applicant has failed to comply with the terms of sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title and section 661 of Title 43. Where the claimant for a patent is not a resident of or within the land district wherein the vein, lode, ledge, or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section by the claimant for such patent may be made by his, her, or its authorized agent, where said agent is conversant with the facts sought to be established by said affidavits.

Administrative Procedure Act

5 U.S.C. § 706. Scope of review.

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

Federal Land Policy and Management Act of 1976

43 U.S.C. § 1714. Withdrawals of lands.

(a) Authorization and limitation; delegation of authority

On and after the effective date of this Act the Secretary is authorized to make, modify, extend, or revoke withdrawals but only in accordance with the provisions and limitations of this section. The Secretary may delegate this withdrawal authority only to individuals in the Office of the Secretary who have been appointed by the President, by and with the advice and consent of the Senate.

* * *

(c) Congressional approval procedures applicable to withdrawals aggregating five thousand acres or more

(1) On and after October 21, 1976, a withdrawal aggregating five

> thousand acres or more may be made (or such a withdrawal or any other withdrawal involving in the aggregate five thousand acres or more which terminates after such date of approval may be extended) only for a period of not more than twenty years by the Secretary on his own motion or upon request by a department or agency head. * * *

Pub. L. 94-579 § 701. Effect on existing rights.

* * *

> (h) All actions by the Secretary concerned under this Act shall be subject to valid existing rights.

* * *

Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

APPELLANTS' EXCERPTS OF RECORD: INDEX VOLUME

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December 22, 2020

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December 22, 2020

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al.,

Plaintiffs,

v.

Heather Provencio, Forest Supervisor, Kaibab National Forest, et al.,

Defendants.

and

Energy Fuels Resources (USA), Inc, et al.,

Intervenor-Defendants.

NO. CV-13-08045-PCT-DGC

JUDGMENT IN A CIVIL CASE

Decision by Court. This action came for consideration before the Court. The issues have been considered and a decision has been rendered.

IT IS ORDERED AND ADJUDGED that pursuant to the Court's Order filed May 22, 2020, Energy Fuels' Motion for Summary Judgment having been granted with respect to Plaintiffs' request to enjoin activities at the Canyon Mine and on the merits of claim four and that The Forest Service's Motion for Summary Judgment having been granted on the merits of claim four. This case is hereby terminated.

Debra D. Lucas
Acting District Court Executive/Clerk of Court

May 22, 2020

By s/ M. Pruneau
Deputy Clerk

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust; Center for Biological Diversity; Sierra Club; and Havasupai Tribe, Plaintiffs, v. Heather Provencio, Forest Supervisor, Kaibab National Forest; and United States Forest Service, U.S. Department of Agriculture, Defendants, and Energy Fuels Resources (USA), Inc.; and EFR Arizona Strip LLC, Intervenor-Defendants.	No. CV-13-8045-PCT-DGC **ORDER**

This case arises from the proposed reopening of the Canyon Mine, a 17-acre uranium mine located six miles south of the Grand Canyon in the Kaibab National Forest. The Havasupai Tribe and three environmental groups – Grand Canyon Trust, Center for Biological Diversity, and Sierra Club – brought this suit for declaratory and injunctive relief against the United States Forest Service and the Supervisor of the Kaibab National Forest (collectively, the "Forest Service"). Doc. 1. The Canyon Mine's owners and operators, Energy Fuels Resources (USA), Inc. and EFR Arizona Strip, LLC (together, "Energy Fuels"), intervened as Defendants. Docs. 30, 31, 35.

The parties have filed motions for summary judgment on the only remaining claim in the case – claim four – which challenges the Forest Service's determination that Energy Fuels had "valid existing rights" at the Canyon Mine when the Department of the Interior ("DOI") withdrew public lands around the Grand Canyon from new mining claims. Docs. 226, 233, 234; *see* Doc. 115 ¶¶ 89-92. The Court heard oral argument by telephone conference on May 11, 2020. *See* Doc. 242. For reasons stated below, the Court will grant summary judgment in favor of Defendants.

I. Background.

The history of the Canyon Mine spans more than 30 years. In October 1984, Energy Fuels submitted to the Forest Service a proposed Plan of Operations for the mine. AR Doc. 2 at 193-221.[1] The Forest Service completed a Final Environmental Impact Statement ("FEIS") pursuant to the National Environmental Policy Act ("NEPA"). AR Doc. 3. In September 1986, the Forest Service issued a Record of Decision ("ROD") approving construction and operation of the Canyon Mine under a modified version of the Plan (the "1986 Plan"). AR Doc. 6. Several administrative appeals followed, and the Forest Service affirmed the ROD. AR Doc. 188 at 3972. The Ninth Circuit rejected a challenge to the ROD in August 1991. *See Havasupai Tribe v. United States*, 943 F.2d 32 (9th Cir. 1991).

Shortly thereafter, Energy Fuels began constructing the mine. It built surface structures and sank the first 50 feet of a 1,500-foot shaft, but placed the mine on standby status in 1992 because of low prices in the uranium market. AR Doc. 525 at 10487. For the next 20 years, the mine was inactive but maintained under the interim management portions of the 1986 Plan. AR Doc. 481 at 10314.

In January 2012, the Secretary of the DOI, acting under authority of the Federal Land Policy and Management Act ("FLPMA"), withdrew for 20 years some one million acres of public land from mineral location and entry under the Mining Law of 1872, 30

[1] Citations to the administrative record are denoted "AR," followed by the relevant document and page number. Citations to documents filed in the Court's docket are denoted "Doc.," and pin cites are to page numbers placed at the top of each page by the Court's electronic filing system. For simplicity, the Court will refer to all entities that have owned the Canyon Mine during the last 30 years as "Energy Fuels."

U.S.C. § 22 (the "Withdrawal"). AR Doc. 481 at 10308-31; 77 Fed. Reg. 2563, 2012 WL 122658 (Jan. 18, 2012); *see* 43 U.S.C. § 1714; *Nat'l Mining Ass'n v. Zinke*, 877 F.3d 845 (9th Cir. 2017).[2] The Withdrawal covered the location of the Canyon Mine, but did not disturb valid existing mining rights. 77 Fed. Reg. 2563. Before approving the Withdrawal, which had been proposed in 2009, the DOI prepared an Environmental Impact Statement. AR Docs. 446, 447; 74 Fed. Reg. 35,887-01, 2009 WL 2143370 (July 21, 2009). The statement noted the existence of the Canyon Mine and assumed it would resume operations at some point. AR Doc. 446 at 9090, 9093.

In August 2011, Energy Fuels notified the Forest Service that it intended to resume mining under the 1986 Plan. AR Doc. 439. In response, the Forest Service decided to prepare a mineral report to determine whether the Canyon Mine had "valid existing rights," and therefore was not affected by the Withdrawal (the "VER Determination"). *See* 43 C.F.R. § 3809.100(a). Although Energy Fuels initially asserted that additional government approvals were not required before the mine reopened (AR Doc. 443), Energy Fuels agreed to withhold shaft sinking until the VER Determination was finished (Doc. 123-2 at 2-3).[3]

The Mining Law of 1872 provides that citizens may acquire rights to "valuable mineral deposits" on federal lands. 30 U.S.C. § 22. To determine whether Energy Fuels had valid existing rights in the Canyon Mine at the time of the Withdrawal, the Forest Service therefore assessed whether the rights were "valuable." The VER Determination, finished on April 18, 2012, found that a "valuable mineral deposit" existed at the Canyon Mine because, "under present economic conditions, the uranium deposit . . . could be mined, removed, transported, milled and marketed at a profit." AR Doc. 525 at 10483,

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[2] Mineral entry refers to "the right of entry on public land to mine valuable mineral deposits," and mineral location is "the act or series of acts whereby the boundaries of a claim are marked." *Mount Royal Joint Venture v. Kempthorne*, 477 F.3d 745, 750 n.3 (D.C. Cir. 2007). The Withdrawal foreclosed the development of new mining claims.

[3] Energy Fuels resumed sinking the shaft after the VER Determination was completed in 2012, and finished the shaft in March 2018. *See U.S. Dep't of Agric., Forest Serv., Canyon Uranium Mine*, https:/www.fs.usda.gov/detail/kaibab/home/?cid=fsm91 050263 (last visited May 4, 2020). Energy Fuels advised the Forest Service that ore production would not occur immediately due to low uranium prices, and has provided no estimate for when ore production will begin. *Id.*

10506. The Forest Service concluded that Energy Fuels had "valid existing rights that were established prior to the Withdrawal," and that further operations at the mine were not barred by the Withdrawal. *Id.*

In addition to the VER Determination, the Forest Service performed a "Mine Review" before the mine reopened. AR Doc. 533. The review was conducted by a 13-person interdisciplinary team with expertise in minerals and geology, surface and groundwater, air quality, transportation, tribal consultation, heritage resources, vegetation, the NEPA, and socioeconomic issues. *Id.* at 10597. Among other matters, the team evaluated the sufficiency of the 1986 Plan and the original FEIS and ROD; historical and religious issues related to local tribes; the effect of resumed operations on the quality of air, surface water, and groundwater; and the effect of resumed operations on wildlife and any threatened, endangered, or sensitive species. *Id.* at 10592–637. The Mine Review was finished on June 25, 2012, and concluded that operations could resume at the Canyon Mine under the 1986 Plan. *Id.* at 10594.

Plaintiffs filed this lawsuit in March 2013, seeking declaratory and injunctive relief under the Administrative Procedure Act ("APA"), 5 U.S.C. § 706. Doc. 1. Plaintiffs' amended complaint asserted four claims: (1) the Forest Service violated the NEPA by not conducting a new environmental impact study in connection with the VER Determination (Doc. 115 ¶¶ 70-77); (2) the Forest Service violated the National Historic Preservation Act ("NHPA") by failing to complete a full § 106 historic property review before approving resumed operations at the mine (*id.* ¶¶ 78-83); (3) the Forest Service alternatively violated the NHPA by not properly updating its original § 106 analysis (*id.* ¶¶ 79-88); and (4) the Forest Service violated the Mining Law, the FLPMA, and the 1897 Organic Act by failing to account for various costs in the VER Determination (*id.* ¶¶ 89-92).

On April 7, 2015, the Court granted summary judgment to Defendants on all claims. Doc. 166. On claims one through three, the Court held that the VER Determination was not a "major federal action" requiring a new environmental impact study under the NEPA or an "undertaking" requiring a full § 106 consultation under the NHPA, and that the Forest

Service's NHPA review under 36 C.F.R. § 800.13(b)(3) was appropriate and reasonable. *Id.* at 22-41. On claim four, the Court held that Plaintiffs had Article III standing and that the VER Determination was a "final agency action" subject to review under the APA, but that Plaintiffs lacked prudential standing because claim four fell outside the Mining Law's "zone of interests." *Id.* at 13-21; *see Grand Canyon Trust v. Williams*, 98 F. Supp. 3d 1044 (D. Ariz. 2015).

The Ninth Circuit initially affirmed on all grounds. *See Havasupai Tribe v. Provencio*, 876 F.3d 1242 (9th Cir. 2017). One year later, however, the Ninth Circuit withdrew its original decision and entered an amended order that affirmed the rulings on claims one through three, but held that claim four fell within the FLPMA's zone of interests. The Ninth Circuit remanded claim four for consideration on the merits. *Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1166-67 (9th Cir. 2018).

The parties now move for summary judgment on claim four. Docs. 226, 233, 234. Plaintiffs argue that the VER Determination is invalid because the Forest Service failed to consider all relevant costs in its profitability analysis of the Canyon Mine. Doc. 228 at 13-22. Defendants contend that Plaintiffs lack Article III standing and otherwise are entitled to no relief because the VER Determination was not legally required. Docs. 233-1 at 8-11, 234-1 at 12-20. Defendants further contend that claim four fails on the merits because the VER Determination included all relevant costs and must be upheld under the APA's deferential standard of review. Docs. 233-1 at 11-20, 234-1.

II. Article III Standing.

The Court previously held that the Forest Service's VER Determination was not required by law – that mining could have resumed at the Canyon Mine on the basis of the 1986 Plan. Doc. 166 at 6-11. Based on this holding, the Forest Service now contends that Plaintiffs lack Article III standing to bring claim four. Doc. 234-1 at 12-20. It argues that because authorization to operate the mine derives solely from the 1986 Plan approval, and not from the VER Determination, Plaintiffs' alleged injuries are traceable to the 1986 Plan approval alone. *Id.* at 19. As a result, claim four fails two requirements of Article III

standing: Plaintiffs' injuries are not fairly traceable to the VER Determination and will not be redressed by setting it aside. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

The Court previously held that claim four satisfied these standing requirements. Doc. 166 at 13-16. On appeal, the Ninth Circuit also was "satisfied that plaintiffs have suffered injuries in fact that are fairly traceable to the Service's actions and that could be redressed by a favorable judicial determination." *Havasupai Tribe*, 906 F.3d at 1162 n.3. Plaintiffs argue that this Ninth Circuit conclusion is "both law of the case and binding precedent." Doc. 238 at 7 (quoting *Nordstrom v. Ryan*, 856 F.3d 1265, 1270 (9th Cir. 2017)). The Court agrees.

The Ninth Circuit specifically found that Plaintiffs satisfy the elements of Article III standing on claim four. *See Havasupai Tribe*, 906 F.3d at 1162 n.3. This ruling was not dictum, as the Forest Service contends (Doc. 234-1 at 19), but a holding essential to the court's judgment. "The federal courts are under an independent obligation to examine their own jurisdiction, and standing is perhaps the most important of the jurisdictional doctrines." *FW/PBS, Inc. v. City of Dallas*, 493 U.S. 215, 231 (1990) (quotation marks, brackets, and citations omitted).

Nor would the Ninth Circuit have reached the issue it addressed on appeal – whether claim four satisfied the zone-of-interests test – without first confirming that Plaintiffs have Article III standing to bring the claim. *See Nordstrom*, 856 F.3d at 1270 ("In *Nordstrom I*, we necessarily decided that Nordstrom had standing to bring his Sixth Amendment claim"); *see also Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 93-102 (1998) (Article III standing must be determined before addressing whether a cause of action exists); *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 127-28 (2014) (noting that "prudential standing" is a misnomer and holding that the zone-of-interests requirement is not jurisdictional, but concerns whether a cause of action exists). The Ninth Circuit's decision "is both the law of the case and binding precedent that [the Court] must follow." *Nordstrom*, 856 F.3d at 1270; *see California v. U.S. Dep't of Health & Human*

Servs., 941 F.3d 410, 421 (9th Cir. 2019). The Court will deny the Forest Service's motion on the issue of standing.

III. Defendants' Arguments Based on Plaintiffs' Requested Relief.

Plaintiffs ask the Court to set aside the VER Determination and enjoin all activity at the Canyon Mine until a new VER Determination can be completed. Doc. 228 at 22; *see* Doc. 115 at 28-29. Energy Fuels argues that because the VER Determination was not legally required and has no effect on the 1986 Plan or continued operations at the mine, Plaintiffs are entitled to no relief. Doc. 233-1 at 8-11. The Court concludes that Plaintiffs, if successful, could have the VER Determination set aside, but could not obtain an injunction of activity at the Canyon Mine. The Court will address the injunction issue first.

A. Enjoining Activity at the Canyon Mine.

By its own terms, the Withdrawal did not extinguish mining rights that already existed. The Court previously held that the Withdrawal required a validity determination only for mines which required a new plan of operations. Doc. 166 at 8-9 (citing AR Doc. 481 at 10310; Fed. Reg. 2563, 2012 WL 122658 (Jan. 18, 2012)); *see* 43 C.F.R. § 3809.100(a); *Vane Minerals (US), LLC v. United States*, 116 Fed. Cl. 48, 57-58 (2014); *In re Goergen*, 144 IBLA 293, 297-98 (1998). Because the 1986 Plan was already approved and the Canyon Mine did not require approval of a new plan, the VER Determination was not "legally required before operations at the Canyon Mine could resume." Doc. 166 at 6, 10.

Given this holding, which was not disturbed on appeal, the Court concludes that Plaintiffs would have no legal basis to enjoin mine operations if the VER Determination was set aside. *Cf. In re Ctr. for Biological Diversity*, 162 IBLA 268, 281 (2004) ("[U]ntil the [DOI] undertakes a mining or mill site claim contest . . . and renders a final determination of invalidity, it is well established that the claimant will be permitted to engage in mining and processing operations.") (citations omitted); *In re Sw. Res. Council*, 96 IBLA 105, 118-24 (1987) (explaining that "[t]he holder of a valid mining claim has the right, from the time of location, to extract, process and market the locatable mineral

resources thereon"). The Court will grant Energy Fuels' motion for summary judgment on claim four to the extent Plaintiffs seek to enjoin operations at the Canyon Mine.

B. Setting Aside the VER Determination.

Energy Fuels argues that the Court need not reach the merits of claim four because the VER Determination was not legally required and setting it aside would have no effect on the mining project. Doc. 233-1 at 10-11. But federal agencies often have discretion on whether to take a particular action. *Fed. Election Comm'n v. Akins*, 524 U.S. 11, 25 (1998). When they do, those adversely affected by the action generally may sue to have it set aside. *Id.*; *see Abbott Labs. v. Gardner*, 387 U.S. 136, 140 (1967) (discussing presumption of reviewability of agency action); *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410 (1971) (same). If a reviewing court finds that the agency abused its discretion or committed legal error, the court "will set aside the agency's action and remand the case – even though the agency . . . might later, in the exercise of its lawful discretion, reach the same result for a different reason." *Fed. Election Comm'n*, 524 U.S. at 25 (citing *SEC v. Chenery Corp.*, 318 U.S. 80 (1943)).[4]

VER determinations also enable the Forest Service and the DOI to make "a decision on whether or not to contest the [mining] claim." Forest Service Manual § 2819.1 (AR 7312); *see Grand Canyon Tr.*, 98 F. Supp. 3d at 1052; 43 C.F.R. § 4.451-1. Plaintiffs note, correctly, that the Forest Service's VER Determination serves as a certification of claim validity that protects Energy Fuels from a claims contest. Doc. 228 at 12; *see Freeman v. U.S. Dep't of the Interior*, 37 F. Supp. 3d 313, 325 (D.D.C. 2014).

The VER Determination is subject to judicial review.[5]

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[4] The Forest Service claims that even if the Court were to set aside the VER Determination, Plaintiffs' injuries would not be redressed because there is no indication the Forest Service would undertake another review. Doc. 234-1 at 16. But the Forest Service presents no evidence that it would decline to make another VER Determination, and its "speculation do[es] not amount to evidence sufficient to warrant granting summary judgment." *Carling v. Veneman*, No. 3:04-CV-00211-JKS, 2006 WL 8438430, at *7 (D. Alaska July 6, 2006).

[5] This ruling is consistent with the Court's earlier ruling on the reviewability of the VER Determination, which was affirmed on appeal. The Forest Service argued in its motion to dismiss that the VER Determination was not a final agency action subject to

IV. APA Standard of Review.

"The APA's standard of review is 'highly deferential, presuming the agency action to be valid and affirming the agency action if a reasonable basis exists for its decision." *Cal. Pac. Bank v. Fed. Deposit Ins. Corp.*, 885 F.3d 560, 570 (9th Cir. 2018) (quoting *Indep. Acceptance Co. v. California*, 204 F.3d 1247, 1251 (9th Cir. 2000)). A court may set aside a final agency action only where the plaintiffs show that the action is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). This scope of review "is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'" *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins.*, 463 U.S. 29, 43 (1983) (citation omitted); *see also Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976) ("Absent a showing of arbitrary action, we must assume that the agencies have exercised this discretion appropriately.").

V. The Profitability Test and the VER Determination.

In determining that valuable mineral rights existed at the Canyon Mine, and that Energy Fuels therefore had valid existing rights under the 1872 Mining Law, the Forest service applied the "prudent man" and "marketability" tests recognized in *United States v. Coleman*, 390 U.S. 599, 602 (1968). It concluded that uranium at the mine could, under present economic conditions, "be mined, removed, transported, milled and marketed at a profit." AR Doc. 525 at 10483, 10486, 10506.

Plaintiffs contend that this determination is invalid because the Forest Service failed to consider costs of environmental monitoring, wildlife conservation, future environmental

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judicial review. Doc. 71 at 21-23. The Court disagreed, finding that the determination "marked the consummation of the Forest Service's validity determination" and was "a practical requirement before the Canyon Mine resumed operations" under *Bennett v. Spear*, 520 U.S. 154 (1997). Doc. 131 at 7. The Court then concluded that such a practical requirement could satisfy the second prong of the *Bennett* test, which requires that agency action be "one by which rights or obligations have been determined, or from which legal consequences will flow." *Id.* at 9-10 (quoting *Bennett*, 520 U.S. at 178); *see also* Doc. 166 at 21. The Ninth Circuit agreed. *See Havasupai Tribe*, 906 F.3d at 1162-63 ("[T]he Mineral Report *determined* that such rights existed with respect to Canyon Mine, and that is all *Bennett* requires.") (emphasis in original).

mitigation measures, as well as sunk costs. Docs. 228 at 14-22, 238 at 12. Defendants argue that all relevant costs were considered and that the VER Determination must be upheld under the APA's deferential standard of review. Docs. 233-1 at 11-21, 234-1 at 21-23.

A. The Prudent Man and Marketability Tests.

Congress has delegated to the Secretary of the Interior "the responsibility of determining the validity of mining claims." *Rawls v. Sec'y of Interior*, 460 F.2d 1200, 1200-01 (9th Cir. 1972). For more than 100 years, the Secretary has applied a "prudent man" test to assess claim validity. *See Castle v. Womble*, 19 L.D. 455, 457 (1894). Under this test, a mineral deposit is "valuable" as required by the Mining Law if it is "of such a character that 'a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine.'" *Coleman*, 390 U.S. at 602 (quoting *Castle*, 19 L.D. at 457). The Supreme Court "has approved the prudent-man formulation and interpretation on numerous occasions." *Id.* (citing *Chrisman v. Miller*, 197 U.S. 313, 322 (1905); *Cameron v. United States*, 252 U.S. 450, 459 (1920); *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 335-36 (1963)); *see also Watt v. W. Nuclear, Inc.*, 462 U.S. 36, 58 n.18 (1983).

In *Coleman*, the Supreme Court addressed another test developed by the Secretary known as "the marketability test." 390 U.S. at 600. That test requires a mine claimant to show "that the mineral can be 'extracted, removed and marketed at a profit.'" *Id.* The Court upheld "the marketability test [as] an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is 'valuable.'" *Id.* at 602. The Supreme Court found that "the prudent-man test and the marketability test are not distinct standards, but are complementary in that the latter is a refinement of the former." *Id.* at 603.

B. The VER Determination.

Consistent with this law, the VER Determination considered whether, "under present economic conditions, the uranium deposit [at the Canyon Mine] could be mined,

removed, transported, milled and marketed at a profit." AR Doc. 525 at 10486. The analysis was done by two Forest Service certified mineral examiners: Michael Linden, a Salable Mineral Specialist, and Mike Doran, a Locatable Minerals Lead. *Id.* at 10482-83. Linden and Doran followed the valuation approach set forth in the Bureau of Land Management Surface Management Handbook, H-3809-1 ("BLM Handbook"), and prepared a 45-page report setting forth their methods of investigation, work performed, information relied on, and analysis. AR Doc. 525. Their findings were approved by Locatable Minerals Specialist Greg Visconty. *Id.* at 10482.

The relevant dates for determining the validity of the mining claims were July 21, 2009, the date when the Withdrawal was first proposed by the Secretary, and April 18, 2012, the date of the VER Determination. AR Doc. 525 at 10487; *see* 65 Fed. Reg. 41,724, 41,725-26 (July 6, 2000) (DOI policy explaining applicable "marketability dates"). The actual mineral examination was conducted over several months in late 2011 and early 2012. AR Doc. 525 at 10483, 10486.

The Forest Service examiners made multiple trips to the Canyon Mine and also visited Energy Fuels' offices in Fredonia, Arizona, its Arizona One Mine north of the Grand Canyon, and its White Mesa Mill in Blanding, Utah. *Id.* at 10486. Their field work included verifying the mine boundaries, documenting development activities, and examining and testing drill core samples. *Id.* at 10487, 10495-97. The examiners analyzed geological reports and maps to obtain information about mineralization of the area, including the many uranium-bearing breccia pipes on the Colorado Plateau. *Id.* at 10487-95. They reviewed Forest Service case files and Energy Fuels' records and data for the Canyon Mine and the Arizona One Mine. *Id.* at 10487-89. They evaluated the methods and results of Energy Fuels' mining and milling operations. *Id.* at 10498-99. They also performed an economic analysis based, among other things, on the tonnage and grade of the uranium ore to be mined, Energy Fuels' capital and operating costs, commodity pricing, and a cash flow feasibility analysis. *Id.* at 10499-10505.

Their economic analysis relied in part on cost information provided by Energy Fuels. *Id.* at 10500 (citing Appendix C for specific costs). Plaintiffs criticize the Forest Service for looking to Energy Fuels for such information, but the BLM Handbook specifically approves such a procedure. AR Doc. 374 at 7435-36. In addition, Energy Fuels is uniquely qualified to provide relevant information about uranium mining near the Grand Canyon. It is the only company that has mined breccia pipe uranium mines on federal lands subject to the Withdrawal, including the Arizona One, Pinenut, and Kanab North Mines. AR Doc. 669 at 12396. Its Arizona One Mine, like the Canyon Mine, is located about 6 miles from the rim of the Grand Canyon and was deemed to have valid existing rights at the time of the Withdrawal. It too was subject to environmental evaluation and approval by the Forest Service – approvals challenged unsuccessfully by some of the Plaintiffs in this Court. *See Ctr. for Biological Diversity v. Salazar*, 791 F. Supp. 2d 687, 704 (D. Ariz. 2011), *aff'd*, 706 F.3d 1085 (9th Cir. 2013). The examiners found that "[c]osts for the Canyon Mine are expected to be similar to the currently operating Arizona One Mine." AR Doc. 525 at 10500.[6] But the examiners did not simply accept Energy Fuels' cost information. They looked to independent sources to verify such items as the costs of labor and transportation and the projected sale price for uranium. *Id.* at 10502, 10504.

After completing their mineral review, the examiners made the following findings:

- The Colorado Plateau hosts many uranium-bearing breccia pipes, and numerous studies have documented their importance as a source of uranium resources for the country. More than 17 million pounds of uranium have been produced from breccia pipe deposits on the Colorado Plateau over the last 50 years. *Id.* at 10491.

- Drilling [at the Canyon Mine] over the years has confirmed the presence of a breccia pipe containing more than 84,000 tons of uranium ore grading at

[6] This was an appropriate consideration for the examiners. As the BLM Handbook notes in its discussion of how to estimate mining costs: "Neighboring mining operations within a particular mining district often use similar mining methods. The removal cost per ton of rock or cubic yard of gravel will usually vary by only a few percent between properties." AR Doc. 374 at 7437.

0.97% "U3O8," which equates to more than 1.6 million pounds of uranium. *Id.* at 10486.[7]

- Chemical examinations of core samples confirm the presence of uranium and certain other associated metals at the Canyon Mine. Energy Fuels' exploration drilling blocked out three different ore bodies which confirmed that the Canyon Mine uranium deposit can be classified as a proven reserve. *Id.* at 10496-97 (citing Appendix E).

- The proposed mining method at that Canyon Mine is a combination of modified block-caving and shrink-stopping. The underground workings are to include the main shaft, an escape shaft and air-flow path, cross-cut levels, and a series of "corkscrew" workings to follow the ore. The underground workings would be very similar to those used at the Arizona One Mine. *Id.* at 10498.

- Energy Fuels' White Mesa Mill is the sole conventional uranium mill operating in North America. Uranium ore extracted from the Canyon Mine is transported to the mill in trucks. Each truck contains about 25 tons of material. Haulage distance to the mill is about 330 miles, one-way. The mill uses conventional uranium processing methods (ore screening and grinding, leaching, solvent extraction, and drying). The resulting "yellowcake" is stored in 55-gallon drums as a final product for sale that ultimately will be used as fuel for nuclear power plants. The milling process recovers 95% of available uranium. *Id.* at 10498-99, 10501.

- Energy Fuels developed ore tonnage and grade estimates from the results of 45 surface holes totaling 61,400 feet with an average depth of about 1,364 feet. Two different resource calculations were made for the Canyon Mine deposit. Energy Fuels' numbers were reasonable and acceptable for the examiners to evaluate the Canyon Mine claims. Based on experience gained from mining older breccia pipe deposits, the ore tonnage estimates likely will be much higher once untested portions of the Canyon Pipe are drilled. *Id.* at 10498-99.

- Capital and operating cost estimates for the Canyon Mine are expected to be similar to the costs for the Arizona One Mine. A review of Energy Fuels' cost estimates found them to be reasonable and at an adequate level to spot

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[7] Uranium can take many chemical forms, but in nature it is generally found as an oxide. Triuranium octoxide (U_3O_8), a "yellowcake" substance, is the most stable form of uranium oxide and the form most commonly found in nature. *See ConverDyn v. Moniz*, 68 F. Supp. 3d 34, 38 (D.D.C. 2014).

check specific operating costs. Labor and transportation costs were spot-checked and independently verified. *Id.* at 10500.

- The Plan approved in 1986 included the sinking of a 1,500-foot vertical shaft with development levels between 900 and 1,500 feet. Mine production would be approximately 200 tons per day. The estimated annual production is 35,287 tons of ore and 623,940 pounds of U3O8. The development program is expected to last three years to completion, and the minimal mine life is five years. *Id.* at 10500-01.

- Energy Fuels planned to move its surface infrastructure and workforce from the Arizona One Mine to the Canyon Mine. Much of the surface development at the Canyon Mine is complete, and includes the main headframe, hoist house, warehouse and shop, sediment ponds, and power lines. These costs are considered "sunk" costs because they were previously completed for mine development and are fixed assets on the claims. Most of the capital expenses are future underground development costs. *Id.* at 10497, 10500-01 (citing Appendices B and D).

- The total capital cost is $19,109,161. This amount includes a nearly $1.7 million contingency fund and $450,000 in reclamation costs. *Id.* at 10500-01.[8]

- Estimated operating costs for each ton of ore at the Canyon Mine are $110.42 for mining, $66.00 for haulage, $141.04 for milling, and $36.56 in indirect costs. The total operating cost is $354.02 per ton of ore, and the per-pound cost of U3O8 is $17.36. *Id.* at 10501-02 (see Tables 4 & 5).

- Based on the feasibility analysis performed using the APEX program, Energy Fuels would earn a profit of $29,350,736 based on a uranium (U3O8) price of $56.00 per pound (net present values were $22,250,758 at a 10% discount rate, $19,336,119 at a 15% discount rate, and $16,755,429 at a 20% discount rate). *Id.* at 10504-05 (see Table 6).

- At a uranium price of $56.00 per pound, the Canyon Mine would have a 78% rate of return and a one-year payback period. Using a more conservative uranium price of $42.00 per pound, the mine would still be

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[8] The capital costs are summarized in Table 3 of the economic evaluation section of the report (AR Doc. 525 at 10500), and specific costs are set forth in Appendix C (*see* Doc. 228-1 at 5-12).

profitable with a 36% rate of return. The minimum rate of return for the mining industry is about 12%. *Id.* at 10505.[9]

- We conclude that a discovery of a valuable mineral deposit existed at the time of the segregated withdrawal on July 21, 2009 . . . as required under the 1872 Mining law (30 USC 21-54). Furthermore, the company has shown that on July 21, 2009 and under present economic conditions, the uranium deposit on the claims could be mined, removed, transported, milled and marketed at a profit. We conclude that the test for discovery of a valuable mineral . . . has been met . . . . The [Canyon Mine has] valid existing rights that were established prior to the mineral withdrawal.

Id. at 10506.

VI. Plaintiffs' APA Challenge to the VER Determination.

Plaintiffs contend that the VER Determination is invalid under the APA because: (1) Energy Fuels did not estimate, and the Forest Service did not consider, environmental costs for monitoring radiation, surface water, and groundwater, costs for wildlife conservation, and costs of future environmental mitigation measures; and (2) the Forest Service did not include "sunk costs" in its estimate of the mine's value. Doc. 228 at 13-22. Before addressing these arguments, a few broader points deserve mention.

The examiners "performed several independent discounted cash flow analyses" using APEX software, which is "well-accepted as a reliable evaluation tool by the mining industry for a variety of commodities and mine designs." AR Doc. 525 at 10504. Data needed to run the cash flow analyses included the mine's capital and operating costs,

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[9] Plaintiffs argue that the mine would lose more than $10 million if the uranium price was $23.00 per pound. Docs. 228 at 10, 238 at 9. But Plaintiffs do not dispute that the Forest Service used the correct marketability dates when it determined the relevant price per pound – the date of the initial Withdrawal and the date of the VER Determination – or correct methods for determining price under the BLM Handbook. *See* 65 Fed. Reg. 41,724-5. Nor do Plaintiffs dispute that the Forest Service used the lower of the two prices produced by these dates in its validity analysis ($56.00 per pound). *See* Doc. 233-1 at 12-13. What is more, the $23.00 per pound figure cited by Plaintiffs is a multi-year average that is not consistent with BLM guidance and that comes from the declaration of Roger Clark, attached as Exhibit 4 to Plaintiffs' motion for summary judgment (Doc. 228-1 at 34-35), a document submitted solely to support Plaintiffs' standing arguments and not considered by the Court on the merits (Doc. 238 at 12). The $10 million loss also is found in an exhibit to Plaintiffs' motion that cannot be considered on the merits. *See* Doc. 228, Ex. 2. Thus, the $23.00 per pound price is irrelevant on multiple levels.

reserve tonnages, production rates, ore grades, commodity prices, and applicable federal and state taxes. *Id.* at 10504-05. Plaintiffs do not challenge the use of the APEX software.

The ultimate objective of the Forest Service's evaluation was to determine whether the Canyon Mine would be profitable. In addressing this question, the mineral examiners took a conservative approach – they erred on the side of understating the mine's potential profitability.

For example, a key component was the price Energy Fuels could receive for uranium. In estimating this price, the examiners used the BLM Handbook method, which looked at spot prices for uranium during the month of the valuation date and the preceding 36 months. *Id.* at 10502. When applied to the June 2009 valuation date, this method produced an average uranium price of $70.79 per pound. *Id.* When applied to January 2012 (while the VER Determination was underway), it produced an average price of $49.69 per pound. *Id.* After identifying these average spot prices, the examiners noted that uranium producers typically have long-term contracts for uranium delivery with prices "higher than the spot price" and that "include provisions for cost inflation, fuel surcharges and other factors." *Id.* Energy Fuels' long-term contracts between January 2009 and January 2012, which accounted for about half of its sales from the Arizona One Mine, varied between $61 and $57 per pound. Its short-term prices were $52 per pound. *Id.* at 10502-03. The examiners took an average of this range – $56 per pound – and used it for their estimated price in the analysis.[10] Thus, the examiners intentionally selected a lower price estimate than the $70.79 per pound that was available under BLM guidance for the 2009 marketability date, noting that "[i]t should be remembered that this is the lower price of the two time periods to consider, since the earlier time frame of July 21, 2009 and 36 months prior to that, would yield significantly higher prices using the BLM guidance policy." *Id.* at 10503.

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[10] BLM guidance notes that actual mine prices may be considered in arriving at a price estimate, so the examiners' look at Energy Fuels' actual contract prices was not error. *See* 65 Fed. Reg. at 41,726 ¶ 4.

The examiners also acted conservatively in estimating the amount of uranium the mine would produce: "From experience gained from [Energy Fuels'] properties with the other Colorado Plateau breccias mines, and from experience learned in mining older breccias deposits[,] . . . the ore tonnage estimates will likely go *much higher* once other 'un-tested' portions of the breccias pipe are drilled." *Id.* at 10499-500 (emphasis added). Indeed, of six Colorado Plateau uranium mines reported by Energy Fuels, the amount of ore ultimately removed from the mines averaged more than three times higher than the initial estimates. *See* Doc. 525, Appx. C at 12560 (actual mine production averaged 3.37 higher than initial surface calculations).

Using conservative estimates of the mine's ore production capacity and uranium prices, and adding in a contingency of $1,700,000 for unexpected costs, the APEX program estimated that the Canyon Mine would earn a profit of $29,350,736. *Id.* at 10504-05. This would be a 78% rate of return – six times the industry minimum. *Id.* The examiners then performed a "sensitivity analysis" by lowering the assumed uranium price by 25% below the lowest estimate produced by the BLM method (to $42 per pound), and found the mine still would be profitable and earn returns three times more than the industry minimum rate. *Id.* at 10505. Given this analysis, the mine was "of such a character that 'a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine.'" *Coleman*, 390 U.S. at 602 (citation omitted).

One additional point should be noted. The law "does not require a guaranteed profit to constitute a discovery" under the Mining Law. *United States v. Mannix*, 50 IBLA 110, 117-18 (1980). It requires only "a reasonable prospect of success in developing a valuable mine." *Id.* at 112; *see also Coleman*, 390 U.S. at 602 (requiring only a "reasonable prospect of success"); *Ideal Basic Indus., Inc. v. Morton*, 542 F.2d 1364, 1369 (9th Cir. 1976) (requiring "reasonable prospect of success"). The conservative approach taken by the mineral examiners confirms that the Canyon Mine has a reasonable prospect of success.

Against this backdrop, the Court will address the deficiencies alleged by Plaintiffs.

A. Environmental Costs.

1. Environmental Monitoring.

Plaintiffs note that the 1986 Plan requires Energy Fuels to monitor radiation around the mine, surface water in nearby streams, and groundwater beneath the mine, including a year's worth of pre-operation samples to establish baseline radioactivity and radon values. Doc. 228 at 14-15. According to the FEIS, the monitoring includes radiation measurements at 12 locations, radon measurements at the mine site and the nearby town of Tusayan, surface water samples at five locations, and soil samples at six locations. AR Doc. 3 at 527-28. Groundwater will be sampled quarterly. *Id.* at 530. The FEIS estimated the total cost of these monitoring efforts at $112,000. *Id.* at 538 ($70,000 for radiation monitoring of air, soil, and water, and $42,000 for groundwater sampling).

Plaintiffs claim that these monitoring costs were not considered by the Forest Service in the VER Determination. *Id.* Energy Fuels contends that the costs were included. As support, Energy Fuels cites the declaration of Harold R. Roberts, asserting that environmental monitoring costs were included in the "Mining & Site G&A" category included in Energy Fuels' cost spreadsheet. Doc 233-2, ¶ 8. But the Roberts declaration is not in the administrative record and will not be considered by the Court. *See Camp v. Pitts*, 411 U.S. 138, 142 (1973) ("the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court"); *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 992 (9th Cir. 2014).

Plaintiffs also cite evidence outside the record, but assert that Exhibits 2-5 to their motion for summary judgment are provided only to support their standing argument. Doc. 238 at 12. The Court will not consider those exhibits on the merits. Plaintiffs' Exhibit 1 purports to be a re-creation of Excel spreadsheets that the Forest Service used during the VER Determination, but the Court cannot conclude that the spreadsheets are

identical to those considered by the Forest Service and therefore will confine its review to the .pdf copies of spreadsheets in the administrative record.[11]

Looking only to the record evidence, the Court cannot resolve the dispute between the parties on whether the environmental monitoring costs were included in the VER Determination. Energy Fuels asserts that they are included in the "Mining & Site G&A" entry in the spreadsheets, but Plaintiffs note that this entry appears to include only "Sublevel development," "Utilities," and "Production." Doc. 228 at 15-16. The Court cannot determine what is included in "Production." Plaintiffs note that the production number is based on a per-ton estimate developed from Energy Fuels' Arizona One Mine, and assert that the environmental monitoring costs could not possibly be the same at the mine. *Id.* at 17. But as already noted, the Arizona One Mine is a breccia pipe uranium mine located 6.5 miles from the north rim of the Grand Canyon. *See* Doc. 228-1 at 34. It presumably raises environmental issues very similar to those arising at the Canyon Mine, 6 miles from the other side of the Grand Canyon.

The spreadsheets in the record also include entries for "Permitting & Engineering" and "Reclamation," as well as labor costs for "Radon Security" and "Engineer/ Environmental" (AR Docs. 673, 680), but these categories are not described in any detail. Thus, although it is possible that at least some environmental monitoring costs were included in the financial numbers used by the Forest Service, the Court cannot make that determination from the administrative record as a matter of undisputed fact. For purposes of the APA analysis below, the Court therefore will assume these costs were not included.

Energy Fuels further argues that the baseline environmental monitoring work identified by Plaintiffs was completed before the VER Determination in April 2012. Doc. 233-1 at 15. The ROD also asserts that it was completed. AR Doc. 6 at 928 ("Baseline measurements of radiation values in soil, air and water have been taken."). If

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[11] The Exhibit 1 spreadsheets were created by Plaintiffs for this litigation. *See* Doc. 228, Ex. 3. The declaration that attempts to show they are identical to those in the record acknowledges that some values in the record spreadsheets are redacted and the Exhibit 1 spreadsheets therefore did not perform the same calculations. *Id.* ¶¶ 8-9.

this is correct, these would be sunk costs, which are addressed below. But the Forest Service told the Court in November 2013 that the baseline monitoring had not been done and would occur shortly before mine operations are to begin. *See* Doc 95 at 6. Again, the Court cannot determine whether the baseline monitoring costs were included in the financial estimates relied on for the VER Determination, and will assume they were not included.

Plaintiffs acknowledge that the groundwater monitoring well (which is included in their discussion of environmental monitoring costs) was installed before the VER Determination. Docs. 228 at 9, 15; 238 at 15. This cost, therefore, is a sunk cost. Whether sunk costs should have been included in the VER Determination is addressed below.

2. Wildlife Conservation Measures.

The ROD requires Energy Fuels to replace 32 acres of elk foraging habitat and a watering source that would be displaced by the mine. AR Doc. 6 at 925. The elk habitat would be replaced by mechanically thinning trees and brush in a 32-acre area comparable to the mine site. AR Doc. 3 at 532; *see also* AR Doc. 628 at 11874 (specifying "mechanical thinning of conifers" as the means of restoration). The watering source would be replaced by constructing one earthen tank in a suitable location. *Id.* The FEIS estimated the cost of these measures at $14,420. AR Doc. 3 at 538 ($8,250 for the construction of the new water tank and $6,170 for creation of the new 32-acre foraging area).[12]

The Forest Service also received a recommendation from the U.S. Fish and Wildlife Service ("FWS") regarding measures for protecting California condors. AR Doc. 507. The recommended measures mostly were informational, such as advising mine employees to avoid interactions with condors and to report condor sightings to the FWS, and ensuring that the site remains clean so as not to attract the birds. *Id.* at 10433-34. The FWS also recommended that evaporation ponds at the site be made inaccessible to condors. *Id.*

[12] A Forest Service letter in the administrative record states that Energy Fuels has spent $12,000 for the reconstruction and sealing of nine earthen wildlife and livestock tanks, and that this "may exceed the total scope of work specified in the Canyon Mine EIS." AR Doc. 326 at 5859. This letter confirms the approximate cost of the water-source work required in the ROD.

at 10434. No method was specified, but this presumably would mean providing a covering of some sort for the ponds. Energy Fuels suggests that this could be done by covering the ponds with a net, which seems logical because more substantial coverings would likely impede the ponds' evaporation purpose. Doc. 233-1 at 17 n.5. Plaintiffs claim that the Forest Service failed to consider the costs of these wildlife conservation measures. Doc. 228 at 16.

Defendants contend that the condor protection costs are included in the "Surface Facilities, rehab, impoundment, ore pad" category of costs in the VER Determination. AR Doc. 525 at 10500. Plaintiffs disagree, citing specific components of this category that do not appear to include condor protection. Doc. 228 at 17. The Court cannot conclude from the administrative record that these costs were included in the VER Determination.[13]

For purposes of the APA review, the Court will assume that the VER Determination did not include the elk habitat restoration or the condor net.

3. Future Mitigation Measures.

Plaintiffs assert that environmental monitoring may identify contamination at the mine that will require future environmental mitigation measures. Doc. 228 at 15. They argue that the Forest Service should have estimated these potential future mitigation costs, such as possible pumping and treatment of groundwater if it is contaminated by the mine, and included them in the VER Determination. *Id.* Energy Fuels counters that the Forest Service is not required to speculate about unknown future costs when evaluating a mine's profitability. Doc. 233-1 at 18 (citing *United States v. Dwyer*, 175 IBLA 100, 118 (2008) (affirming the ALJ's finding that the "proposed measures for reducing costs and increasing profits amount to speculation")). The Court agrees with Defendants.

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[13] It is not clear whether a net will be needed to protect condors. Energy Fuels asserts that no net has been installed to date because no condors have been seen at the mine and a net could be dangerous to birds. Doc. 233-1 at 17 n.5. The 2012 Mine Review also seemed to recognize that the need for a net was uncertain, stating that the Forest Service would "work with the mining company to determine the necessity and practicality of such a covering or determine if there are any other actions the company could take to mitigate this possibility of an impact to the condor when standing water is in the evaporation pond." AR Doc. 533 at 10621.

The FEIS includes a detailed discussion of the mine's potential effect on groundwater and, using conservative assumptions, concludes that "the possibility for significant deterioration of water quality at any [point of] discharge is very small." AR Doc. 3 at 650. The ROD provides that groundwater monitoring will help "assure that important water sources, including springs which are sacred to the Hopi and Havasupai Tribes, will not be adversely affected by the Canyon mine." AR Doc. 6 at 924. And the 2012 Mine Review confirmed the validity of the FEIS and ROD. AR Doc. 533 at 10592-637. The review found that "[t]here does not seem to be any reason to reevaluate groundwater conditions or mining effects on them, as there is no new information or changed circumstances related to ground water that would indicate the original analysis was insufficient." *Id.* at 10624.

Thus, whether groundwater will ever become contaminated from the mine, and whether Energy Fuels will ever incur costs for remediation of the groundwater, are simply unknown. Predicting the cost for such a future possibility would require much speculation. The profitability of the mine should be based on "present economic conditions" – what is known today – rather than speculation. *See United States v. Garcia*, 161 IBLA 235, 257 (2004) ("As the Board has stated many times, 'the prudent man test is objective, and subjective considerations have no place in the calculus of prudence."); *United States v. Clouser*, 144 IBLA 110, 130 (1998) ("[W]e agree with [the ALJ] that . . . speculative cost reductions do not alter the Government's profitability determination"); *In re Pac. Coast Molybdenum Co.*, 75 IBLA 16, 29 1983) ("a mining claimant must show that, *as a present fact*, considering historic price and cost factors and assuming that they will continue, there is a reasonable likelihood of success that a paying mine can be developed.") (emphasis added); *United States v. Highsmith*, 137 IBLA 262, 278 (1977) ("No evidence has been offered by contestees as to the impact of [the] dump on marketability of the resources on the claims, . . . and we decline to speculate on this matter[.]")); *see also* Doc. 228 at 13 (Plaintiffs' acknowledgement that "[t]he rule is one of 'present marketability,' a limitation

impose by courts to thwart speculative claims"). Plaintiffs have not shown that the Forest Service erred in omitting speculative future mitigation measures.

4. Harmless Error.

Even if the Court assumes that the VER Determination omitted environmental monitoring, elk habitat restoration, and a net to protect condors, it cannot conclude that these relatively modest expenses would make the Canyon Mine unprofitable. Plaintiffs themselves do not assert that the mine would be unprofitable if these costs were considered. They claim only that "[t]he profitability forecast would have dropped substantially[.]" Doc. 228 at 10. But a drop in profits is not enough to defeat valid existing rights if the mine remains profitable.

In light of the relatively minor costs asserted by Plaintiffs, the Court directed the parties to address the harmless error rule during oral argument. Doc. 244. That subject consumed a majority of the hearing. After considering the parties' arguments and the cases cited during the hearing, the Court concludes that any error in omitting these environmental costs was harmless in the overall profitability analysis.

Section 706 of the APA instructs that "the court shall review the whole record or those parts of it cited by a party, and *due account shall be taken of the rule of prejudicial error*." 5 U.S.C. § 706 (emphasis added). The Supreme Court has interpreted this language to impose a harmless error rule like that adopted by courts in civil cases. *Shinseki v. Sanders*, 556 U.S. 396, 406 (2009) ("we have previously described § 706 as an administrative law harmless error rule.") (quotation marks, ellipsis, and citation omitted); *see also Ludwig v. Astrue*, 681 F.3d 1047, 1054 (9th Cir. 2012) ("*Sanders* establishes that administrative adjudications are subject to the same harmless error rule as generally applies to civil cases.").

Plaintiffs bear the burden of showing that their alleged errors were harmful. *Shinseki*, 556 U.S. at 409 ("the burden of showing that an error is harmful normally falls upon the party attacking the agency's determination") (quotation marks and citation omitted); *Organized Vill. of Kake v. U.S. Dep't of Agric.*, 795 F.3d 956, 969 (9th Cir. 2015)

("not every violation of the APA invalidates an agency action; rather, it is the burden of the opponent of the action to demonstrate than an error is prejudicial."); *Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631 F.3d 1072, 1092 (9th Cir. 2011) ("*Sanders* clarifies that the burden of showing an agency's deviation from the APA was not harmless rests with the petitioner[.]").

a. Procedural Error.

In attempting to avoid the effect of the harmless error rule, Plaintiffs emphasize Ninth Circuit cases which state that an agency error is harmless where it "clearly had no bearing on the *procedure used* or the *substance* of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1091-92 (emphasis added); *see Nw. Res. Info. Ctr., Inc. v. Nw. Power & Conservation Council*, 730 F.3d 1008, 1020 (9th Cir. 2013) (same). Plaintiffs argue that the failure to address the environmental costs they have identified is a procedural error sufficient to overcome the harmless error rule, regardless of the amount of costs omitted or their effect on the mine's profitability. The Court is not convinced.

Plaintiffs' Ninth Circuit cases focus on procedural errors in administrative rulemaking, an area of law where procedure matters greatly. The Ninth Circuit has instructed that the harmless error rule should be applied to congressionally-mandated rulemaking procedures only rarely. *See Cal. Wilderness Coal.*, 631 F.3d at 1020-21 (courts "must exercise great caution in applying the harmless error rule *in the administrative rulemaking context*" because "[h]armless error is more readily abused there than in the civil or criminal context"); *see also Nw. Res. Info. Ctr.*, 730 F.3d at 1020 ("As noted above, this court has defined 'harmless error' *in the administrative-rulemaking context* as an error that 'clearly had no bearing on the procedure used or the substance of [the] decision reached.'") (emphasis added).

This case does not involve administrative rulemaking. Plaintiffs challenge the Forest Service's evaluation of a factual issue – whether the Canyon Mine is likely sufficiently profitable to constitute a "valuable" mineral discovery under the Mining Law. No specific procedures are prescribed for such a determination. *See* 65 Fed. Reg. 41,724

("When determining the validity of mining claims, Federal land management agencies conduct examinations of your asserted discovery to evaluate whether the mineral deposit can be removed and marketed at a profit given the production costs and the prevailing market on a given date. The Bureau of Land Management, the National Park Service, and the U.S. Forest Service each employ certified mineral examiners who conduct these examinations on behalf of the Secretary of the Interior.").[14]

Plaintiffs cite *Independence Mining Co. v. Babbit*, 105 F.3d 502, 506-07 (9th Cir. 1997), but that case does not impose specific procedures on validity determinations. It states only that "a mineral examiner must . . . estimate the . . . cost of extracting, processing and marketing the minerals, including the costs of complying with any environmental and reclamation laws." Plaintiffs' other cases make similarly general statements. *See Clouser v. Espy*, 42 F.3d 1522, 1530 (9th Cir. 1994) (observing that measures to "reduce incidental environmental damage" will increase operating costs and thereby affect claim validity); *United States v. E. K. Lehmann & Assoc.*, 161 IBLA 40, 104 n.25 (Mar. 16, 2004) ("It is well-established that the costs of compliance with . . . environmental laws . . . are properly considered in determining whether . . . the mineral deposit is presently marketable at a profit."). These cases reinforce the requirement that an agency must estimate all costs of operation when determining whether a mine will be profitable, but they do not establish the kind of procedure at issue in the agency rulemaking cases.

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[14] The BLM Handbook followed by the Forest Service in this case requires mineral examiners to "evaluat[e] a mineral deposit to determine if the operator has a reasonable prospect of success in developing a valuable mine." AR Doc. 374 at 7427. Part of this evaluation requires consideration of operating costs, but the process is one of estimation. *See id.* at 7436-7 ("Preparing a Cost Estimate," "Estimation Methods," "Cost estimating"). The BLM Handbook directs examiners to estimate all relevant costs, including equipment costs, labor costs, environmental compliance costs, milling costs, smelter and refining costs, and others. *Id.* at 7438-9. The Court cannot conclude that the BLM Handbook's mention of environmental compliance costs establishes a procedural rule comparable to the procedures required for agency rulemaking. In addition to the fact that the BLM Handbook requires only estimation, the handbook does not appear to have the force of law because it is a statement of agency policy, rather than being legislative in nature, and it has not been adopted through formal public comment processes. *See River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1071 (9th Cir. 2010).

Thus, the Court cannot conclude that the environmental cost omissions identified by Plaintiffs' are harmful merely because they are procedural requirements. The relevant question is whether the alleged omissions had a harmful effect on the overall profitability determination for the Canyon Mine. This question is found in the other prong of the Ninth Circuit's harmless error rule.

b. Substantive Error.

The second prong of the Ninth Circuit's harmless error doctrine in APA cases asks whether the error affected "the substance of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1091-92. As the Supreme Court has explained:

> Often the circumstances of the case will make clear to the appellate judge that the ruling, if erroneous, was harmful and nothing further need be said. But, if not, then the party seeking reversal normally must explain why the erroneous ruling caused harm. If, for example, the party seeking an affirmance makes a strong argument that the evidence on the point was overwhelming regardless, it normally makes sense to ask the party seeking reversal to provide an explanation, say, by marshaling the facts and evidence showing the contrary.

Shinseki, 556 U.S. at 410.

In this case, the Forest Service found that the Canyon Mine would be very profitable, making more than $29 million in profits, a rate of return more than six times the industry minimum. These substantial profits were predicted using conservative estimates of the amount of ore that would be mined and the prices at which it would be sold. And they included a $1.7 million contingency for unknown expenses and $450,000 for reclamation of the mine site after mining is finished.[15] Given this factual context, it "makes sense to ask the party seeking reversal to provide an explanation [of why the errors were harmful], say, by marshaling the facts and evidence showing the contrary." *Id.*

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[15] Plaintiffs note that the contingency amount is set forth in the capital cost section of the VER Determination (*see* AR 10501), but provide no support for their contention that contingency funds may not be used "to cover expenses omitted from the estimates, like managing groundwater infiltration and pollution or protecting wildlife." Doc. 238 at 16.

Plaintiffs make no such attempt. They do not try to quantify the allegedly omitted costs of environmental monitoring, elk habitat restoration, or a condor net, even though grounds for estimating most of those costs can be found in the administrative record. And they provide absolutely no basis for the Court to conclude that these costs would alter the Canyon Mine's profitability.

As noted above, the FEIS estimates the costs of environmental monitoring at $112,000 and of wildlife habitat restoration at $14,420, for a total of $126,420. If the Court takes judicial notice of the inflation rate between 1986 (the year of the FEIS) and 2012 (the year of the VER Determination), the approximate cost of these measures in 2012 would be $261,000. *See* U.S. Dep't of Labor, Inflation and Consumer Spending, Inflation Calculator, https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=126420&year1=198601&year2=201201 (last visited May 21, 2020). The FEIS cautions that these cost estimates are based on data from contractors, trade journals, and similar sources, are used for comparison of the various alternatives evaluated in the FEIS, and that "actual costs could vary significantly from these estimates." AR Doc. 3 at 538 n.1. But even if the costs were to increase four-fold, to approximately $1 million, they would not come close to making the Canyon Mine unprofitable.

The Court can find no administrative record estimate of the cost for a net to cover the evaporation ponds to protect condors. But Plaintiffs have provided no basis for suspecting that a net would cost anywhere near enough to eliminate $29 million in profits, even when the other environmental costs are considered.

In short, Plaintiffs have not carried their burden of showing that their alleged errors were harmful. *See Tongass Conservation Soc'y v. U.S. Forest Serv.*, 455 F. App'x 774, 777 (9th Cir. 2011) ("[E]ven if we were to find some merit to some aspect of TCS's arguments concerning the cumulative impact of future projects, we would still deny TCS relief on the ground that the error was harmless."); *Ludwig*, 681 F.3d at 1054 (determining

whether an alleged agency error is harmful "requires 'case-specific application of judgment, based upon examination of the record'") (quoting *Sanders*, 556 U.S. at 407).[16]

B. Sunk Costs.

The Forest Service did not include certain past costs in its evaluation of the Canyon Mine's profitability. These were costs for work done or facilities installed at the mine before the VER Determination, including construction of the mine's head frame, hoist house, warehouse, shop, sediment ponds, and power lines. AR Doc. 525 at 10497, 10500 (*see* Appendices B and D). The Forest Service excluded these costs and the cost of the groundwater monitoring well because they "are considered 'sunk' costs." *Id.* at 10500. This decision was consistent with guidance from the BLM Handbook:

> Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date. Do not include as expenses in the operation's cash flow those capital costs that were sunk before the date of marketability.

AR Doc. 374 at 7438 (footnotes omitted).

Exclusion of sunk costs complied with decisions from the Interior Board of Land Appeals ("Board"), an entity within the DOI charged with reviewing mine valuation determinations. In *Mannix*, the Board held that sunk costs should not be included in the calculation of mining profits:

> The Government argues that all earlier expenses in development of the property must be considered, e.g., the cost of constructing cabins, sheds, and an access road and the purchase of rail and ore cars, and that such expenses must be recouped before it can be said that the mine is a profitable venture. We think the Government errs in its argument and analysis. . . . [I]f the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met.

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[16] Plaintiffs note the Supreme Court's statement in *Shinseki* that the burden of showing that an alleged error was harmful is not "a particularly onerous requirement[,]" 556 U.S. at 410, but it is nonetheless a requirement, and Plaintiffs provide nothing to meet it.

50 IBLA at 119.

Other Board decisions follow *Mannix*. *See United States v. Coppel*, 81 IBLA 109, 129 (1984) ("As this Board has noted, while consideration of the likelihood of recovery of capitalization costs yet to be expended is a necessary element of determining the existence of present discovery, where the expenditures have already been made prior to either the contest or a withdrawal of the land, such factors are not properly considered in determining present marketability.") (citing *Mannix*, 50 IBLA at 119); *United States v. Collord*, 128 IBLA 266, 288 n.24 (1994) ("Not included [in the prudent-man and marketability tests] are development and capital costs that have already been spent before the date on which a valuable mineral deposit must be shown to exist.") (citing *Mannix*); *Clouser*, 144 IBLA at 131 ("To the extent that there are existing tracks and lighting, the costs attributable to them need not be considered.") (citing *Mannix*).

Plaintiffs claim that the Forest Service erred when it applied this law. They argue that the Board's law on sunk costs "is unsound and contrary to binding Supreme Court precedent." Doc. 228 at 19. The Court disagrees for three reasons: Plaintiffs' argument does not apply the correct standard of review; their position is not supported by Supreme Court or federal court cases; and, even if Plaintiffs are correct, they have not shown that the error is harmful.

1. Plaintiffs Do Not Apply the Correct Standard of Review.

The question posed by Plaintiffs' claim is not whether the Board decisions and BLM Handbook are incorrect, as Plaintiffs suggest, but whether the Forest Service's reliance on these DOI sources in the VER Determination was arbitrary and capricious. "[A]gencies are entitled to rely on the expertise of another agency without forgoing deferential review." *Bellion Spirits, LLC v. United States*, 393 F. Supp. 3d 5, 13 (D.D.C. 2019) (citing *City of Boston Delegation v. FERC*, 897 F.3d 241, 255 (D.C. Cir. 2018) ("Agencies can be expected to 'respect the views of such other agencies as to those problems' for which those 'other agencies are more directly responsible and more competent.'")). Courts have described Plaintiffs' burden under this deferential standard of review as "heavy." *See Defs.*

of Wildlife v. U.S. Dep't of Navy, 895 F. Supp. 2d 1285, 1318 (S.D. Ga. 2012) ("Plaintiffs, as the challenging party, 'bear a heavy burden to prove that the agency was arbitrary and capricious in relying upon the [National Marine Fish Services] determination of a matter firmly within that agency's area of expertise.'") (quoting *Sierra Club v. U.S. Army Corps of Eng'rs*, 295 F.3d 1209, 1222 (11th Cir.2002) (internal brackets omitted)).

Thus, the Court must focus on the reasonableness of the Forest Service's reliance on the Board cases and BLM Handbook, not on the validity of the cases themselves. *See WildEarth Guardians v. U.S. Forest Serv.*, 828 F. Supp. 2d 1223, 1238 (D. Colo. 2011) ("[T]he Forest Service conducted its own analysis but relied on the expertise of the [DOI's Mine Safety and Health Administration] regarding whether such a [flaring] system would be approved for use in the mine. Again, although WildEarth clearly disagrees with the MSHA's assessment, it does not demonstrate that the Forest Service's reliance on MSHA's statements of its position as to whether such a system would be approved for use was arbitrary, capricious, or unsupported by the record."); *City of Tacoma, Wash. v. F.E.R.C.*, 460 F.3d 53, 75 (D.C. Cir. 2006) ("[W]hen we are reviewing the decision of an action agency to rely on a [biological opinion prepared by other agencies], the focus of our review is quite different than when we are reviewing a [biological opinion] directly. In the former case, the critical question is whether the action agency's reliance was arbitrary and capricious, not whether the [biological opinion] itself is somehow flawed.") (citing *Aluminum Co. of Am. v. Adm'r, Bonneville Power Admin.*, 175 F.3d 1156, 1160 (9th Cir.1999); *Pyramid Lake Paiute Tribe v. U.S. Dep't of Navy*, 898 F.2d 1410, 1415 (9th Cir.1990); *Stop H-3 Ass'n v. Dole*, 740 F.2d 1442, 1460 (9th Cir.1984)).

A Ninth Circuit case illustrates the proper method of review. In *Pyramid Lake*, an Indian tribe challenged a biological opinion adopted by the Department of the Navy but issued by the FWS, which was not a party to the action. The Ninth Circuit refused to consider whether the FWS had violated the Endangered Species Act, stating:

> The Tribe argues at length that the FWS's biological opinions which contain the "no jeopardy" findings are based on faulty analysis. . . . The Tribe's argument misses the mark, however, because the FWS is not a party to this

> action. The FWS's actions, or lack thereof, in preparing its opinions are relevant on appeal only to the extent that they demonstrate whether the Navy's reliance on the reports is "arbitrary and capricious."

898 F.2d at 1415; *see Aluminum Co. of Am.*, 175 F.3d at 1160 ("The [plaintiffs] advance arguments targeted at both NMFS's actions in preparing the 1995 BiOp and the BPA's decision to adopt NMFS's 'jeopardy' finding and RPA. The former claims, at least as they challenge the analysis of NMFS, which is not a party to this action, are beyond the scope of our review[.]"); *see also Stop H-3 Ass'n*, 740 F.2d at 1460 ("Remand is not required . . . because we are able to determine from the record that as a matter of law FHWA's decision to rely on FWS's biological opinion was not 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.' . . . On its face, this does not seem to be a 'clear error of judgment.'") (internal citations omitted).

Plaintiffs provide no basis for concluding that the Forest Service acted arbitrarily or capriciously when it chose to follow existing Board cases and the BLM Handbook on the treatment of sunk costs. They do not contend that the Board cases or Handbook were misapplied, nor that any federal court has found them incorrect. The Forest Service is entitled to rely on the expertise of DOI in making the mine profitability determination, and the Court cannot conclude that it acted improperly when it followed DOI guidance on sunk costs. Plaintiffs have not carried their heavy burden on this issue.

2. Plaintiffs' Position Is Not Supported by Federal Case Law.

Plaintiffs argue that the Board's treatment of sunk costs is contrary to Supreme Court precedent. Plaintiffs first cite *Cameron v. United States*, which held that a valuable mineral discovery is one that "would justify a person of ordinary prudence in the further expenditure of his time and means in an effort to develop a paying mine." 252 U.S. at 459. Plaintiffs also cite *Coleman*, which held that a mineral deposit is valuable if "'a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine.'" 390 U.S. at 602 (citation omitted). Plaintiffs further cite the Ninth Circuit's decision in *Ideal Basic*, which

stated that valuable minerals exist when "the deposits [are] of such a character as to justify a man of ordinary prudence in expending further labor and means with a reasonable prospect of success in developing a valuable mine," and that "the mineral could be extracted and marketed at a profit." 542 F.2d at 1369 (citations omitted). The Ninth Circuit further noted that "[a]pplication of these tests makes it clear that profit over cost must be realizable from the material itself and it is that profit which must attract the reasonable man." *Id.*

None of these cases addresses the costs to be considered in the profitability calculation, and they certainly do not address the specific question presented here – whether past development costs must be included. Plaintiffs argue that these cases imply a requirement that all past costs be considered, but the cases do not say so, and the Court therefore cannot conclude that they clearly conflict with the Board's decisions as Plaintiffs claim. As the Board noted in *Mannix*, "[t]here is no case law of which we have knowledge, nor has the government adduced any, that compels consideration of the above mentioned development costs in determining if an ongoing operation is presently profitable." 50 IBLA at 119.

Plaintiffs suggest that the "valuable mineral deposit" requirement of the 1872 Mining Law necessarily focuses on the value of the minerals themselves, not on the profitability of the specific operation that will mine them. From this premise, Plaintiffs assert that all costs related to the ore extraction, future and past, must be considered in deciding whether the claim has value. Although there is some logic to this argument, the language from the cases seems to focus on the claim's value as of the date of valuation.

As noted above, the valuation of a mine is made on a "marketability" date. *See Coleman*, 390 U.S. at 602; 65 Fed. Reg. 41,724, 2000 WL 87795741 (July 6, 2000). For mining claims on withdrawn lands, marketability is addressed "both as of the date of the withdrawal and the date of the mineral examination." 65 Fed. Reg. at 41,725. Language from the Supreme Court suggests that the comparison of costs and revenue to determine profitability looks forward from the marketability date: a mineral deposit is "valuable" if

it is "of such a character that 'a person of ordinary prudence would be justified in the *further expenditure* of his labor and means, with a reasonable prospect of success, in developing a valuable mine.'" *Coleman*, 390 U.S. at 602 (emphasis added); *see also Cameron*, 252 U.S. at 459 ("the discovery should be such as would justify a person of ordinary prudence in the *further expenditure* of his time and means in an effort to develop a paying mine.") (emphasis added); *Ideal Basic*, 252 F2d. at 1369 (asking whether "deposits were of such a character as to justify a man of ordinary prudence *in expending further labor and means* with a reasonable prospect of success in developing a valuable mine") (emphasis added).[17]

Plaintiffs suggest that *United States v. Armstrong*, 184 IBLA 180 (2013), is inconsistent with the Board's holding in *Mannix*. Doc. 228 at 21. But *Armstrong* makes no mention of *Mannix* and does not hold that sunk costs should be considered in evaluating profitability. The claimant in *Armstrong* argued that certain portable equipment he owned was a sunk cost that should be excluded from the profitability analysis. 184 IBLA at 219. The government's expert testified that "anything that has been used and done on the property and cannot be transferred, is a sunk cost, while things that have value and can be applied to a different property or sold are an investment of the operator." *Id.* The Board agreed that "this is the standard approach to economic valuations in [mine] operations" and that "the portable equipment owned by [the claimant] is not a sunk cost." *Id.*[18]

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[17] If the Court were called upon to review the sunk costs cases decided by the Board and reflected in the BLM Handbook, the task would not be to determine which approach to sunk costs is better, Plaintiffs' or the Board's. The task would be to determine whether the Board's approach is arbitrary and capricious. *See Ctr. for Biological Diversity v. United States Dep't of the Interior*, No. CV-01-1758-PHX-ROS, 2005 WL 8159960, at *4 (D. Ariz. Sept. 30, 2005) (citing *IMC Kalium Carlsbad, Inc. v. Interior Bd. of Land Appeals*, 206 F.3d 1003, 1009-10 (10th Cir. 2000)) ("Deference is warranted where the Court is satisfied that the IBLA's decision is supported by the record and is not arbitrary or capricious."). The Court could not find the sunk costs approach of *Mannix* – which has been in existence for 40 years – arbitrary and capricious. The *Mannix* rule has not been contradicted by any federal court decision that has addressed sunk costs and comports with the forward-looking language of Supreme Court and Ninth Circuit cases.

[18] *See also United States v. Feezor*, 130 IBLA 146, 222 (1994) ("Utilization of either presently unused equipment or presently uninvested capital represents consumption of the opportunity value attributable to both, and this lost opportunity value is properly assessed against any income in determining the net profitability of an enterprise."); *United States v. Garner*, 30 IBLA 42, 67 (1977) ("costs necessarily must include the amortization cost of the equipment used in the mining operations, even though the claimant by fortuitous

The BLM Handbook likewise distinguishes between portable equipment and the type of unrecoverable surface development at the Canyon Mine. AR 7438 ("Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs."). The rationale for including the opportunity cost of useable assets such as portable equipment does not apply to fixed assets such as a groundwater well, which cannot be sold or used at another location. *See* Doc. 228 at 22. *Armstrong* did not reject the principle that properly recognized sunk costs should be excluded from a future profitability determination. 184 IBLA at 219.[19]

3. Any "Sunk Costs" Error Was Harmless.

In any event, Plaintiffs do not show that the value of the sunk costs at the Canyon Mine would, if considered, render the mine unprofitable. They do not suggest that such costs are close to the more than $29 million in profits predicted by the VER Determination. Thus, even if the Court somehow could conclude that the Forest Service's treatment of sunk costs was error, Plaintiffs have not met their burden of showing that it was harmful error.[20]

C. Merits Conclusion.

As explained above, the Court cannot find that the VER Determination included all environmental monitoring and wildlife conservation costs. But even if those costs were not considered, Plaintiffs have not met their burden of showing that the omission was harmful given the Canyon Mine's more than $29 million in conservatively estimated

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circumstance has access to machinery at a cost less than the average prudent person would have to pay") (citations omitted).

[19] Plaintiffs argue that the *Mannix* approach to sunk costs could allow miners to game the system by investing substantial sums in a mine before they seek a determination of valid existing rights. But Plaintiff do not explain why a miner would seek to lose money in a mining operation, and they provide no evidence that such gaming has occurred or is occurring here.

[20] Plaintiffs attach a value of more than $6 million to the sunk costs, but do so by citing a source outside of the administrative record that the Court cannot consider. *See* Doc. 228 at 9 (citing Roberts Declaration, Doc. 31-3 ¶ 17). And yet even this amount would not render the Canyon Mine unprofitable.

profits. The exclusion of sunk costs was not error; and even if it was, Plaintiffs have not shown that it was harmful. As a result, Plaintiffs have not shown that the VER Determination should be set aside.

As already noted, the Court must treat an agency's decision "with deference, particularly 'when the agency is making predictions, within its special expertise[.]" *Ctr. for Biological Diversity*, 409 F. Supp. 3d at 752 (quoting *Forest Guardians v. U.S. Forest Serv.*, 329 F.3d 1089, 1099 (9th Cir. 2003)). The agency's decision "need only be a reasonable, not the best or most reasonable, decision." *River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1067 (9th Cir. 2010) (citation omitted); *see Forest Guardians*, 329 F.3d at 1099 ("An agency's actions need not be perfect; we may only set aside decisions that have no basis in fact[.]"). In this case, "[t]he [Forest] Service 'articulated a rational connection between the facts found and the choice made." *Forest Guardians*, 329 F.3d at 1099 (quoting *Pyramid Lake*, 898 F.2d at 1414); *see Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43; *Cal. Pac. Bank*, 885 F.3d at 570; *Indep. Acceptance Co.*, 204 F.3d at 1251. The Court will grant summary judgment to Defendants on claim four.

VII. Energy Fuels' Motion to Seal.

Energy Fuels moves to seal Plaintiffs' unredacted summary judgment motion and reply brief because they mention Energy Fuels' confidential cost information that is exempt from public disclosure under the Freedom of Information Act and applicable Forest Service regulations and guidance for mineral examiners. Doc. 232; *see* Docs. 226, 238. Plaintiffs' have lodged the proposed unredacted sealed versions of the documents with the Court and have filed redacted public versions on the docket. *See* Docs. 226, 228, 237, 238; LRCiv 5.6(b)-(c).

Sealing Plaintiffs' motion and reply will have no effect on the public's ability to understand the issues addressed in this order because lightly redacted copies have been filed in the public docket. The Court finds compelling reasons to seal and will grant Energy Fuels' motion. *See Kamakana v. City & Cty. of Honolulu*, 447 F.3d 1172, 1179 (9th Cir. 2006).

IT IS ORDERED:

1. Plaintiffs' motion for summary judgment on claim four (Doc. 226) is **denied**.

2. Energy Fuels' motion for summary judgment (Doc. 233) is **granted** with respect to Plaintiffs' request to enjoin activities at the Canyon Mine and on the merits of claim four, and **denied** with respect to the argument that Plaintiffs are entitled to no relief because the VER Determination was not legally required. Energy Fuels' motion to strike (Doc. 233-1 at 21) is **denied** as moot.

3. The Forest Service's motion for summary judgment (Doc. 234) is **granted** on the merits of claim four and **denied** on the issue of standing.

4. Energy Fuels' motion to seal (Doc. 232) is **granted**. The Clerk of Court shall accept for filing under seal the documents lodged on the Court's docket as Docs. 228 and 238.

5. The Clerk is directed enter judgment and terminate this action.

Dated this 22nd day of May, 2020.

David G. Campbell

David G. Campbell
Senior United States District Judge

From: azddb_responses@azd.uscourts.gov
To: azddb_nefs@azd.uscourts.gov
Subject: Activity in Case 3:13-cv-08045-DGC Grand Canyon Trust et al v. Williams et al Order
Date: Friday, August 2, 2019 7:21:31 PM

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U.S. District Court

DISTRICT OF ARIZONA

Notice of Electronic Filing

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Case Name: Grand Canyon Trust et al v. Williams et al
Case Number: 3:13-cv-08045-DGC
Filer:
Document Number: 213(No document attached)

Docket Text:
ORDER. The Court has reviewed the parties' joint matrix regarding their dispute over redacted sunk costs. Doc. 212. The Court will not at this time order Intervenors to disclose the redacted information on sunk costs. Plaintiffs have not demonstrated that sunk costs will be relevant to the Court's decision in this case. The question the Court will decide is whether the Forest Service's VER determination was arbitrary and capricious. Under Bureau of Land Management guidance, followed by the Forest Service, mineral examiners consider only non-sunk capital costs when estimating a deposit's probable economic value in making a validity determination. And, it appears, as the government defendants and Intervenors note, that the valuation decision is made by a forward-looking analysis that does not include past sunk costs. The Court therefore cannot conclude at this point that sunk costs will be relevant to its decision. The Court notes, however, that it has not made a decision on the proper approach to determining whether mineral deposits are valuable. This will be an issue litigated by the parties, and an issue that can be briefed and argued without Plaintiffs' knowing the amount of sunk costs in this case. If Plaintiffs convince the Court that sunk costs are relevant, and if the amount of sunk costs is necessary in determining whether Plaintiffs' position in this case is correct, the Court can at that time require Intervenors to disclose the amount of sunk costs under the protective order. Signed by Senior Judge David G Campbell on 8-2-19. This is a TEXT ENTRY ONLY. There is no PDF document associated with

this entry. (DGC)

3:13-cv-08045-DGC Notice has been electronically mailed to:

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3:13-cv-08045-DGC Notice will be sent by other means to those listed below if they are affected by this filing:

Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

APPELLANTS' EXCERPTS OF RECORD: VOLUME 2 OF 3

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December 22, 2020

UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, Center for Biological Diversity; Sierra Club; and Havasupai Tribe,	
Plaintiffs,	**CV 13-08045-PCT-DGC**
vs.	Phoenix, Arizona **May 11, 2020** 2:00 p.m.
Heather Provencio, Forest Supervisor, Kaibab National Forest; and United States Forest Service, U.S. Department of Agriculture,	
Defendants.	
and	
Energy Fuels Resources (USA), Inc.; and EFR Arizona Strip LLC,	
Intervenor-Defendants.	

BEFORE: THE HONORABLE DAVID G. CAMPBELL, JUDGE

REPORTER'S TRANSCRIPT OF PROCEEDINGS

TELEPHONIC ORAL ARGUMENT

Official Court Reporter:
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Proceedings Reported by Stenographic Court Reporter
Transcript Prepared with Computer-Aided Transcription

1 **T E L E P H O N I C A P P E A R A N C E S**

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23 Also present:

24 Julia Hoffmeier and David Friedland

25

14:01:24 1 P R O C E E D I N G S

2

3 THE COURT: Okay. Why don't we go ahead and get

4 started.

14:01:26 5 Trish, you got down everybody's name for the record;

6 is that right?

7 THE COURT REPORTER: I think so.

8 THE COURT: Okay. In light of that we won't have

9 everybody state your name again, but, please, when you speak,

14:01:38 10 identify yourself when you begin to speak so Trish can keep

11 track of who is speaking.

12 We set aside an hour for this oral argument, 30

13 minutes per side. I've read all of the briefs. I've reread

14 the previous court decisions. I've read the VER

14:02:01 15 determination, and I've reviewed the various appendices and

16 looked at some other parts of the administrative record and

17 read some of the cases that are cited. So I'm familiar with

18 the arguments. You don't need to devote time to sort of

19 orienting me to what's been argued. I think I understand

14:02:20 20 that. You can, instead, cut to the issues that you think are

21 most important.

22 Why don't we start with plaintiffs since they filed

23 the first motion.

24 MR. PAUL: Thank you, Your Honor. Good afternoon.

14:02:37 25 This is Aaron Paul speaking on behalf of the Grand Canyon

14:02:49 1 Trust, Sierra Club, and Center for Biological Diversity.
2 If I might, I have a question at the outset which has
3 to do with the motion to seal. I think argument today from --
4 certainly from the plaintiffs, I believe from Energy Fuels,
14:03:00 5 perhaps from the government, will raise matters addressed in
6 documents that have been provisionally sealed with the Court,
7 and I was hoping to get some guidance on how that would be
8 handled in terms of the hearing itself being sealed or whether
9 we need to identify matters that are under seal for the court
14:03:23 10 reporter before we raise them during argument today.
11 THE COURT: I think what I would recommend, Mr. Paul,
12 to make it an easier process is have you make whatever
13 arguments you need to make, including sealed materials. Let
14 defendants do the same. If at the end of the hearing the
14:03:47 15 defendants feel that things that have been mentioned on the
16 record that ought to be sealed, then what we can could do is
17 give them an opportunity to review the transcript of the
18 hearing after it is produced and see if the parties can
19 designate specific excerpts that need to be sealed, the rest
14:04:04 20 of which would be made public, because obviously this is an
21 important event in the case and we ought to make as much of it
22 public as possible.
23 But I'd rather do that after the fact when
24 everybody's heard the full arguments rather than trying to do
14:04:20 25 it a piece at a time as we go through because I just think

14:04:23 1 that will make the hearing too cumbersome.
2 Is that approach agreeable to defendants?
3 MR. GLASS: It is to the intervenor defendants,
4 Your Honor.
14:04:35 5 THE COURT: And who is that?
6 MR. GLASS: I'm sorry. This is Brad Glass of
7 Gallagher & Kennedy for Energy Fuels Resources.
8 THE COURT: Okay.
9 MR. DUFFY: And is this is Sean Duffy for federal
14:04:47 10 defendants. And that approach is agreeable to us.
11 THE COURT: Okay. Does that make sense to you,
12 Mr. Paul?
13 MR. PAUL: It does, Your Honor. Thank you.
14 THE COURT: Okay.
14:05:00 15 MR. PAUL: With that, I would like to begin with our
16 motion for summary judgment, and I thought I'd go directly to
17 the issues you raised last Friday in your order concerning
18 harmless error, beginning with the standard for finding an
19 error to be harmless in an administrative procedure in a case
14:05:18 20 like this one.
21 And that standard is that an error is deemed harmless
22 only when it is one that clearly had no bearing on the
23 procedure used for the substance of the decision reached.
24 Since we didn't brief this, the cite for that is *California*
14:05:30 25 *Wilderness Coalition* case, 631 F.3d 1072.

14:05:37 1 THE COURT: What's the page cite?
2 MR. PAUL: 1090.
3 THE COURT: Okay.
4 MR. PAUL: And as the Ninth Circuit has clarified,
14:05:45 5 repeating the Supreme Court on this point, the burden does
6 rest with the plaintiffs on the issue of harmless error, but
7 it's not a particularly onerous requirement.
8 Now, I think before diving into that standard, I
9 think it's significant to ask what is the error we're talking
14:06:07 10 about here. And that's a failure entirely to consider
11 environmental compliance costs in the validity determination
12 prepared for the Canyon Mine in 2012.
13 I'd like to address in a little more detail the
14 arguments on that point in a moment, but stated briefly, the
14:06:29 15 key point is that the core document, this is AR Doc. 525, the
16 validity determination itself, is just silent on the issue of
17 environmental compliance costs. Doesn't discuss them at all.
18 And -- and that's significant when it comes to harmless error
19 because in determining whether or not it is harmless, this
14:06:55 20 being a record review case, the analysis is confined to the
21 record. And here, we have a situation where the record is --
22 there is complete absence in the record on this key question
23 of environmental compliance costs.
24 And when I'm referring to that, I want to include
14:07:17 25 some costs which is obviously a part of the environmental

14:07:25 1 compliance costs that were left out. And I would say on that
2 point there's sort of one caveat to what I'm saying about the
3 record being silent on environmental compliance costs as of
4 2012, and that's in a letter that Energy Fuels sent before its
14:07:48 5 service that was included in Appendix C to the validity
6 determination. That's AR Doc. 672.
7 And that document does -- has some statement about
8 the amount of some costs that Energy Fuels estimated were
9 being left out of the analysis in 2012. But the company
14:08:12 10 redacted the figure when the document was added to the
11 records. We don't know what that number is. You'll recall we
12 had a dispute about this briefed in the joint matrix last
13 year.
14 Now, I'd like to linger for a moment on this point
14:08:31 15 about the absence of record evidence for a moment because I do
16 think it's really key here, and direct you to another
17 Ninth Circuit decision, *Brown-Hunter v Colvin*, 806 F.3d 487,
18 from 2015. And, granted, this is a social security disability
19 case, but the standard applied there, at least in part, is
14:09:04 20 quite similar to the APA standard that I began with at the
21 outset.
22 And there Judge Wallace, I think, made a point of
23 stressing that when evaluating whether an error is harmless,
24 it's really improper to sort of piece together implicitly
14:09:24 25 from --

14:09:30 1 THE COURT: Mr. Paul?
2 MR. PAUL: I think I was muted for a moment
3 inadvertently.
4 THE COURT: Yeah. I heard you say Judge Wallace said
14:09:38 5 that when evaluating whether an error is harmless, and then
6 you got cut off.
7 MR. PAUL: I apologize.
8 The rest of that sentence was something on the order
9 of it's improper to piece together from the record sort of
14:09:54 10 implicitly a substitute analysis for what's missing.
11 And that element of the decision was stressed at the
12 outset. It says, "This error was not harmless because it
13 precludes us from conducting a meaningful review of ALJ's
14 reasoning."
14:10:14 15 Page 49 of the decision.
16 I think that's precisely the situation we have here.
17 Since we don't know what the Forest Service thought of
18 environmental compliance costs, when it prepared the validity
19 determination there was no basis to find that the error was.
14:10:34 20 A quick related point is that Energy Fuels has
21 submitted to the Court a declaration that has some information
22 in it on a couple of the costs that are in dispute. It's the
23 Harold Roberts declaration, ECF 233-2. We've asked that that
24 declaration be struck in our reply brief. It's our view, and
14:10:59 25 I think this is a fairly straightforward proposition, that the

14:11:02 1 quintessential example of a post hoc rationale being added to
2 the record, you know, in the reviewing court rather than
3 before the agency itself. So in the absence of that evidence,
4 the absence of the ultimate record there is no basis to find
14:11:27 5 harmless error here.
6 And the last thing I would say on this particular
7 part of the harmless error standard is that, you know, to find
8 a harmless error in a case like ours, I think would create a
9 Catch-22 the Court really ought not to -- ought not to
14:11:44 10 sanction. And the reason is that the error itself is the
11 reason we don't have evidence to put before you about what the
12 costs at issue -- what the Forest Service thought the costs at
13 issue would have been in 2012. And in that circumstance, I
14 think a harmless error determination is unwarranted.
14:12:10 15 And before leaving the subject of harmless error, one
16 final point. As I said at the very outset, you know, the
17 standard in an APA case depends not only on whether the error
18 had a bearing on the substance of the decision, but also on
19 whether it affected the procedure used. And the plaintiffs
14:12:35 20 would submit that that standard, that part of the standard, is
21 satisfied here as well -- I should say not satisfied here.
22 Which is to say that in the wake of the Ninth Circuit's
23 decision, which explicitly recognized that the validity
24 determination was prepared under FLPMA as a procedure for
14:12:56 25 determining whether the Canyon Mine could operate despite the

14:13:02 1 mineral withdrawal around the Grand Canyon, it seems evident
2 that what happened here was a procedural violation.
3 There's a whole body of case law and guidance that
4 sets out a set of procedural steps that the government has to
14:13:20 5 take when it completes a validity determination, and one of
6 those steps is to consider environmental compliance costs.
7 And the Forest Service left that step out, which is a
8 procedural problem. And I think, therefore, the error clearly
9 had a bearing on the procedures used here.
14:13:49 10 THE COURT: Mr. Paul, let me ask you a couple of
11 questions.
12 On that last point you just made where you said one
13 of the required procedural steps is to consider an
14 environmental compliance costs, what --
14:13:59 15 MR. PAUL: Um-hmm.
16 THE COURT: -- procedure are you referring to? What
17 citation can you give me on that step?
18 MR. PAUL: We cited a series of cases in our opening
19 brief, Your Honor, which I don't have my finger on here.
14:14:22 20 The lead case, I think, on this point would be the
21 *Independence Mining Company*, 105 F.3d 502, Ninth Circuit 1997.
22 We cited additional cases in our brief.
23 But there, the Ninth Circuit explicitly recognized
24 that before determining validity, the examiner must consider,
14:14:41 25 among other matters, the cost of complying with environmental

14:14:45 1 reclamation laws.
2 THE COURT: Okay. Let me ask you a second question.
3 If I conclude that the Forest Service acted properly
4 in not including sunk costs, and therefore properly did not
14:15:19 5 consider the cost of the groundwater monitoring well that was
6 installed some years ago, then I think -- well, and if I also
7 conclude that the possible future costs of environmental
8 compliance, as opposed to environmental monitoring, are too
9 speculative to be included in the profitability analysis, I
14:15:43 10 think what we're left with are the sampling costs, which would
11 be soil, surface water, and groundwater sampling, the 32-acre
12 habitat restoration, the net over the ponds to protect condors
13 if they ever come down there.
14 I think that's all of them if I rule that way. Is
14:16:16 15 that right or are there other categories that I'm leaving out?
16 MR. PAUL: I believe that list was complete,
17 Your Honor.
18 THE COURT: So the question that leads me to -- and
19 incidentally, I do want to hear defendants' view on how I can
14:16:36 20 consider the Roberts declaration when it appears to me to be
21 clearly outside of the administrative record.
22 Setting that aside for a minute and assuming I cannot
23 consider it, it seems to me that I'm still left with a
24 situation that the VER determination found the mine would earn
14:16:57 25 more than $29 million in profits in five years based on what I

14:17:06 1 think were fairly conservative estimates as to ore prices and
2 ore volumes that will come out of the mine. Even though I
3 recognized you've argued that the price dropped later, I think
4 I need to look at the dates in 2009 and 2012.
14:17:27 5 I guess my question is: How much, if at all, does
6 common sense come into this? Because it just seems to me that
7 there is no way that the soil sampling, the surface water
8 sampling, the occasional groundwater sampling from the well,
9 plus the net and 32 acres of habitat restoration would get
14:17:44 10 close to eliminating the $29 million in estimated profits.
11 MR. PAUL: Um-hmm.
12 THE COURT: And, therefore, there's just no way that
13 those costs could be viewed as potentially leading to a
14 conclusion that this mine is not profitable.
14:18:03 15 And I'm interested in your thoughts of whether that
16 kind of a broad-based thinking is just improper or how you
17 would respond to it.
18 MR. PAUL: Sure, Your Honor.
19 I do think, essentially for the reasons I just gave,
14:18:24 20 that that line of reasoning would be improper under the case
21 law. I've looked at a large number of harmless error
22 decisions since Friday afternoon, and I haven't seen any --
23 any decision that sanctions the idea of making an assumption,
24 you know, based on, say, common sense about, you know, what
14:18:50 25 the agency would have found in the first place.

14:18:54 1 I think I would, in answering your question, turn to
2 the point I was making, which is simply that when the record
3 is silent, there's no basis for making that harmless error
4 determination on the costs that you've specifically
14:19:10 5 identified, and that alone would warrant remand, you know,
6 under the sort of scenario you just posed to me.
7 I do want to highlight, in responding to your
8 question, that the caveats you gave I think are very
9 significant. If you are going to get into an analysis of --
14:19:37 10 of, you know, what -- sort of weighing, say, a common sense
11 notion of what the costs might be against whatever else is in
12 the record, I want to stress that, you know, that's subject to
13 some costs. For example, there is a declaration in the record
14 from the 1980s about how much Energy Fuels had spent at that
14:19:56 15 point, and since this was not briefed I want to point you to
16 it. It's Doc. 215 at page 4653, and it notes -- this is an
17 executive vice president for the company -- that Energy Fuels
18 had spent 8.2 million by that -- by that date. Or would have
19 spent that much by the end of 1987. Which in 2012 dollars
14:20:19 20 would have been about 17 million.
21 There's additional evidence we cited in our brief on
22 this point.
23 I just want to stress that, you know, if you don't do
24 what you suggested and rule against us on some costs, that
14:20:33 25 number is very significant.

14:20:34 And on the point of environmental mitigation, I think your caveat's fair. I just want to point out that we don't know what those costs would be, but they also, I think, could be very, very sizable. They include things like potentially
14:20:52 installing additional groundwater wells. And there's evidence in the record at AR Doc. 447 at 9504 that just one well can cost $3 million.

THE COURT: Let me ask one other question. And I understand what you've said and I need to read more harmless
14:21:12 error cases myself, but the cases do make clear that it's your burden to show that the error was harmful.

I also acknowledge and agree that the cases say it's not a high threshold to clear.

But as you've made the point, there is no evidence in
14:21:35 this case -- again, if I set aside sunk costs or future remediation costs for a minute. As you've pointed out, there's nothing in the record on the cost of these monitoring activities and the net and the 32 acres. And so if there's nothing in the record to suggest that those could approach an
14:22:01 amount that would affect the outcome of this case, how can I conclude the plaintiffs have met their burden of showing that the error was harmful?

MR. PAUL: You know, I think the answer to that, Your Honor, goes back to the Catch-22 point that I made.

14:22:22 I think that approaching the analysis in that way and

14:22:26 1 holding it against us, the agency's failure to identify this
2 information in the first place, really sort of subverts the
3 "clearly had no bearing" standard that the Ninth Circuit has
4 reaffirmed in the wake of *Shinseki*.
14:22:50 5 I think if you -- and I understand the standard is
6 phrased in a negative, which makes this question a bit
7 complex, but I think that ultimately what the Court has to do
8 on the harmless error analysis is find something that's clear
9 in the record that states the decision had no bearing. And I
14:23:12 10 think all we have to do in meeting our burden of proof, then,
11 is to show an absence of anything on that subject.
12 THE COURT: Okay. I understand your position.
13 I want to give you time to address other points if
14 you would like to.
14:23:30 15 MR. PAUL: I would. Although I'm hoping to reserve a
16 little bit of time for rebuttal as well, Your Honor.
17 I think the other subject, we've canvassed the merits
18 reasonably well, I think, in this discussion about harmless
19 error, and I would like to turn to sunk costs for a moment
14:23:46 20 because, you know, as I said previously, especially on this
21 point of harmless error, they're important, but they're
22 important overall to the disposition of the case.
23 The argument there really begins with the text of the
24 mining law itself, which declares all valuable mineral
14:24:09 25 deposits to be free and open to exploration. And depends on

14:24:15 1 the Supreme Court's interpretation of that statutory language,
2 particularly in *Coleman*, which we cite in our briefs, that a
3 marketability test applies, demands that deposits be
4 extracted, removed, and marketed at a profit. And Interior
14:24:34 5 Board of Land Appeals case law in particular emphasizes that
6 that is an objective standard.
7 The question is what does it take to mine that
8 deposit of minerals?
9 Ultimately, I do think we made this point in our
14:24:50 10 briefs but I want to stress it here, the idea of expunging
11 costs spent mining the deposit that were incurred before the
12 validity determination just can't be squared with that text.
13 Valuable mineral deposit depends on what it takes to get the
14 mineral out of the ground. And it's not an examination of
14:25:18 15 what a company might report year over year in its general
16 ledger on that year's profits and losses. It depends on the
17 entire set of costs that it would take a prudent person to get
18 the mineral out of the ground.
19 With that point, with your permission, Your Honor, I
14:25:48 20 would like to reserve the balance of my time for rebuttal. I
21 didn't start the timer -- well, perhaps you can tell me how
22 much time I have left. I have --
23 THE COURT: Yeah. You've used about 23 minutes, by
24 my note. But -- and I won't hold you strictly to that. I'll
14:26:07 25 give you a chance to rebut.

14:26:09 1 I do want to ask you a question on what you were just
2 talking about.
3 Have you found in your research, Mr. Paul, that this
4 sunk costs issue has never been addressed in court? It just
14:26:33 5 kind of surprises me that it would never have come up.
6 Neither party cites a case, but I had assumed --
7 MR. PAUL: That's right, Your Honor.
8 THE COURT: Go ahead.
9 MR. PAUL: Forgive me.
14:26:42 10 Yeah, the answer is -- is no, except to the extent
11 that I think it follows, you know, *U.S. v. Coleman* case. But
12 to go searching for the word "sunk costs" or any variance of
13 that in Westlaw, I haven't turned anything up in the federal
14 courts on this subject.
14:26:59 15 THE COURT: Okay.
16 Okay. Let's turn to plaintiffs.
17 Well, I need to ask you one other question, Mr. Paul,
18 and I won't hold you to this time. I'll give you five minutes
19 rebuttal at the end.
14:27:18 20 You talked about the Roberts declaration, and I
21 understand your position on that declaration.
22 And I understand that of the five exhibits that you
23 attached to your summary judgment motion, you intend me to
24 consider Exhibits 2 through 5 only on the issue of standing;
14:27:52 25 is that right?

14:27:58 1 MR. PAUL: That's correct, Your Honor.
2 THE COURT: So here's the question I have about
3 Exhibit 1. My internet's pretty slow. I'm trying to get to
4 the declaration that you, I think it was you, provided with
14:28:13 5 respect to Exhibit 1. And my specific question is about
6 paragraph 8 of your declaration, where you are explaining how
7 you constructed Exhibit Number 1, and that declaration is, I
8 think, Exhibit 3 to your motion.
9 In paragraph 8 you indicate, if I understand it
14:28:46 10 correctly, that after you transferred the data from the PDF
11 documents that were in the record into an Excel spreadsheet,
12 you found that some of the formulas performed incorrect
13 calculations and that was because the PDFs had redacted things
14 that you couldn't identify.
14:29:10 15 And so what you did is you say in the second sentence
16 of paragraph 8 where Energy Fuels had not redacted the formula
17 results, in the results version, you replaced the
18 non-functional formulas, meaning the ones that weren't working
19 in your live Excel spreadsheet, with the correct result of the
14:29:32 20 formulas and marked them in light blue text so we could tell
21 which ones they are.
22 But I'm assuming from that, that still means that
23 your Excel spreadsheet is not identical to the original
24 because it doesn't include the formulas that produced the
14:29:51 25 results in the originals. You just sort of cut and pasted

14:29:54 1 results in where they weren't redacted.
2 Am I reading that correctly?
3 MR. PAUL: I -- I -- I'm not sure, Your Honor. I
4 would say that essentially I do take the position that it
14:30:13 5 reproduces with complete fidelity documents AR Docs. 673
6 through 680 in the record.
7 You're right that on the items highlighted with blue
8 text, all that is reflected there is the outcome of the
9 formula which, you know, is pulled directly from the -- from
14:30:41 10 the record, but it does not show the static figure and
11 wouldn't show a formula in those instances.
12 But essentially the point would be that what I
13 produced in Exhibit 1 reproduces verbatim what's available to
14 us in Exhibits 672 through 680.
14:31:20 15 THE COURT: Here's the --
16 MR. PAUL: If I --
17 THE COURT: Go ahead.
18 MR. PAUL: No, I was going to make a separate point,
19 Your Honor.
14:31:25 20 THE COURT: So here's the question that I have about
21 it. I -- you make an argument, I think it's in your reply
22 brief, in response to Energy Fuels' assertion that the various
23 environmental monitoring costs were included in the GNA
24 portion of the spreadsheet -- I'll hear from them in a minute
14:31:51 25 as to whether that's a correct understanding -- but they argue

14:31:54 it's in there, it's sort of baked into the numbers that Energy Fuels gave to the Forest Service.

And you seek to disprove that in the reply by saying, no, if you go to this particular value in the main spreadsheet 14:32:09 and you look at backup documents, it consists only of these four categories, which include environmental costs, et cetera.

My question, because I haven't tried to do it yet and go through Exhibit 1, is whether that argument on your part necessarily relies on the computation that's absent from the 14:32:30 Excel spreadsheet, or is it instead just based solely on the PDF documents that are in the record?

MR. PAUL: It's based solely on what's in the record, Your Honor. And in those instances, you know, what I did was simply followed the formulas through, as I attempted to 14:32:54 describe in my briefing from the particular cell, though, that Energy Fuels identified and laid out how the data is drawn. And the conclusion that I presented to the Court, I would say that followed ineluctably from the formula itself is a mathematical conclusion. It's not, you know, based on some 14:33:22 missing element of the calculation that I pasted in. That's not how it worked.

THE COURT: Okay.

MR. PAUL: So the point obviously --

THE COURT: Go ahead.

14:33:36 MR. PAUL: Well, it was pretty -- what the

14:33:38 1 Forest Service had in front of it, of course, was an
2 unredacted spreadsheet and we don't -- we don't have that. I
3 would just say that to the extent that what you're looking at
4 in Exhibit 1 doesn't reflect precisely what the Forest Service
14:33:55 5 had at the time, that's an artifact of the company having
6 converted this document to a number of PDFs and redacted it.
7 And to the extent that they gave us the information, the
8 formulas and the results, it's all here accurately represented
9 in Exhibit 1.
14:34:15 10 THE COURT: I also understand, though, that to mean,
11 Mr. Paul, that I don't need to rely on Exhibit 1, that every
12 point you want to make is made in the PDF copies in the
13 administrative record; is that correct?
14 MR. PAUL: That's exactly right, Your Honor, although
14:34:31 15 I'll point out that -- that I think will be a somewhat
16 unpleasant exercise, which is the whole point of me submitting
17 Exhibit 1. I absolutely invite the Court to check our work.
18 The idea with Exhibit 1 was to simply make that easier.
19 THE COURT: Okay. All right.
14:34:51 20 I'll still give you five minutes of rebuttal. But
21 that means that by the end of the day Mr. Paul will have had
22 about 45 minutes, so I'll give defendants 45 minutes to divide
23 among yourselves.
24 And let's go ahead now. Whoever wishes to go first,
14:35:07 25 begin.

14:35:08 1 MR. DUFFY: Thank you, Your Honor. This is
2 Sean Duffy on behalf of the federal defendants.
3 I would like to address some of the issues counsel
4 for plaintiff addressed regarding the VER determination, in
14:35:25 5 particular how it treated sunk costs, as well as the harmless
6 errors entered.
7 With regard to the VER determination, plaintiffs
8 essentially challenged that on two grounds. First, they claim
9 that it should have included sunk costs; and then second, that
14:35:51 10 it failed to account for environmental costs regarding the
11 initial groundwater monitoring, mitigation, and more or less
12 conservation measures.
13 First, with respect to the sunk costs, there's a
14 long-standing theory of administrative -- Department of
14:36:12 15 Interior administrative decisions regarding the claiming of
16 examining the profitability of the mine. And those decisions,
17 along with the BLM handbook, settles what the validity
18 determination -- includes future costs and excludes
19 unrecoverable capital costs.
14:36:45 20 So specifically, in some instances -- it's reasonable
21 that's -- that's what we've done here. We believe that the
22 Forest Service was reasonable in excluding the sunk costs.
23 I don't read *United States versus Coleman* in the same
24 way that the plaintiffs do as implying that sunk costs should
14:37:10 25 be considered in that determination. I don't think it really

14:37:13 1 speaks to that.
2 Secondly, with regard to some of the itemized costs,
3 in some instances, particularly the radiation and groundwater
4 monitoring, we believe that those costs were accounted for in
14:37:30 5 the VER determination.
6 For example, the installation of the groundwater
7 monitoring well was completed, I believe, in 1987.
8 THE COURT: Let me interrupt you for a minute,
9 Mr. Duffy. I don't think plaintiffs disagree with that. I
14:37:50 10 think their brief pretty clearly treats the well as a sunk
11 cost. So what I'm interested in is whether you can point in
12 the record to where the monitoring is covered in what the
13 Forest Service considered.
14 MR. DUFFY: Well, we see that the monitoring costs
14:38:13 15 are covered under the labor costs that were submitted. It's
16 the mining company itself that does the monitoring. And I
17 think the intervenors can speak a little bit more to this.
18 But, if you please, these costs are already captured in the
19 VER determination, who will be doing the monitoring. And so
14:38:35 20 that doesn't leave literally much else that I'm aware of with
21 respect to that cost.
22 And so, really, it seems to me, and I guess it
23 depends on, you know, what the Court's view of sunk costs is,
24 but in our view it really does come down to the items that the
14:38:53 25 Court ident- -- Your Honor had just identified, the sampling

14:38:57 1 and the habitat restoration and the net to prevent potential
2 harm to condors.
3 And plaintiffs are correct that in that in the
4 Document Number 525, the document that we're all looking at
14:39:14 5 here, doesn't have specific cost items for environmental
6 compliance costs. But I don't read the cases that the
7 plaintiffs rely on, for example, *Independence Mining Company*
8 *v. Babbitt*, page 9 of their motion for summary judgment, as
9 requiring that those costs need to be broken out in every
14:39:37 10 instance.
11 In this case, since a lot of those costs were
12 whimsical, unforeseen, at the time, and for the most part they
13 should be captured by the capital contingency of $1.7 million
14 that the company had set aside.
14:40:05 15 I guess I'd also like to discuss the harmless error.
16 THE COURT: Before you leave sunk costs, Mr. Duffy,
17 let me ask you a couple of questions on what you just said.
18 Somebody is kind of shuffling papers that's making it
19 very hard to hear. If whoever is doing that could shuffle
14:40:25 20 more quietly, that would be helpful.
21 The -- let's talk first about -- I think you just
22 indicated that you believe things like the 32-acre habitat
23 restoration or the net over the ponds, which you didn't
24 mention but I assumed you were including it, would be covered
14:40:50 25 by the contingency of 1.7 million and that would -- at least

14:40:57 1 the bulk of the costs for monitoring would be covered by the
2 labor costs.
3 So here's the question that I have: It's evident
4 from the VER determination that the 1.7 million was just a
14:41:17 5 10 percent of identified capital costs add on. In fact, I
6 think it's even called in at least one place something like
7 capital contingency cost. The idea being, according to
8 plaintiffs, that this was going to cover cost overruns for the
9 things that are listed in the VER's capital costs, and those
14:41:40 10 don't include the net or the habitat restoration, so it
11 wouldn't be proper for me to assume, and I think they would
12 emphasize that's what I would have to do, is assume, that 1.7
13 was meant to include these environmental protection costs.
14 And I think they would similarly argue that there's
14:42:07 15 no evidence that I can look to if I don't consider the Roberts
16 declaration to conclude that the hours labor number that was
17 provided to the Forest Service included the monitoring
18 activities, I would just have to make an assumption about that
19 again because there's no proof it really was considered.
14:42:28 20 Could you address those thoughts, please.
21 MR. DUFFY: Sure. I believe the capital costs,
22 you're right, that it refers to capital contingency costs, and
23 that environmental monitoring and costs of that nature don't
24 specifically fall within the definition of what one would
14:42:54 25 consider a capital cost.

14:42:56 1 But as I look at this, it seems to me that by using
2 that 10 percent figure, the -- for purposes of the VER
3 determination, the mining company was setting aside generally
4 an additional sum to account for things that were not
14:43:20 5 necessarily foreseen or included in the cost analysis.
6 So I'm not sure that I -- just because they use the
7 word "capital," that that necessarily implies it can only
8 account for costs of a certain nature.
9 THE COURT: Well, let me follow that up before you
14:43:42 10 address the labor point.
11 You said -- and I think you're probably right, and
12 there's no rule, I assume, that the mine would have which said
13 they could only, if they were ever to keep track of it, they
14 could only credit against this 1.7 million things that are
14:44:00 15 capital costs. They could probably apply it however they do.
16 And you said they could apply to unforeseen costs.
17 I think part of what the plaintiffs' argument is,
18 however, is that these weren't unforeseen costs. These were
19 environmental costs. And the case law required the
14:44:15 20 Forest Service to consider them separately and include them.
21 And it didn't. At least there's no evidence it did.
22 And the mere fact there's a slush fund over there
23 derived by 10 percent of the capital costs that might be
24 available to pay for them doesn't satisfy the Forest Service's
14:44:33 25 obligation to consider and address environmental costs.

14:44:36 What is your thought on that?

MR. DUFFY: Well, I certainly agree that Document 525 does not set forth separately environmental costs.

I do think that some of those costs are captured

14:45:07 perhaps by labor costs. But I -- you would have to --

(Court reporter interrupted for clarification.)

MR. DUFFY: Are captured by labor costs.

But I don't necessarily read the case law as requiring the environmental costs themselves would need to be

14:45:19 a separate entry. It's certainly something that needs to be considered, but I don't know that it can't fall within the capital costs and requires its own separate line item.

THE COURT: All right. Why don't you go ahead with the other points you wanted to make.

14:45:43 MR. DUFFY: Okay. So turning to the harmless error analysis, you know, plaintiffs characterized -- I believe I heard them characterize the error was the failure to consider environmental costs. And, to me, that sounds like a type of informational inquiry. But I think that the relevant -- if

14:46:09 there was an error in this case, the relevant analysis under the harmless error analysis, and I think the Court was alluding to this, is ultimately whether the VER determination that there was a valid right in a profitable mine was incorrect.

14:46:31 And so -- and plaintiffs also referred to procedural

14:46:38 1 rights, which I guess is similar to the sort of informational
2 injury type of argument.
3 I don't believe the Ninth Circuit's opinion that you
4 referenced in *Ludwig v. Astrue* has necessarily counted from
14:46:51 5 that.
6 There, the burden -- the court held that the burden
7 is on the party to demonstrate not only error, but also that
8 it affected his substantial rights. Which is not to say an
9 error in his procedural rights. Which I think underscores the
14:47:06 10 point I just made, which is really what plaintiffs would need
11 to show here, and it is their burden, that the -- this mine is
12 not profitable. Plaintiff has not provided any specific
13 figures associated with any of these environmental costs we've
14 been discussing. So, for that reason, I don't believe that
14:47:32 15 they have met their burden.
16 I know to some extent, you know, the intervenors have
17 submitted a declaration which attempts to put some numbers
18 onto some of these figures. We moved to strike portions of
19 the plaintiffs' declaration for relying on the -- their post
14:48:00 20 record and therefore weren't before the agency at the time
21 that it made that determination.
22 And so even if the figures cited in the plaintiffs'
23 declaration fall well within that category, I do think that
24 the Court can also apply common sense in this case and
14:48:20 25 recognize that it just would be nearly impossible, if not

14:48:25 1 impossible, for those additional cost items to somehow render
2 the mine an unprofitable one.
3 And I think that's really what the harmless error
4 analysis requires the plaintiffs to prove.
14:48:42 5 THE COURT: Let me ask you a question on something
6 you said just now, Mr. Duffy.
7 You said that the plaintiffs have not provided any
8 information to show that the costs would be great enough to
9 make the mine unprofitable.
14:49:03 10 How do you respond to their Catch-22 argument, which
11 I understand to mean that the reason they can't provide any
12 information is because the Forest Service didn't consider it,
13 so there's nothing in the administrative record to consider,
14 and the Forest Service shouldn't be allowed to escape this
14:49:20 15 error of failing to consider this topic by saying, well, the
16 plaintiffs can't prove what we would have considered if we did
17 consider it would have proven harmful.
18 What is your response to that point?
19 MR. DUFFY: Well, I certainly recognize the conundrum
14:49:41 20 that the plaintiffs are in in terms of not having the
21 information in the record to prove that the mine was
22 unprofitable.
23 But I do believe, at minimum, they need to give us
24 just some reason to believe, for example, by pointing out how
14:50:05 25 significant these environmental issues are likely to be and

14:50:09 how costly they might be, or something that could appeal to our common sense to -- at least call into question whether this mine could be profitable.

THE COURT: Okay. Did you have other points you

14:50:31 wanted to make?

MR. DUFFY: No. Those are the only points I wanted to make today.

We'll stand on our brief regarding the standing argument. So that's all I have.

14:50:50 THE COURT: Okay. How about from Energy Fuels?

MR. GLASS: Thank you, Judge. This is Brad Glass of Gallagher & Kennedy for Energy Fuels.

I want to pick up on the discussion about whether environmental costs were covered in the VER determination

14:51:05 Document 525. I'd point the Court to page 18 of that document, which is Bates labeled 010500.

THE COURT: What document, Mr. Glass?

MR. GLASS: The VER determination Document 525.

THE COURT: You said page 18?

14:51:25 MR. GLASS: Of the document, yes.

THE COURT: All right.

MR. GLASS: If you look at table 3, there's a capital costs summary listed. And the first item, Your Honor, is permitting and engineer.

14:51:35 When the VER determination was issued, Energy Fuels

14:51:37 had every one of the permits Under the Clean Air Act, the Clean Water Act, and Arizona State statutes and regulations that it was required to operate.

Notwithstanding that, the company put capital costs
14:51:50 into maintaining those permits. That is right here on this chart.

In addition, if you go down two items, it says surface facilities rehab impoundment ore pad.

The wildlife mitigation, our contention is in Roberts
14:52:06 declaration but we cite to this in the record, is that this was included in this cost of $508,000.

In addition there's -- so we build the environmental permitting costs in, they're considered by the Forest Service and VER determination. So the ongoing future environmental
14:52:22 costs relate to monitoring.

On that point, I'll refer you to Document 680, which is a supplement --

THE COURT: Hold on. Hold on just a minute, Mr. Glass. I'm trying to keep up.

14:52:36 MR. GLASS: Oh. I'm sorry.

THE COURT: I see table 3, permitting and engineering.

MR. GLASS: Okay. While we're on that --

THE COURT: Before we leave that, I've got a question
14:52:50 for you. Hold on just a second.

14:52:52 1 So when it says capital development permitting and
2 engineering --
3 MR. GLASS: Um-hmm.
4 THE COURT: -- what is there in that that suggests
14:53:03 5 that the kind of permitting being referred to would have
6 anything to do with soil sampling and groundwater monitoring?
7 MR. GLASS: Your Honor, this mine is located in the
8 middle of Forest Service lands. There is no other kind of
9 permit at issue other than the environmental permitting. It's
14:53:28 10 the only kind of permits that are issued for the mine.
11 That's -- that's why it's covered here.
12 Another thing I should have mentioned, if you go
13 further in the table you'll see that reclamation costs are
14 also identified at $450,000. That's a reclamation that's
14:53:44 15 required by the plan of operations at the end of operation.
16 So, again, that's an environmental cost of reclaiming the mine
17 back to its natural state when the mine is completed.
18 So there's another example of the environmental cost
19 being considered by the Forest Service in the VER
14:54:01 20 determination.
21 And to your point about the contingency being the
22 capital costs, it applies to the permitting and engineering.
23 It applies to the surface facilities rehab. It would apply to
24 any kind of net that would need to be applied. It would apply
14:54:16 25 to any other kind of surface mitigation, wildlife mitigation,

14:54:19 1 that would be required.
2 So those items that we've talked about, we contend,
3 would be covered by this contingency for these costs.
4 And while we're on this document and the operating --
14:54:36 5 the costs, you asked questions about the general
6 administrative costs and whether that captures some of these
7 other costs. And we say it does. We, Energy Fuels, is in a
8 unique position. It and its predecessors have extensive
9 experience in operating breccia pipe mines, including the
14:54:57 10 Arizona One mine recently, which was litigated before you.
11 And, so, as part of the Arizona One mine, we have
12 detailed cost estimates for that mine that could be applied to
13 this one. Those cost estimates include in all the costs it
14 takes to mine, market, and produce tons of ore. And that was
14:55:20 15 used by the Forest Service and applied here as well. It gives
16 a real world example of how you would include all costs
17 associated with mining, because they worked at Arizona One
18 just as they are here.
19 So that mining and site GNA category, you'll see in
14:55:39 20 the -- in the spreadsheets and documents does include all of
21 the -- the actual costs to mine, market the ore. Another --
22 THE COURT: I-- I understand, I think, the argument
23 you're making, Mr. Glass, as to why it would be logical to
24 assume that it included those.
14:56:04 25 But I'm also understanding from what I've read in the

14:56:08 1 briefs there's nothing you can point to that's specific in the
2 administrative record that says soil monitoring, surface water
3 monitoring, groundwater monitoring, the net, the 32 acres,
4 were included in costs that the Forest Service considered.
14:56:30 5 There's nothing specific. You would have to look at general
6 categories and assume that it would have been included, don't
7 we?
8 MR. GLASS: Well, we'll give you the cites in the
9 records what we considered environmental permitting costs.
14:56:44 10 I also -- as to day-to-day operations and monitoring
11 tasks, I will point you to Document 680, which is one of the
12 spreadsheets. And it's a little bit hard to find. If you go
13 down to 012618, there's a labor charge.
14 THE COURT: Say that again. 01 --
14:57:05 15 MR. GLASS: 2618.
16 THE COURT: All right.
17 MR. GLASS: And if you look at the labor chart
18 towards the bottom of that, you will see if there's
19 environmental engineer listed as someone that's on the site
14:57:19 20 doing work. You also see there's a radon security person on
21 the site taking radon measurements.
22 And then as you scroll down you'll see the man-hours
23 are estimated over time.
24 But to say there's nothing in the record, we point
14:57:35 25 here and say these are the folks at the mine doing this work.

14:57:39 1 We have accounted for it. It's included in our labor costs,
2 which are -- which were submitted and considered by the
3 Forest Service. These are the folks doing the day-to-day
4 monitoring activities, and we did account for them in the cost
14:57:57 5 estimate.
6 THE COURT: How about with respect to the 32-acre
7 restoration and the cargo net?
8 MR. GLASS: In regards to the -- to the netting over
9 the pond, first of all, we don't believe a net is required at
14:58:17 10 the time. There's a question of whether the netting can do
11 more harm than good. There's also a question whether the
12 California condor even comes to the mine. We submitted
13 evidence in our early briefing on this that one has never been
14 seen at the mine. And so it's an unforeseen -- to us, it's
14:58:30 15 an -- something that's not anticipated as an unforeseen cost.
16 There is no specific line item because, again, it's
17 unreasonable and unforeseen to us, and it would be covered by
18 the capital contingency. Again, a net is a capital cost, that
19 would go over the mine.
14:58:46 20 And in regard to the wildlife mitigation, there's
21 evidence in the record that we completed part of that. We
22 cited to AR 326 at 5859, which is a letter from the
23 Forest Service showing that Energy Fuels had contributed a
24 total of $12,000 to seal and reconstruct nine earthen wildlife
14:59:13 25 and livestock tanks in the district. The Forest Service

14:59:17 1 acknowledges that that doesn't absolve them of doing the other
2 mitigation efforts.
3 Our position is those costs fall under the surface
4 facilities rehabilitation and comment and ore pad costs of
14:59:30 5 $508,000 that we listed in -- that's listed in the VER
6 determination. And, again, if it's not, it would fall under
7 the contingency.
8 THE COURT: Go ahead.
9 MR. GLASS: Okay.
14:59:52 10 I'm trying to get to -- and, again, we cited a case
11 on our briefing. One issue I wanted to talk about was that
12 the Forest Service was not required to consider speculative
13 potential future mitigation costs. But nonetheless, the
14 contingency was built into the cost estimate to give it a
15:00:15 15 conservative estimate based on real world experience of
16 Arizona One to cover cost overruns or those unforeseen
17 incidents. And so just note that there was a significant
18 contingency built in.
19 One other note in response to plaintiffs' statement
15:00:43 20 about Energy Fuels Nuclear spending substantial sums in the
21 1980s to build a well. I want to make a distinction that
22 Energy Fuels Nuclear was a prior operator at the mine. It's
23 not the Energy Fuels Resources that's before you today. That
24 company went bankrupt. It was bought by another company,
15:01:03 25 International Uranium Corporation, which held it as a

15:01:06 1 subsidiary. It was then sold to Denison Mines and then it was
2 sold to the current Energy Fuels Nuclear.
3 So I just want to note that distinction that there's
4 an Energy Fuels Nuclear and Energy Fuels Resources in the
15:01:21 5 record so that that doesn't get confusing.
6 In regard -- and on that point, I want to go to the
7 sunk costs and just simply say our view cited in our briefing
8 is that a valid existing rights determination or a mineral
9 examination is a snapshot in time and it's forward looking.
15:01:41 10 The BLM handbook makes that clear. The IBLA cases make that
11 clear.
12 Like you, Your Honor, I was surprised there were no
13 cases addressing it. But if you look at how those cases
14 usually come before the IBLA, I think that's why. They're
15:01:57 15 usually the Forest Service or BLM invalidating a claim, and
16 it's a battle between the private party and the government, a
17 third party's not usually involved, and it's usually up
18 through the IBLA process then. So there's not -- not usually
19 a chance for a third party to come in and challenge the
15:02:17 20 mineral exam or determination or the VER determination in
21 those cases.
22 So we think that the VER determination was done
23 properly here. Again, it was a snapshot in time, an appraisal
24 valuation of looking forward, could a prudent miner make a
15:02:33 25 profit and would they proceed and -- and clearly with the

15:02:37 1 29-plus million in profit. It's -- it easily meets that test
2 here.
3 In regard to prejudicial error, I don't have much
4 else to add other than I -- we agree it applies. We do not
15:03:04 5 believe errors were made. We believe we included all of the
6 costs in the cost estimates that were submitted to the agency.
7 Nonetheless, to the extent there were errors, we do
8 believe they're harmless. And specifically any errors, in our
9 opinion, were covered by the 1.7 million contingency, and if
15:03:21 10 they exceeded that, they're well within the $29 million of
11 profit of the mine, which is over and above the 1.7 million
12 contingency.
13 We did cost out in the Roberts declaration the items
14 that had been identified and discussed. I understand the
15:03:37 15 argument of why that may be inappropriate or outside of the
16 administrative record. Our purpose in submitting that was not
17 to supplement the record, it was to provide color to the
18 documents that had been submitted to the Court and to provide
19 estimates and to put concrete numbers to the alleged harms and
15:03:57 20 issues that Energy Fuels didn't consider. So it was for the
21 purposes of addressing those harms and to explain a document
22 that was in the record.
23 THE COURT: Do you have any basis, Mr. Glass, upon
24 which I can consider it even for that purpose, since my review
15:04:16 25 is confined to the record?

15:04:22 1 MR. GLASS: No, Your Honor. You know, we were -- no.
2 I don't.
3 THE COURT: Okay.
4 Let me ask you another question.
15:04:33 5 MR. GLASS: Sure.
6 THE COURT: There was a disagreement between the
7 parties on the monitoring necessary to establish baseline
8 levels. And in the briefing, Energy Fuels asserted that the
9 baseline monitoring data was collected before the VER
15:04:59 10 determination. And yet during a discovery dispute that
11 occurred back in 2013, the Forest Service said that the
12 baseline monitoring had not been done. And that, of course,
13 was a statement made after the VER determination was finished.
14 Which of those is right?
15:05:22 15 MR. GLASS: Well, we have provided citations to the
16 record where that baseline monitoring is located in the
17 record. I just note that there had been a groundwater
18 monitoring well at the Canyon Mine since 1987, Your Honor.
19 That monitoring well, which is in the Redwall aquifer that's
15:05:40 20 been at issue, has been monitored consistently and regularly.
21 It has never shown any impacts from the mine. It's directly
22 at the mine.
23 So if a well directly at the mine isn't showing
24 impacts, it's impossible for me to see how springs ten miles
15:05:56 25 away at the rim of the Grand Canyon could possibly see it.

15:06:02 And for that -- to support that, I note that the Forest Service convened a 13-member interdisciplinary panel that examined all of the potential issues identified in the EIS, and one of those members was tasked with looking at
15:06:16 groundwater-related issues and determined that nothing further needed to be done.

In addition to that baseline monitoring, I note that the mine has an Arizona Aquifer Protection Permit that's in place and valid, and ensures that the mine doesn't impact the
15:06:33 aquifers located around it.

So I think -- I think in light of the fact there's been ongoing continuous monitoring of the well since 1987, there's an existing state Aquifer Protection Permit and the citations in the record, both from the Forest Service and its
15:06:51 mine review and at other -- other locations that have examined the baseline monitoring, I think it's a non-issue. I think we've established that the mine has not impacted and will not impact the aquifer issue.

THE COURT: Well, I understood the plaintiffs to be
15:07:06 arguing that the baseline monitoring concerned more than just groundwater, it was going to include surface water, it was going to include soil, radon. Is that incorrect?

MR. GLASS: All of that monitoring has been done at the site, Your Honor. Again, I point to the mine review. I
15:07:22 don't have the citation handy. But it assessed whether any

15:07:26 1 additional authorization permits or any additional work or
2 items needed to be done, and it concluded that they did not.
3 And the mine has been continuously permitting. And
4 as I noted, at the date of the VER determination it had all
15:07:41 5 the required federal and state permits.
6 I'm not sure what additional baseline monitoring
7 they're referring to, or what medium, but in light of the fact
8 it has valid active permits and the Forest Service reviewed
9 and determined no additional authorizations or approvals were
15:07:58 10 required, I think it speaks volumes that it had everything and
11 everything's been done above the board.
12 THE COURT: Okay. Did you have other points you
13 wanted to make, Mr. Glass?
14 MR. GLASS: No. I guess the last point is kind of
15:08:12 15 where I started. I just note that Energy Fuels is an
16 experienced mining company, has unique experiences in that it
17 has mined breccia pipes on the Colorado Plateau. It owns the
18 only domestic uranium mill. It's the largest producer of
19 uranium in the United States. It has mined several mines up
15:08:30 20 on the strip, including the Arizona One mine. So its cost
21 estimates are accurate, real, they include everything that
22 goes into producing ore, including the environmental response
23 cost, and that was all provided to the Forest Service.
24 Last point I note is that the Forest Service got
15:08:51 25 Energy Fuels' cost estimates and independently verified it

15:08:55 1 using an Apex program, which is spelled out in the VER
2 determination.
3 But the Forest Service didn't just take our word for
4 it, they checked the cost estimates using their established
15:09:06 5 program, and that was required by the BLM handbook for mineral
6 examination. They followed that to a tee. They confirmed it.
7 They put the information in the VER determination. We think
8 it's a really sound, solid document, and it included all of
9 the costs including environmental response costs, which I
15:09:24 10 cited to you earlier.
11 Thank you, unless you have any other questions.
12 THE COURT: Okay. Thanks.
13 Let's go back to Mr. Paul for five minutes.
14 Mr. Paul, are you there?
15:09:48 15 MR. PAUL: Forgive me, I was on mute, Your Honor.
16 THE COURT: Okay.
17 MR. PAUL: I'd like to start with a few of the
18 assertions made about how these environmental compliance costs
19 were allegedly considered. It's our view, as you know, that
15:10:05 20 Energy Fuels' dissection of the record just now is a post hoc
21 rationale and just doesn't reflect what the Forest Service
22 considered.
23 A couple specific points here, though. He's arguing
24 about the general and administrative cost category, including
15:10:25 25 monitoring costs. As we point out in our briefs, you know,

15:10:29 1 Canyon Mine and Arizona One are not the same, in particular
2 when it comes to monitoring the environment around them. And
3 so just the docket wholesale, whatever the production figure,
4 has been redacted, but whatever that figure was at
15:10:44 5 Arizona One, without any adjustment to consider the specific
6 facts of Canyon Mine on the south rim of the Grand Canyon,
7 it's -- it's -- it simply doesn't make sense.
8 And certainly the Forest Service didn't explain its
9 reasoning on that subject in it the first instance, and, of
15:10:58 10 course, that's the standard that applies here.
11 Secondly, if you look at the record decision from
12 1986 for the mine, on page 928, AR Doc. 6, page 928, it
13 specifically says for radiological monitoring that employees
14 at Energy Fuels are not allowed to do that monitoring. I
15:11:23 15 quote: All monitoring will be by independent contractors and
16 all costs will be borne by the applicant Energy Fuels.
17 To the extent they're claiming that number covers
18 monitoring, it's inconsistent with their obligations under the
19 ROD.
15:11:40 20 Mr. Glass just now made a handful of arguments about
21 the capital costs that occur in the validity determination. I
22 just note that those figures, it's apparently a cut and paste
23 from Appendix C. They're all redacted in the docket in front
24 of you, but I can say with certainty that they all appear on
15:12:01 25 this summary tab of that exhibit. And just by having analyzed

15:12:09 1 the formula as to how they were calculated, I don't think that
2 reflects an independent analysis of this subject by the
3 Forest Service in any regard.
4 On the subject of baseline monitoring, I think it's
15:12:25 5 important to hold the Forest Service to the assertion it made
6 earlier in the case. As you note, the monitoring we're
7 talking about is supposed to occur one year before ore is
8 mined and, of course, that hasn't been triggered even yet in
9 2020. So whatever Energy Fuels is talking about in terms of
15:12:45 10 baseline monitoring is just -- is not the monitoring that's at
11 issue in this case.
12 Mr. Glass, near the end, made a point about Apex.
13 You know, I think it's evident from the VER determination on
14 that subject that, again, Energy Fuels' cost figures were put
15:13:05 15 into a model. It's not something where the model used an
16 independent analysis of those costs. They're just adopted
17 wholesale. That's evident from the validity determination
18 itself.
19 A related point on mitigation costs that I've been
15:13:24 20 making as I've been responding to this, the idea those costs
21 are speculative is an argument that Energy Fuels has made.
22 Forest Service has not. Just Energy Fuels. And I want to
23 stress that in a record review case, it's up to the agency to
24 do in the first instance. There's no explanation in the
15:13:43 25 record to support the notion that they're speculative.

15:13:47 1 Forest Service never addressed those costs at all. So I think
2 the standard of review precludes that kind of finding in this
3 case.
4 And last --
15:14:00 5 THE COURT: Mr. Paul, let me ask you a question about
6 that last point.
7 The mitigation costs that I understand you to be
8 referring to are not identified anywhere. Those are costs
9 that will be incurred if it is determined someday that the
15:14:16 10 mine has impacted groundwater or surface water or something
11 like that.
12 If that's right, how in the world could you possibly
13 start to estimate what those mitigation costs would be when
14 you don't even know their nature at this point, much less the
15:14:33 15 extent of the contamination that we'd be attempting to
16 address?
17 MR. PAUL: Of course.
18 So those are the costs I'm talking about when I refer
19 to mitigation measures. What I say on that point, it's the
15:14:45 20 one made in our reply brief, you know, those measures are
21 predictable. There was potentially an adaptive management
22 program adopted in the 1980s to handle environmental
23 compliance problems as they arise. And I recognize that
24 that's contingent, but there are some specific measures that
15:15:07 25 would necessarily follow if problems arise.

15:15:11 1 You know, for example, if groundwater becomes
2 contaminated at the mine, the record of decision is quite
3 clear that groundwater pumping -- and I'm quoting from AR Doc.
4 at 928 again: Groundwater pumping will be maintained until
15:15:31 5 concentrations of the critical constituents are reduced to
6 recommended primary drinking water standards.
7 And I'll give you an example of something the
8 Forest Service knows will happen if groundwater is
9 contaminated. And I think just like the capital costs
15:15:46 10 contingency, which doesn't cover these costs but it addresses
11 the same sort of element of uncertainty in the analysis. The
12 Forest Service could have thought about the subject, evaluated
13 what would happen depending on what circumstances unfolded
14 over the next -- whatever mining would occur, and calculated
15:16:05 15 out a reasonable estimate of the expected costs.
16 THE COURT: Well, but the difficulty, or I should say
17 one difficulty I have with that, Mr. Paul, is you have
18 emphasized, I think rightly, that the task of the
19 Forest Service in determining, or I should say estimating,
15:16:25 20 whether or not this mine would be profitable is to focus on
21 present information. Known realities. And one thing it can't
22 do, for example, is speculate about what the future price of
23 uranium might be.
24 If that's true, how can it speculate about whether or
15:16:43 25 not there would be contamination in the future? It seems to

15:16:46 1 me whether or not uranium in five or ten years would be at $70
2 per pound is -- is -- there's no more speculation than
3 speculating that a particular aquifer will become contaminated
4 to a particular extent and will require groundwater pumping.
15:17:07 5 Those are both unknowns at the present and I'm having
6 difficulty with your suggestion that the Forest Service should
7 plug in a number into the VER determination to account for
8 that unknown.
9 MR. PAUL: I understand the analogy you're making,
15:17:23 10 Your Honor, and my response would be it's up to the
11 Forest Service in the first instance to provide that
12 explanation. I mean, if indeed the agency's position is that
13 those costs are speculative, that should appear somewhere.
14 Some explanation of why they were omitted. And it doesn't.
15:17:44 15 If I might, I know I'm over my time --
16 THE COURT: Go ahead.
17 MR. PAUL: -- I'd appreciate the opportunity to make
18 one more -- a couple very brief points on sunk costs.
19 I want to just stress quickly, you know, if the Court
15:17:59 20 is inclined to follow the interior board of land appeals
21 precedence on this issue, we think that's not the right
22 approach and that those cases were wrongly decided, but the
23 leading case on the subject, *Mannix*, expressly says -- it --
24 it prefaces its holding with the phrase "absence a prior
15:18:21 25 withdrawal." And here we have a withdrawal. There was a

15:18:24 1 withdrawal that prompted the validity determination. So even
2 if *Mannix* is applied in this case, I think it follows that
3 sunk costs should have been considered.
4 THE COURT: Well, but on that point, Mr. Paul, I saw
15:18:40 5 that language. What I assumed it meant, and it was nothing
6 but an assumption, was costs that were incurred after a prior
7 withdrawal should be considered. And the costs we're talking
8 about don't fall under that category.
9 I take it you read it differently? You say if there
15:19:02 10 was a prior withdrawal, then you go back to the beginning of
11 the mine operation and include all sunk costs, even if they
12 occurred before the withdrawal?
13 MR. PAUL: I do read it that way. And I'm struggling
14 to see what the rationale would be, obviously *Mannix* doesn't
15:19:20 15 supply it, for counting costs after a withdrawal but before
16 the so-called mineralization date, the moment the validity is
17 determined.
18 That, of course, is not the explanation that *Mannix*
19 gives for the decision. I think that -- you know, we talked
15:19:42 20 about this in our joint matrix on sunk costs about a year ago.
21 I think the only rationale that has been supplied by the IBLA
22 on that subject comes from a concurring decision by
23 Judge Burski, I believe, in the *Collard* case. We did discuss
24 it in our briefing. And that's -- that's not the rationale
15:20:05 25 that Judge Burski gave.

15:20:09 THE COURT: Well, what is the rationale behind saying we don't consider sunk costs unless there was a prior withdrawal, in which case we consider all sunk costs. What's the rationale behind that?

15:20:23 MR. PAUL: Obviously this is not a line of reasoning we entirely agree with. But I think what Judge Burski says in that case is the -- essentially the determination is claims based, and the concern that the IBLA had in *Mannix* was if a -- if a claim is invalidated when the lands are still open to

15:20:52 mineral entry, then as a practical matter someone else can go out and stake a new claim to that same deposit and it will just essentially inundate the government with, you know, additional filings on claims despite having just invalidated one whose prior costs would have made mining the deposit

15:21:18 unprofitable.

But that rationale doesn't hold true if the lands are withdrawn. That is, in that circumstance somebody can't go out and stake a new claim, sort of wiping the slate clean of those past costs.

15:21:35 And since that's the situation we have here, we think sunk costs, even under the *Mannix* rule, should be considered.

THE COURT: Well, let me ask you one other question that's prompted by that comment that has sort of bumped around in the back of my head so it's not very well developed.

15:21:57 But let's assume hypothetically that a company finds

15:22:02 1 minerals, stakes a claim, starts the development, proves they
2 exist, does some substantial work at the site, and then goes
3 bankrupt. Another company comes in and buys the stock of that
4 company for pennies on the dollar. And using its money can
15:22:28 5 develop that mine and make a substantial profit.
6 It didn't pay for any of the past sunk costs.
7 Would you say in that situation that the past sunk
8 costs that it did not pay for still have to be included in the
9 calculation of whether or not that company can make a profit
15:22:46 10 at the site?
11 MR. PAUL: Absolutely, Your Honor. I think that's a
12 great example. I mean, Mr. Glass mentioned that Energy Fuels
13 Nuclear went bankrupt here. And I would say that in that
14 circumstance the company that comes in and buys the bankrupt
15:23:04 15 entity for pennies on the dollar is really mining the
16 bankruptcy, not the mineral deposit. And that's the core
17 point we're trying to make in our argument on sunk costs,
18 which is that the test of the mining law focuses on the
19 deposit, not the situation, the subjective situation, of any
15:23:24 20 given mining company like in the example you gave.
21 And, yeah, we need to consider as an objective matter
22 what it would take to mine that deposit starting on day one,
23 not sometime in the future when the bankruptcy and sale
24 occurred.
15:23:45 25 THE COURT: Okay. I think I interrupted you. You

15:23:47 1 were going to make one final point.
2 MR. PAUL: You actually went to the point I wanted to
3 make, which was about the bankruptcy. So unless you have
4 additional questions, that's all I had to share.
15:24:04 5 THE COURT: Okay. Any other thoughts from
6 defendants?
7 MR. DUFFY: This is Sean Duffy for federal
8 defendants. I have no additional comments.
9 THE COURT: All right. Mr. Glass, how about you?
15:24:17 10 MR. GLASS: Just one comment on that last point and
11 I -- I disagree. I think that it's, again, a forward-looking
12 analysis. The company that bought the asset from the
13 bankruptcy, its value is not what it paid for. It's how
14 many -- how much minerals is in the ground. So if that
15:24:38 15 company could make -- say it sunk -- the prior company sunk
16 $30 million into the mine, it bought it for a million, and
17 going forward it can make 25 million. It absolutely under the
18 test, there is a valid existing right and it can proceed
19 because its value is just a million dollars and it can make
15:25:02 20 24, minus all the costs.
21 THE COURT: What is your response, Mr. Glass, to the
22 point Mr. Paul just made that -- he didn't say it this way but
23 this is how I understood it, that the reason we have a
24 profitability analysis in the first place is to decide whether
15:25:20 25 there's a valuable mineral right within the meaning of the

15:25:24 mining law of 1872.

MR. GLASS: Um-hmm.

THE COURT: And that the focus is not on the company, the focus is on the minerals. And if there are minerals in

15:25:31 the ground that cannot be mined profitably, you don't get rights to them even if you can buy a bankrupt company's assets for pennies on the dollar and make money by mining it because the truth is they're still not valuable, they couldn't be mined at a profit, and you just have the fortuity of a

15:25:51 bankruptcy to make it possible for you.

MR. GLASS: Yeah. First of all, that's not the case here, wouldn't concede that's the case here. But in the hypothetical, in the example, again, what the law requires is the test that the Supreme Court has laid out and the precedent

15:26:06 since is whether a prudent mine moving forward, forward to make a profit. And it does not regard how the value was created by prior companies, what they put in, what they did. The question is whether the current holder of the mining claim or the asset can make a profit going forward.

15:26:26 I guess a basic economic analysis of when you do a valuation, what do you have and can you make a profit going forward.

That's how I would answer that question, Your Honor.

THE COURT: Okay. All right.

15:26:39 Well, thank you for your arguments. This has been

15:26:42 helpful. I will take this under advisement and get you a decision sometime in the next few days or few weeks, depending on how much of the record I have to spend my time on.

MR. GLASS: Your Honor --

15:26:58 THE COURT: Go ahead.

MR. GLASS: Sorry, Your Honor, sorry to interrupt, but I just wanted to note at the beginning you indicated you may allow us a chance to review the transcript if there's confidential information discussed. I do not believe that

15:27:13 there was today. I believe we discussed only what's in the public record and did not get into that territory, so I don't believe that we need to -- from Energy Fuels' perspective, we don't need to take under advisement a review. We're comfortable with it being made public.

15:27:31 THE COURT: Okay. I appreciate you catching that point.

Mr. Duffy, do disagree with that?

MR. DUFFY: No. I agree with that point.

THE COURT: Okay. Then we won't have you review the

15:27:42 transcript. If somebody orders it, it will go into the record in this form.

Okay. Thank you all. Stay safe.

MR. BIENVENU: Your Honor --

THE COURT: Who --

15:27:50 MR. BIENVENU: Your Honor, may I make one last

15:27:52 additional point. My name is --

THE COURT: Who is --

MR. BIENVENU: This is Reed Bienvenu. I am counsel for the Havasupai tribe. And I just wanted to make one point,

15:28:00 which is that we did not formally join the briefs in this case. We've let the environmental companies take the lead on the environmental issues because they're the experts in that area.

But I wanted to note for the record that we do

15:28:15 support their summary judgment motion and we didn't want you to draw any inference by us not joining or as signatories that we were not supporting that motion. So I just want to note that for the record.

THE COURT: Okay. That's noted.

15:28:32 Anybody else?

Okay. Thank you all.

(End of transcript.)

* * * * *

C E R T I F I C A T E

I, PATRICIA LYONS, do hereby certify that I am duly appointed and qualified to act as Official Court Reporter for the United States District Court for the District of Arizona.

I FURTHER CERTIFY that the foregoing pages constitute a full, true, and accurate transcript of all of that portion of the proceedings contained herein, had in the above-entitled cause on the date specified therein, and that said transcript was prepared under my direction and control, and to the best of my ability.

DATED at Phoenix, Arizona, this 2nd day of June, 2020.

s/ Patricia Lyons, RMR, CRR
Official Court Reporter

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U.S. District Court

DISTRICT OF ARIZONA

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Case Name: Grand Canyon Trust et al v. Williams et al
Case Number: 3:13-cv-08045-DGC
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Docket Text:
ORDER. During Monday's argument, the parties should address whether the harmless error rule applies to Plaintiffs' contention that the VER Determination failed to account for various environmental monitoring and protection costs. See 5 U.S.C. § 706 ("due account shall be taken of the rule of prejudicial error" in deciding whether an agency action should be set aside); Shinseki v. Sanders, 556 U.S. 396, 406 (2009) ("we have previously described § 706 as an administrative law harmless error rule.") (quotation marks, ellipsis, and citation omitted); Ludwig v. Astrue, 681 F.3d 1047, 1054 (9th Cir. 2012) ("Sanders establishes that administrative adjudications are subject to the same harmless error rule as generally applies to civil cases."). Signed by Senior Judge David G Campbell on 5-8-20. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC)

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC **Joint Matrix Regarding the Parties' Dispute Over Redacted Sunk Costs**

INTRODUCTION

Pursuant to the Court's order on July 18, 2019, the Parties seek in this joint matrix for the Court to resolve a dispute over a redaction made by Intervenor-Defendants Energy Fuels Resources (USA) and EFR Arizona Strip LLC (collectively, "Energy Fuels") in a document produced to Plaintiffs under the stipulated protective order approved by the Court on May 7, 2019. The stipulated protective order in this case authorizes parties to redact "sensitive information that the producing party believes is not relevant to the claims in dispute." Stip. Protective Order ¶ 11, ECF No. 209 (May 7, 2019).

The document at issue is a letter from Energy Fuels to the U.S. Forest Service dated March 28, 2012, transmitting the company's economic analysis of the Canyon Mine for use in the agency's mineral examination concerning the mine. The redaction at issue is the following:

- The [redacted] in sunk costs at the Canyon Mine are excluded from the NPV analysis. Sunk costs are not relevant to the decision process for determining the economic viability of the Canyon Mine at this time.

The Parties disagree whether the redacted information should be withheld. Their respective positions on this legal issue are set out below. The Havasupai Tribe concurs with Plaintiffs' position below.

Plaintiffs' Position:

I. Introduction

The propriety of redacting the amount of "sunk costs" presents a purely legal question that is illuminated by asking whether a mine is profitable under the following scenario. Suppose that a mining company spends $2 million to begin developing a hard rock mine on federal public lands. The government then closes those lands to mining. At that point, the mine stands to generate $4 million in revenue but will cost $3 million more to build and operate, on top of the $2 million already spent. Is that a profitable mine?

No it is not. Mining that deposit will yield a loss of $1 million. Any investor who spent $5 million on a mining operation that returned $4 million would say the mine lost money. Yet, Energy Fuels (and presumably the Forest Service) would say that this deposit can be mined for a $1 million profit. How? The company would contend that the $2 million spent before the area was closed to mining is a "sunk cost" that can somehow be entirely ignored when accounting for the mine's profitability. And that is the approach the Forest Service took when calculating the Canyon Mine's profitability in this case, the determination whose lawfulness plaintiffs challenge.

This method of accounting cannot be squared with the Supreme Court's holding in *United States v. Coleman*, 390 U.S. 599 (1968), which insists that a mineral deposit is "valuable"—and thus open for mining under federal law—only if the deposit can be mined and marketed at a profit. *Id.* at 602–03. Yet it is impossible to determine the profitability of mining a deposit of minerals if some costs of mining are ignored simply because they were incurred in the past. The amount of sunk costs that Energy Fuels redacted and the Forest Service excluded from its profitability calculation is therefore relevant under Fed. R. Evid. 401: It affects the probability that Canyon Mine is unprofitable, and it is of consequence in determining this action, since the legal adequacy of the Forest Service's profitability calculation is the key question to be resolved. As a result, the Court should reject the argument that the amount of sunk costs is irrelevant to

this case and order Energy Fuels to produce a copy of the March 28, 2012, letter with the amount of sunk costs unredacted.

II. Legal Background

The claim remaining on the merits asserts that the Forest Service improperly determined that Energy Fuels had "valid existing rights" to mine uranium at Canyon Mine even though the mine sits on federal public lands that have been temporarily closed to uranium mining. *See* Am. Compl. ¶¶ 89–92, ECF 115, (Apr. 23, 2014). To have valid existing rights to mine on "withdrawn" lands like these, a mining company must have discovered a "valuable mineral deposit" before the withdrawal. *Hjelvik v. Babbitt*, 198 F.3d 1072, 1074 (9th Cir. 1999). A "prudent person" test dictates whether a deposit is valuable, and that test requires, in part, that the mineral deposit must be "marketable." *Coleman*, 390 U.S. at 600–603. A mineral is marketable only if it can be "extracted, removed, and marketed at a profit." *Id.* at 600.

III. The amount of sunk costs is probative of profitability.

Plaintiffs contend on the merits that the Forest Service's evaluation of the mine's profitability was legally flawed. *See* Am. Compl. ¶¶ 89–92; Pls.' Mem. Supp. Mot. Summ. J. at ECF pp. 17–21, ECF 140-1 (Oct. 15, 2014). The agency's error includes omitting costs, such as the expense of a groundwater monitoring well, other environmental monitoring, mitigating harm to the environment and cultural resources, and completing wildlife-conservation measures, like building power lines to reduce risk to California condors. *Id.*

In response, defendants have made two arguments that implicate sunk costs. First, Energy Fuels argued that "[c]osts related to the construction of the monitoring well and powerlines were excluded as sunk costs, because they were built before the [validity] determination." EFR's Mem. Opp. Pls.' Mot. Summ. J. at ECF p. 19, ECF 147-1 (Nov. 19, 2014). Second, both Energy Fuels and the Forest Service argued that the mine would earn enough revenue that the profitability analysis would not change if the omitted costs had been accounted for. *See See* Fed. Defs.' Reply at ECF p. 17, ECF 155

(Jan. 29, 2015) ("Line-items for monitoring and mitigation will not cost $29 million, and the Forest Service relied on that profit in concluding that Energy Fuels could feasibly mine the minerals 'at a profit.'"); EFR's Reply at ECF p. 11, ECF 156 (Jan. 29, 2015) ("Even if those costs were [$3.9 million], [the Forest Service's] conclusions would not have changed.").

Especially considering these lines of defense, the amount of sunk costs is relevant to the merits because the probability that the mine is unprofitable would change if any amount of sunk costs were improperly excluded. *See* Fed. R. Evid. 401(a). And the amount of sunk costs may well be sizable. Though Energy Fuels has identified exactly what outlays it considered to be sunk costs, the Forest Service's mineral examination explains that the excluded costs included "[m]uch of the surface development"—like the "main head frame, hoist house, warehouse and shop, sediment ponds, and power lines." AR Doc. 525 at 10500 ("These costs are considered 'sunk' costs since they were previously completed for mine development and are fixed assets on the claims.").

IV. Sunk costs are of consequence to determining the merits.

Despite putting the question of sunk costs specifically into issue, Energy Fuels argues that the amount of sunk costs is not relevant—and thus may be redacted—on the grounds that, as a matter of law, those costs were properly excluded from the Forest Service's profitability calculation. That contention hinges on a mining contest resolved by the Interior Board of Land Appeals, *United States v. Mannix*, 50 IBLA 110 (1980). In that appeal, the Board addressed whether "earlier expenses" of mining the deposit at issue—such as the cost of cabins, sheds, an access road, and rail and ore cars—must be included in calculating profitability. *Id.* at 119. It held, with almost no explanation or analysis, that "*[a]bsent a prior withdrawal*, if the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met." *Id.* (emphasis added).

On a few occasions, the Board has repeated this holding without explaining it and without justifying its departure from the common-sense conclusion that *all* costs matter in

calculating profitability.[1] And the Bureau of Land Management has copied this treatment of sunk costs into its handbook, also without any analysis. *See* AR Doc. 374 at 7438. It is this line of precedent that Energy Fuels uses to claim that sunk costs are legally irrelevant. But the company's reasoning is unsound for three reasons.

A. Profitability cannot be determined while ignoring sunk costs.

The Board's precedent purportedly allowing for sunk costs to be disregarded absent a withdrawal cannot be squared with *Coleman's* profitability requirement. The mining law confers mining privileges on those who discover "valuable mineral deposits" on public lands. 30 U.S.C. § 22. As the Ninth Circuit has explained, "profit over cost must be realizable *from the material itself* and it is that profit which must attract the reasonable man." *Ideal Basic Indus., Inc. v. Morton*, 542 F.2d 1364, 1369 (9th Cir. 1976) (emphasis added).

If costs are incurred to develop a deposit of minerals, those costs do not vanish when considering future development of that deposit simply because the costs were incurred in the past. Someone who spends $100,000 building and running a mine who then sells the minerals for $50,000, has not turned a profit, regardless of when the costs were incurred. *See, e.g.*, *United States v. Freeman*, 179 IBLA 341, 345 (2010) ("[A] paying mine is one that 'recoup[s] all of the claimants' expenditures'…."). Doubtless, the potential profitability of a deposit may change over time—if, say, the price of the mineral rises or *future* costs fall. But that cannot mean that the actual, past development costs of necessary mining improvements on that deposit somehow disappear when asking whether that deposit can be profitably mined.

This remains true—contrary to an argument Energy Fuels may make—even if one mining company takes advantage of past work by a different mining company. A mineral deposit that cannot be mined at a profit cannot be transmuted into a profitable deposit in any meaningful economic sense if one company goes broke mining it and another

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[1] *See, e.g.*, *United States v. Clouser*, 144 IBLA 110, 132 (1998); *United States v. Copple*, 81 IBLA 109, 129 (1984).

company turns a profit *only* by piggybacking on the other's purportedly "free" work. The question under the mining laws is whether a "valuable mineral deposit" exists that can be profitably mined, 30 U.S.C. § 22, not whether one miner can turn a profit *solely* because it is harvesting another miner's losses. *See Coleman*, 390 U.S. at 600–03 (focusing exclusively on the question of whether the *mineral deposit* can be profitably mined).

For example, if Company A spends $75,000 mining a deposit and generates $0 in revenue, and Company B will exploit Company A's work and spend $25,000 more continuing to mine that deposit yet make just $50,000 in revenue, the deposit would cost $100,000 to mine and return $50,000 in proceeds, for a net loss of $50,000. That is not a deposit that was profitable to mine, even if Company B's revenues exceed its expenses. In that scenario, Company B's "profit" comes from exploiting Company A's work, not from the "material itself." *Ideal Basic Indus., Inc.*, 542 F.2d at 1369. Put differently, if Company A had not done the first $75,000 of work mining the deposit, Company B would have had to spend $100,000 to mine the deposit and made $50,000 in revenue, yielding a net loss of $50,000. Only if Company B can make enough revenue to cover the value of Company A's work that Company B exploited can it be said that the deposit can be profitably mined. And this is especially obvious if Company B buys Company A's mining claims and workings. In that instance, there can be no question that Company A's work and infrastructure were not "free" for Company B.[2]

Under any scenario, ignoring sunk costs contradicts the objective nature of the prudent-person test. *See United States v. Armstrong*, 184 IBLA 180, 217–18 (2013) (prudent person standard is an objective one). "[W]hat is required to extract, process, and market the mineral on a particular claim is the same no matter who mines it." *Id.* at 218.

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[2] Energy Fuels may claim that some or all of the sunk costs at issue here were incurred in the early 1990s by one of the company's predecessors in interest, Energy Fuels Nuclear, Inc. But Energy Fuels Nuclear was bought by a predecessor of the "Denison Mines" group of companies, which Energy Fuels then bought in 2012. *See* AR Doc. 492 at 10361; AR Doc. 569 at 11374. So, Energy Fuels paid something for the earlier-staked Canyon Mine claims and partially developed infrastructure.

And that being so, there can be no logical justification for ever excluding sunk costs altogether from a calculation of profitability.

B. Regardless, sunk costs cannot be ignored when there is a withdrawal.

Even if *Mannix* were correct that past expenditures may be zeroed out "absent a withdrawal," they may not be excluded where, as here, there is a withdrawal. This caveat to the *Mannix* holding was explained at length in a 1994 concurring Board opinion by Judge Burski, who was on the three-judge panel in *Mannix*. "While not clearly explained," he wrote, "the non-existence of a withdrawal was critical to the Board's ruling in the *Mannix* case." *United States v. Collord*, 128 IBLA 266, 304 (1994).[3] "[T]he Board reasoned that while it might be argued that the specific claims at issue were invalid, nothing would prevent the appellants from relocating new claims upon the receipt of the Board's decision." *Id.* And since those new claims "would not be burdened with the necessity of recouping past expenditures made under prior locations," the Board, "bowing to practicality," entertained the fiction that sunk costs were zero. *Id.*

Yet a withdrawal would have changed that outcome, "[s]ince no future location could be made…." *Id.* Under those circumstances, the Board would no longer entertain the fiction that a new claim could be staked to wipe the slate clean of past costs. *Id.* Put differently, in *Mannix*, the Board asked whether a particular *claim* is profitable to develop, and it held that one claim that is staked over another does not inherit the earlier-staked claim's costs. When a withdrawal prevents the staking of new claims, there is no justification for the fiction that sunk costs may be ignored.

It is true that the Board—without any reasoning or scrutiny—has applied the *Mannix* holding to claims on withdrawn lands. *See United States v. Copple*, 81 IBLA 109, 129 (1984); *United States v. Clouser*, 144 IBLA 110, 132 (1998). But those cases are distinguishable. In *Copple*, Judge Burski applied the *Mannix* holding to withdrawn

[3] Lest Judge Burski's explanation be taken as a *post hoc* rationale, he added a footnote explaining that issuance of the *Mannix* decision "was preceded by lengthy discussions within the panel and the explanation provided in the text of this concurrence does, I believe, do justice to the understanding of the panel which issued that decision." *Collord*, 128 IBLA 266, 304 n. 10 (1994).

lands without any analysis, a conclusion that he later rejected in *Collord* by explaining that "the non-existence of a withdrawal was critical" for excluding sunk costs. 128 IBLA at 304. Still further, the cost for existing mine workings at issue in *Copple* were not assumed to be zero, but were discounted by both sides' experts to reflect their present value to the proposed mining operation. *Id.* at 115–16, 129. Having approved of this discounting, the Board's holding on sunk costs can only be understood to mean that *all* actual, past "development costs … need not be recouped" to show a profit, but the value of the existing workings nonetheless must be accounted for as a present cost. *Id.* at 129.

In *Clouser*, the Board was focused on whether the cost of already-owned *equipment* must be accounted for. 144 IBLA at 132. And when it comes to equipment that can be moved around, the existence of a withdrawal is not germane: It is not as if staking a new claim could, as a legal matter, zero out the mobile equipment costs, which are not fixed assets on the claim. Besides, if that were not enough to render *Clouser* irrelevant, the Board's most recent ruling on the question of already-owned equipment costs, *Armstrong*, 184 IBLA at 216–20 (2013), properly concluded that those costs must be accounted for, implicitly overruling *Clouser*, 144 IBLA 110 (1998). *See also United States v. Feezor*, 130 IBLA 146, 222 (1994) (holding that already-owned equipment costs must be included). Unlike *Clouser*, the ruling in *Armstrong* is backed up by careful and sensible reasoning. 184 IBLA at 216–220. In short, there is an opportunity cost of putting mining equipment to use when it could be sold or used elsewhere. *Id.* at 216–18. This, again, comports with the objective nature of the prudent-person test. *Id.* at 217–18. And that ruling, if it does not reject *Mannix* altogether, at least casts serious doubt on the idea that Board precedent allows sunk costs to ever be wholly ignored. *Id.* at 216–220.

Thus, even if *Mannix* were correct to exclude sunk costs from the profitability calculation absent a withdrawal, the analysis underlying *Mannix* does not support the conclusion that sunk costs may be zeroed out when there is a withdrawal. Its holding therefore does not apply to Canyon Mine, given that the mine is on withdrawn lands. If the Canyon Mine claims are invalid, Energy Fuels cannot go out tomorrow and stake new

purportedly "cost-free" claims. As a result, even if it were proper to exclude sunk costs on non-withdrawn lands, the sunk costs of developing Canyon Mine should be accounted for when determining its profitability.

C. The Bureau of Land Management's handbook is not persuasive.

The last source of precedent on which Energy Fuels relies is the guidance about sunk costs in the Bureau of Land Management's handbook. But that guidance is not binding, and for the reasons just given, it is not persuasive. *See* Fed. Defs.' Reply at ECF p. 17, ECF 155 (arguing that handbook is not binding); *Jacinto v. I.N.S.*, 208 F.3d 725, 733 n.5 (9th Cir. 2000) (asking whether non-binding handbook is persuasive). The handbook's guidance contradicts *Coleman*, for there is no justification under the marketability standard for ever excluding sunk costs. Even still, it does not address the "absent a withdrawal" caveat in *Mannix*. AR Doc. 374 at 7438. And the only other Board appeal the handbook cites, *Clouser*, 144 IBLA at 132, (*see* AR Doc. 374 at 7438 n. 23) is contradicted by the Board's most recent ruling in *Armstrong*, 184 IBLA at 216–220.

V. Conclusion

Energy Fuels' claim that the amount of sunk costs is irrelevant and may be redacted is contravened by the marketability test adopted by the U.S. Supreme Court in *Coleman*. It is not possible to determine whether a mineral may be "extracted, removed, and marketed at a profit," 390 U.S. at 600, if sunk costs are entirely left out of the calculation. And even if the Court adopts the reasoning in *Mannix* for excluding sunk costs absent a withdrawal, that rule would not apply here, since the lands at issue have been withdrawn. Plaintiffs therefore request that the Court order Energy Fuels to produce a copy of the March 28, 2012, letter with the amount of sunk costs unredacted.

Energy Fuels' Position:

Intervenor-Defendants Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (collectively, "Energy Fuels") request that the Court confirm their redaction of confidential information relating to "sunk costs" in Appendix C (Cost Information) to the Valid Existing Rights Determination ("Appendix C") is appropriate, and deny Plaintiffs' request for that information. As noted above, the redaction at issue is the following:

- The [redacted] in sunk costs at the Canyon Mine are excluded from the NPV analysis. Sunk costs are not relevant to the decision process for determining the economic viability of the Canyon Mine at this time.

Energy Fuels believes this redaction is appropriate for three reasons: (A) Plaintiffs are not entitled to receive the confidential information under the U.S. Supreme Court's recent ruling in *Food Marketing Institute v. Argus Leaders Media,* 139 S. Ct. 2356 (2019); (B) Plaintiffs did not identify or challenge "sunk costs" in the Fourth Claim of the Amended Complaint for Declaratory and Injunctive Relief (ECF No. 115) ("Amended Complaint"); and (C) the confidential information was not relevant to the Valid Existing Rights Determination ("VER Determination") under federal guidance and authorities.

A. <u>Plaintiffs are not entitled to the confidential information under *Food Marketing Institute*.</u>

The redacted information regarding "sunk costs" constitutes confidential information because Energy Fuels maintains the information as private and confidential; it is not publicly available; and Energy Fuels provided the information to the U.S. Forest Service ("Forest Service") under an assurance of privacy under the Freedom of Information Act ("FOIA") and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, which is demonstrated by Energy Fuels' transmittal and clear marking on such correspondence that designated Appendix C as confidential. Notwithstanding its belief that all of Appendix C constitutes confidential information, Energy Fuels negotiated with Plaintiffs, agreed to the Protective Order entered by the Court, and produced, with limited redactions of irrelevant information, the documents sought by Plaintiffs in their Motion to Complete the Administrative Record (ECF No.

202). Pursuant to the terms of the Protective Order, Energy Fuels produced Appendix C and redacted its "sunk costs," both due to its nature as confidential information and because it is not relevant to Plaintiffs' Fourth Claim. The Parties now disagree on whether Plaintiffs are entitled to receive the information.

The U.S. Supreme Court's recent ruling in *Food Marketing Institute v. Argus Leader Media*, 139 S. Ct. 2356 (2019), confirms that Energy Fuels' redaction is appropriate. In the case, a private party brought an action under FOIA against the U.S. Department of Agriculture ("USDA"), seeking the names and addresses of all retail stores that participate in the national food-stamp program (*i.e.*, the Supplemental Nutrition Assistance Program or SNAP) and each store's annual SNAP redemption data for five years. Stores must submit certain financial data to receive financial compensation under the SNAP program and many stores submit their financial data under a claim that the data is confidential. The USDA refused to disclose the store's SNAP data, citing FOIA Exemption 4, which protects "trade secrets and commercial or financial information obtained from a person as privileged or confidential." 5 U.S.C. § 552(b)(4). The rationale behind Exemption 4 is that private parties, such as Energy Fuels in this instance, should be able to communicate confidential information to federal regulators, such as the Forest Service, without inadvertently making that confidential information public, waiving confidentiality, or allowing the disclosure of the information to third parties who otherwise would not have access to the information.

In evaluating the private party's FOIA claim, the district court applied the "substantial competitive harm test," which provides that commercial information that a person must provide to the government cannot be deemed confidential unless disclosure is likely to cause substantial harm to the competitive position of the person from whom the information was obtained. In *Food Marketing Institute*, the district court found that disclosure of the information would cause competitive harm but not substantial competitive harm and ordered disclosure. The Eighth Circuit Court of Appeals affirmed the district court. The U.S. Supreme Court reversed and unanimously agreed that the

existing FOIA Exemption 4 standard applied by the district court and Eighth Circuit were too stringent. The U.S. Supreme Court's majority decision, written by Justice Gorsich, held that information is "confidential" within the meaning of FOIA Exemption 4 "at least" where it is "[1] both customarily and actually treated as private by its owner and [2] provided to the government under an assurance of privacy." The Court left open the possibility that satisfying the first condition may be sufficient. The Court specifically rejected the "substantial competitive harm test."

While this is not a FOIA case, the holding and rationale of *Food Marketing Institute* apply equally to Energy Fuels' redaction of its confidential information regarding "sunk costs" and its desire to maintain that information as confidential. Energy Fuels customarily and actually treats its internal financial information, including the information regarding "sunk costs" and its internal budgets and financial plans, as private and confidential. That information is not publicly available. When the information was requested by the Forest Service's mineral examiners, Energy Fuels transmitted and clearly marked the information as confidential per FOIA Exemption 4 and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6. Energy Fuels reasonably relied on the Forest Service to treat the information as confidential and to not release it to third parties such as Plaintiffs, which it properly did. The fact that Plaintiffs have filed a lawsuit under federal statutes other than FOIA and now seeks Energy Fuels' irrelevant confidential information does not change the *Food Marking Institute* holding as it applies to the submission of confidential information submitted to a federal agency with the full expectation and reliance that it will be treated as confidential and not disclosed, as is the case here. *See* Fed. Rule of Evidence 501 (acknowledging that the confidentiality and privilege afforded by the federal FOIA statute and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228, apply to this litigation).

While Energy Fuels agreed to disclose some of the relevant confidential information that relates to Plaintiffs' Fourth Claim in good faith to move this matter forward, Energy Fuels only agreed to do so with the assurance from Plaintiffs that it

could redact irrelevant commercial and financial information, such as the CBI regarding "sunk costs" and its specific internal budgeting and cost information. Energy Fuels does not believe Plaintiffs need this remaining confidential information to bring and brief its Fourth Claim in full and does not believe that there is any legitimate reason for Plaintiffs to have the confidential information regarding "sunk costs." This is especially true since Plaintiffs could use its own internal financial information against Energy Fuels in the future, which is likely to cause substantial harm to the competitive position of Energy Fuels (the person from whom the information was obtained), thus fulfilling the second element of the "substantial competitive harm" test deemed too stringent a test to apply by the U.S. Supreme Court. If Energy Fuels is able to fulfill both elements of an overly stringent test, clearly, it meets the less stringent test's requirements. Accordingly, Energy Fuels believes its right to confidentiality in this case is substantial and clear and, consistent with *Food Marking Institute*. Energy Fuels requests that the Court confirm that its redaction of the confidential information was proper and appropriate and deny Plaintiffs' request for the information.

B. <u>Plaintiffs did not identify or challenge "sunk costs" in their Fourth Claim.</u>

Plaintiffs' Fourth Claim alleges that the Forest Service failed to consider the costs related to the Canyon Mine's approvals, operations, and reclamation when it performed the VER Determination and determined that the Canyon Mine's mining claims are so profitable that they satisfy the prudent person/marketability tests. Plaintiffs identified a detailed list of costs that they allege the Forest Service did not consider in the VER Determination. Specifically, Plaintiffs alleged that the Forest Service did not consider the following:

> . . . In this determination, the Forest Service failed to consider all relevant factors including costs related to Canyon Mine approvals, operations and reclamation. For example, the Forest Service did not include reclamation costs. The Forest Service did not include the costs of groundwater monitoring. The Forest Service did not consider the costs of remediating contamination of the Colorado River and groundwater caused by mining

> activities. The Forest Service did not evaluate the costs associated with expanding the wastewater pond, clearing the utility corridor of trees, or minimizing adverse impacts of the Mine on public land resources, including Tribal resources such as the Red Butte TCP or the California condor. The Forest Service did not include all costs associated with compliance with environmental and other applicable laws, including the Clean Air Act radon emission regulations. The Forest Service did not account for the costs of potential mitigation measures. These costs are relevant to the profitability of Canyon Mine's mineral deposits, and must be fully considered to determine whether each claim contains the requisite discovery of a valuable mineral deposit.

Amended Complaint at ¶ 91 (ECF No. 115).

Plaintiffs' Amended Complaint does not identify the "sunk costs" that are at issue with Energy Fuels' redaction. Namely, "sunk costs" do not fall into the general categories of "approvals, operations and reclamation" costs identified by Plaintiffs. They also were not identified in any of the specific costs identified by Plaintiffs. Further, "sunk costs" were not identified or at issue in the prior summary judgment briefing on Plaintiffs' Fourth Claim before the Court. Because Plaintiffs did not identify or challenge "sunk costs" in their Amended Complaint or in this matter to date, they simply are not relevant and Energy Fuels' redaction is proper and should be confirmed.

C. <u>The confidential information is not relevant to the VER Determination under federal guidance and authorities.</u>

Plaintiffs' Fourth Claim alleges that the Forest Service failed to consider certain costs related to the Canyon Mine's approvals, operations, and reclamation when it performed the VER Determination. The VER Determination is included in the administrative record as Document 525. The VER Determination consists of a Mineral Report that is stamped and certified by three authors and contains five Appendices (A-F); three of which were marked as confidential because they contained confidential information submitted by Energy Fuels (*i.e.*, Appendix C (Cost Information), Appendix E (Assay Data), and Appendix F (Apex Cost Models)). Plaintiffs requested and Energy Fuels has provided Appendix C with limited redactions. The redaction now before the

Court relates to "sunk costs," which are defined in the U.S. Department of the Interior Bureau of Land Management's H-3890-Handbook for Mineral Examiners ("Handbook") as follows:

> d. Sunk Costs. Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date. Do not include as expenses in the operation's cash flow those capital costs that were sunk before the date of marketability.
>
> (1) Excavations, structures, and equipment affixed to the land and that cannot be removed, even for salvage value, may qualify as sunk costs. Examples include pits, underground workings, dumps, tailings ponds, monitor wells and some buildings.
>
> (2) Sunk Costs do not include ongoing equipment, improvement or maintenance expenses. Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs.

AR374 at 007438 (footnotes omitted). The Handbook is included in the administrative record as Document 374 and relevant excerpts are attached as **Attachment A**. It is referenced by the authors of the VER Determination. *See* AR525 at 010506.

The Handbook is federal guidance for mineral examinations and is used by both BLM and Forest Service-certified mineral examiners as a reference when performing mineral examinations. The Handbook is clear regarding "sunk costs:" they are not to be included or considered when performing the mineral exam and it gives examples of what are and are not "sunk costs." And for good reason, as a mineral examination is a forward-looking economic evaluation of whether mining on a claim or set of claims can reasonably be expected to make a profit going forward. The evaluation does not look back at or consider past or "sunk costs" by the claimant or other former owners of the mining claim. These "sunk costs" do not relate to the question of whether mining from the date of the mineral examination can reasonably be expected to make a profit going forward. Recognizing this, the Handbook explains what should and should not be

considered when conducting a mineral examination and expressly states that "sunk costs" are not relevant and should not be considered. And notably, Plaintiffs did not challenge the Handbook's guidance in the Amended Complaint. In light of the clear guidance in the Handbook, "sunk costs" are not relevant; they were not considered by the Forest Service; and Energy Fuels has properly redacted them.

The Handbook references several administrative cases from the U.S. Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals ("IBLA"). Unlike this dispute, these administrative cases typically involve a situation where the United States determines that a mining claim or claims are invalid; a mining claimant contests that determination; and third parties are not involved in the contest. Despite these differences, it is worth noting that the Handbook identifies three IBLA decisions that confirm "sunk costs" should not be considered in a mineral examination. *See United States v. Clouser*, 144 IBLA 110, 131 (1998) ("To the extent that there are existing tracks and lighting, the costs attributable to them need not be considered. However, the claimants did not consider the costs of additional tracks and lighting that would be used in the course of extending the existing underground workings along the veins.") (citation omitted); *United States v. Mannix*, 50 IBLA 110, 119 (1980) ("We would address the question of mining at a profit. The Government argues that all earlier expenses in development of the property be considered, *e.g.*, the cost of constructing cabins, sheds, and an access road and the purchase of rail and ore cars, and that such expenses must be recouped before it can be said that the mine is a profitable venture. We think the Government errs in its argument and analysis. Absent a prior withdrawal, if the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met. There is no case law of which we have knowledge, nor has the Government adduced any, that compels consideration of the above-mentioned development costs in determining if an ongoing operation is profitable. *Cf. Andrus v. Shell Oil Co.*, 48 U.S.L.W. 4603, 4605 (U.S. June 2, 1980) (No. 78

1815)."); and *United States v. Garner*, 30 IBLA 42, 67 (1977) ("Such costs necessarily must include the amortization cost of the equipment used in the mining operations, even though the claimant by fortuitous circumstances has access to machinery at a cost less than the average prudent person would have to pay.") (citation omitted). In light of the Handbook and these IBLA decisions, Energy Fuels requests that the Court confirm that its "sunk costs" are not relevant; they were properly redacted; and Plaintiffs are not entitled to them.

Finally, in negotiations regarding the redaction, Plaintiffs relied upon the following two IBLA cases to argue that "sunk costs" are relevant to the VER Determination and should be disclosed: *United States v. Collord*, 128 IBLA 266 (1994) and *United States v. Armstrong*, 184 IBLA 180 (2013). Neither supports their argument. First, Plaintiffs' reliance on *Collord* is misplaced. The three judge majority opinion in *Collord* actually relied on the *Mannix* decision cited above and held the following when considering capital costs: "Not included are development and capital costs that have already been spent before the date on which a valuable mineral deposit must be shown to exist. *See United States v. Mannix*, supra at 119." *Collard*, 128 IBLA at FN 24. The IBLA's *Collord* decision is consistently with the Handbook and the authorities cited therein. While the concurring opinion in *Collord* attempted to draw some distinctions with the *Mannix* decision, it was not the majority opinion in the case so it does not support Plaintiffs' request for Energy Fuels' confidential information.

Additionally, Plaintiffs' citation to the *Armstrong* decision does not support their argument. In *Armstrong*, the claimant tried to argue that certain portable equipment and machinery that had already been purchased by the claimant was a "sunk cost" and need not be included in its capital costs and related operating costs for purposes of calculating profitability. The IBLA disagreed and determined that the claimant had failed to account for certain machinery in its capital costs in holding:

> Accordingly, the portable equipment owned by Copar is not a sunk cost. In fact, it is located, for the most part, miles away on a separate facility (the Copar facility in Espanola). Thus, as Stebbins testified,

> machinery such as the Phoenix Jig has value as a whole or as its components. Such is the case with all the other machinery Contestees excluded from their economic analysis. If included, such capital costs show a historical net operating loss on locatable sales . . .

Armstrong, 184 IBLA at 219. This holding is entirely consistent with the definition of "sunk costs" in the Handbook ("Sunk Costs do not include ongoing equipment, improvement or maintenance expenses. Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs." AR374 at 007438 (footnotes omitted)). It is also distinguishable from Energy Fuels' "sunk costs," which relates to "sunk costs" only at the Canyon Mine. Energy Fuels prepared detailed budgeting and cost information and submitted it to the Forest Service as part of the mineral examination. That information has now been provided to Plaintiffs with limited redactions pursuant to the Protective Order and will be provided to the Court when the administrative record is amended. That information demonstrates that Energy Fuels' "sunk costs" were proper and are distinguishable from those at issue in the *Armstrong* decision.

Forest Service's Position:

On April 5, 2019, Plaintiffs moved to supplement the administrative record to include, *inter alia*, Appendix C. Pls.' Mot. to Complete the Admin. Record, ECF No. 202 ("Motion to Supplement"). The Parties then jointly moved for a protective order to allow the Parties to exchange the documents sought in Plaintiffs' motion with limited redactions, to resolve any disputes regarding the redactions, and ultimately for the Forest Service to file the documents as part of the Administrative Record subject to the safeguards of the Protective Order. Joint Mot. to Enter Stipulated Protective Order, ECF No. 207. On May 7, 2019, the Court granted the motion and entered the Stipulated Protective Order. Stip. Protective Order, ECF No. 209. Since that time, the parties have conferred and resolved all but one issue pertaining to the redactions.

The sole dispute among the parties is whether Defendant-Intervenors ("Intervenors") are required to provide to the Plaintiffs one additional redacted figure—the dollar amount of "sunk costs." Federal Defendants' position is that Intervenors are not required to remove the redaction for sunk costs for the following reasons.

1. The redacted figure is confidential business information protected from disclosure by Forest Service regulations.

Forest Service regulations allow operators to submit confidential business information and data to the Forest Service, in connection with a locatable minerals operation:

> [I]nformation and data submitted by the operator as confidential concerning trade secrets or privileged commercial or financial information will not be available for public examination. Information and data to be withheld from public examination may include . . . commercial information which relates to competitive rights of the operator.

36 C.F.R. § 228.6; *see also* 5 U.S.C. § 552(b)(4) (exempting from disclosure under FOIA "trade secrets and commercial or financial information [that is] privileged or confidential."). The rationale behind the regulation is that it allows the Forest Service to

obtain information it needs to carry out its statutory duties while allowing a private entity to rest assured that the confidential information it provides will remain confidential and not be disclosed to the public, competitors, or litigants.

Consistent with this regulation, on March 28, 2012, Denison Mines, a predecessor in interest to Intervenor Defendant Energy Fuels Resources, submitted economic information for the Canyon Mine mineral report. ("Appendix C"). The Forest Service reviewed the information in Appendix C and maintained its confidentiality when it issued its Valid Existing Rights ("VER") determination. *See* AR 10485 (confidential) (identifying in Appendix C "Company Confidential Cost Information").

Much of the information that Intervenors included in Appendix C clearly constitutes confidential business information. The information includes key assumptions and conclusions regarding the company's calculation of net present value, internal rate of return, and projected cash flow. Like those figures, the "sunk costs" figure that Plaintiffs seek in the present motion is part of the economic information contained within Appendix C. Federal Defendants have no reason to doubt that Intervenors ordinarily treat "sunk costs" information as confidential. "[W]here commercial or financial information is both customarily and actually treated as private by its owner and provided to the government under an assurance of privacy, the information is 'confidential' within the meaning of [FOIA] Exemption 4." *Food Marketing Inst. v. Argus Leader Media*, 139 S. Ct. 2356, 2366 (2019). The same is true of the Forest Service regulation at issue here.

In their Motion to Supplement, Plaintiffs relied on an unpublished decision in the District of the District of Columbia in *Public Employees for Environmental Responsibility v. Beaudreau* in support of their claim that there is no basis for withholding confidential information in this case. *Id.* (citing 2012 WL 12942599 at *7-8 (D.D.C. Nov. 9, 2012). *Beaudreau* is distinguishable. There, the court found that defendants had "not asserted a legal basis to justify the withholding of this information." *Beaudreau* at *7. Here, by contrast, the Intervenors availed themselves of, and specifically relied on statutory and regulatory provisions protecting confidential business

information from disclosure. And the Forest Service acknowledged that reliance in its Valid Existing Rights determination. The *Beaudreau* court specifically distinguished cases where an agency relied on a legal basis for not disclosing confidential information. *See id.*; *see e.g. Serono Laboratories, Inc. v. Shalala*, 35 F. Supp. 2d 1, 2 (D.D.C. 1999) (considering the agency's statutory mandates to protect "trade secrets").

2. The Stipulated Protective Order permits Intervenors to redact confidential business information.

By its terms, the Stipulated Protective Order allows the producing party (Intervenors, in this case) to "redact sensitive information that *the producing party believes* is not relevant to the claims in dispute." ECF No. 209 ¶ 11 (emphasis added). As noted above, because the redacted "sunk costs" datum consists of confidential business information, Intervenors could (and did) withhold it from disclosure. The Stipulated Protective Order allows a producing party to redact sensitive information when it believes that information is not relevant to the claims in dispute. As the language in the Stipulated Protective Order makes clear, and particular through the use of the word "believes," the relevance of sensitive data is determined by the producing party.

Intervenors have consistently maintained that sunk costs are not relevant to the "decision process for determining the economic viability of the Canyon Mine" that was at issue before the Forest Service when it made the Valid Existing Rights determination. Appendix C. Intervenors have maintained that position to this day. The decision to redact the "sunk costs" figure is Intervenors' choice to make under the Stipulated Protective Order.

3. Sunk Costs are not relevant to the VER determination or to the issues before this Court on remand.

Even if the relevance of "sunk costs" were a question for the agency when making the VER determination, or for the Court when reviewing the agency action under the Administrative Procedure Act ("APA"), Intervenors' relevance determination is correct

on the merits. Under Bureau of Land Management ("BLM") guidance, followed by the Forest Service, mineral examiners consider only non-sunk capital costs to estimate a deposit's probable economic validity for purposes of making a validity determination in a mineral report. *See* BLM Manual, Handbook for Mineral Examiners, H-3890-1 § V.A.1.c, at V-1 (2007) (describing factors to consider); *see also id.* § V.G.2.d, at V-12 ("Do not include as expenses in the operation's cash flow those capital costs that were sunk **before** the date of marketability." (emphasis in original)). This approach is consistent with the well-established rule that defines the discovery of a valuable mineral deposit as when "a person of ordinary prudence would be justified in the *further* expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine[.]" *Chrisman v. Miller*, 197 U.S. 313, 320-21 (1905) (quoting *Castle v. Womble*, 19 Pub. Lands Dec. 455, 457 (1894)) (emphasis added).

Moreover, here the question of relevance is twice removed. The issue for the Court to decide on the merits is not whether sunk costs were relevant to the VER determination, but instead whether the Forest Service's VER determination, taken as a whole, was arbitrary and capricious. *See* 5 U.S.C. § 706(2). Ultimately, sunk costs were not relevant to the VER determination and they are not relevant to the Court's consideration of the Forest Service's compliance with the APA.

Because sunk costs are not relevant to the issue that will be before the Court on remand, Intervenors' decision to redact this confidential business information is appropriate, and is consistent with BLM guidance that the Forest Service applies, Forest Service regulations, and the Parties' Stipulated Protective Order. Plaintiffs' request to have the "sunk costs" information submitted without redaction should be denied.

4. Plaintiffs have not previously asserted "sunk costs" as a basis to challenge the Forest Service's VER determination.

Plaintiffs never previously asserted that the Forest Service failed to consider "sunk costs" in its VER determination. Instead, in their Complaint, Plaintiffs asserted that the Forest Service failed to consider only *prospective* costs, such as "mine approvals,

operations and reclamation," "groundwater monitoring," "remediating contamination of the Colorado River and groundwater," "expanding the wastewater pond," "clearing the utility corridor of trees," "minimizing adverse impacts on public land resources," "compliance with environmental and other applicable laws," and "potential mitigation measures." Am. Compl. for Decl. and Injunc. Relief ¶ 191, ECF No. 191. Plaintiffs did not allege in their Complaint that the Forest Service failed to consider *prior* costs already incurred, such a sunk costs, as a basis to challenge the VER determination. Plaintiffs should not be permitted at this stage of the litigation to raise the issue of "sunk costs." For this additional reason, the Court should deny Plaintiffs' request to have the "sunk costs" information provided without redaction.

Conclusion

For all of the foregoing reasons, the request to have the "sunk costs" redaction removed should be denied.

* * *

Respectfully submitted this 19th day of July, 2019.

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Attorneys for Intervenor-Defendants

UNITED STATES DISTRICT COURT

DISTRICT OF ARIZONA

GRAND CANYON TRUST, *et al.*,	)	
	)	
Plaintiffs,	)	
v.	)	No. CV13-8045-PCT DGC
	)	
HEATHER PROVINCIO, *et al.*,	)	**STIPULATED PROTECTIVE ORDER**
	)	
Defendants,	)	
	)	
and	)	
	)	
Energy Fuels Resources (USA) Inc., *et al.*,	)	
	)	
Intervenor-Defendants.	)	

Good cause appearing, the Court hereby enters the following Protective Order pursuant to Federal Rule of Civil Procedure 26(c):

1. "Confidential Business Information" as used herein means information that a party believes in good faith is a trade secret or confidential commercial or financial information that is not publicly available.

2. Information that one party produces to another after entry of this Protective Order may be designated as Confidential Business Information by placing or affixing on documents produced the words "Confidential Business Information – Subject to Protective Order." Stamping the words "Confidential Business Information–Subject to Protective Order" on the cover of any multi-page document shall designate all pages of the document as Confidential Business Information, unless otherwise indicated by the

producing party. Any electronic media (*e.g.*, CD or DVD) may be designated Confidential Business Information by affixing a label on the tape or disk. Confidential Business Information produced on a CD or DVD shall be formatted such that printed copies of any document(s) contained on the disk shall print with a header or footer that identifies the document(s) as "Confidential Business Information – Subject to Protective Order" wherever practicable.

3. The designation of any document or information as Confidential Business Information shall constitute a certification by the attorney who has reviewed the material and is making the designation that he or she in good faith believes the document or information contains Confidential Business Information.

4. Confidential Business Information and any copies thereof, and notes or summaries made therefrom, shall be disclosed only to:

a. the Court and its personnel, including court reporters;

b. attorneys for the parties to this litigation and persons regularly in the employ of the parties' attorneys assisting in this litigation;

c. employees or representatives of a party who are assisting counsel in the litigation of this action;

d. employees of microfilming, duplicating and data processing service companies retained by counsel to provide support services in this action; and

e. consultants and experts retained by a party to assist in this action.

5. Any person authorized in Paragraph 4 above to receive documents or copies of documents designated as Confidential Business Information shall maintain such Confidential Business Information in their possession in a manner sufficient to protect such material against unauthorized disclosure. Any copies of any Confidential Business Information, or notes or summaries containing such Confidential Business Information, shall be clearly stamped "Confidential Business Information" or affixed with another legend indicating that the materials are subject to this Protective Order.

6. Information designated as Confidential Business Information shall be used solely for the purpose of conducting the litigation of this case and not for any business or

other purpose whatsoever by any person having access to such material, except that these limitations on use shall not apply to (a) information that is made publicly available by the party who designated it as Confidential Business Information; or (b) information that is made publicly available as the result of a Court order, and (c) to employees of the U.S. Department of Agriculture, the U.S. Department of the Interior, and the U.S. Forest Service who have had access to Confidential Business Information apart from the terms of this Protective Order.

7. Any person to whom Confidential Business Information is to be disclosed pursuant to this Protective Order shall first be advised by the party or attorney making the disclosure that pursuant to this Protective Order such person may not divulge any such Confidential Business Information to any other person not authorized under Paragraph 4 above to have access to such Confidential Business Information. The party or attorney shall secure from each person to whom Confidential Business Information is to be disclosed pursuant to this Protective Order an Acknowledgement of Protective Order in the form attached hereto, stating that such person has read this Protective Order and agrees to be bound by it. All signed and dated Acknowledgement forms shall be maintained in the possession of the party or attorney securing the Acknowledgement. An Acknowledgement is not required from employees of the U.S. Department of Agriculture, the U.S. Department of the Interior, or the U.S. Forest Service who have had access to Confidential Business Information apart from the terms of this Protective Order.

8. Nothing in the provisions of this Protective Order shall be deemed to preclude the parties from seeking and obtaining, on an appropriate showing, additional protection with respect to the confidentiality of documents or from seeking and obtaining leave to disclose Confidential Business Information beyond the terms of this Protective Order.

9. Within sixty (60) days after the final conclusion of the litigation of this case, including the final resolution of any appeals (or the expiration of the time in which to notice an appeal if no appeal is taken), the parties shall undertake reasonable and prudent efforts to return all Confidential Business Information to the producing party.

The provisions of this paragraph do not apply to employees of the U.S. Department of Agriculture, the U.S. Department of the Interior, and the U.S. Forest Service who have had access to Confidential Business Information apart from the terms of this Protective Order.

10. If a disclosure of Confidential Business Information is made to a person not authorized to have had such disclosure made to him or her under the provisions of this Protective Order, and if the party responsible for having made or allowed such disclosure becomes aware of such disclosure, that party shall immediately inform counsel for the party whose Confidential Business Information has thus been disclosed of all relevant information concerning the nature and circumstances of such disclosure. The responsible party shall also take all reasonable measures promptly to ensure that no further or greater unauthorized disclosure of the Confidential Business Information is made by anyone.

11. Before any party provides Confidential Business Information to another party, the producing party may redact sensitive information that the producing party believes is not relevant to the claims in dispute. Any party who makes redactions shall provide to the other parties a detailed description of the basis for the redactions. If the parties dispute any redactions that are made, the parties agree to negotiate in good faith to resolve the dispute without the Court's involvement. If the parties cannot resolve the dispute, any party may file a motion with the Court requesting that it resolve the dispute.

12. Defendants shall provide to Plaintiffs' counsel the documents sought by Plaintiffs' Motion to Complete the Administrative Record, ECF 202 (Apr. 5, 2019), within two business days of the Court's approval of this Protective Order. After any dispute over any redaction of those documents is resolved, either by the parties' agreement or Court order, the Federal Defendants shall file the documents as part of the administrative record in this matter.

13. Solely for the purpose of lodging the administrative record with the Court, the Federal Defendants may file under seal any documents designated as containing Confidential Business Information. The parties have not stipulated that information designated as Confidential Business Information may be filed under seal for any other

purpose, and this Order does not provide advance authorization to do so. If a party wishes to file information designated as Confidential Business Information or refer to such information in a filing for any purpose other than lodging the record with the Court, the parties shall follow the requirements of LRCiv 5.6.

Dated this 7th day of May, 2019.

David G. Campbell
Senior United States District Judge

ACKNOWLEDGEMENT OF PROTECTIVE ORDER

1. My name is _____.

2. My business address is _____
_____.

3. My present employer is _____.

4. My present occupation or job description is
_____.

5. I have received a copy of the Protective Order entered by the Court in the above-captioned matter.

6. I have carefully read and understand the provisions of the Protective Order.

7. I certify that I am eligible to have access to the Confidential Business Information under Paragraph 4 of the Protective Order.

8. I will comply with all of the provisions of the Protective Order.

9. I will hold all Confidential Business Information and any duplicates, notes, or summaries made therefrom in confidence, will not disclose such information to anyone not specifically entitled to access under the Protective Order, and will use the information solely for purposes provided for by the Protective Order.

10. At the conclusion of this litigation, I will return all Confidential Business Information and any duplicates, notes, or summaries made therefrom to counsel for the party by whom I am employed or retained.

Executed this ___ day of _____, 20____in _____.

By: _____

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Michael Williams, et al., Defendants.	No. CV-13-08045-PCT-DGC **ORDER**

The parties have filed cross-motions for summary judgment. Docs. 140, 146, 147. The motions are fully briefed and the Court heard oral argument on March 18, 2015. For the reasons stated below, Defendants' and Defendant-Intervenors' motions for summary judgment will be granted and Plaintiffs' motion for summary judgment will be denied.

I. Background.

Plaintiffs include the Havasupai Tribe and various environmental groups: Grand Canyon Trust, Center for Biological Diversity, and the Sierra Club. Defendants are the United States Forest Service; Michael Williams, Supervisor of the Kaibab National Forest; and Intervenors Energy Fuels Resources (USA), Inc. and EFR Arizona Strip, LLC.

This case arises out of the proposed renewal of operations at the Canyon Mine in Northern Arizona. The Canyon Mine is a breccia pipe uranium mine located six miles south of Grand Canyon National Park, in the Kaibab National Forest, and four miles

north of Red Butte, a culturally and religiously significant site for the Havasupai and other tribes. Doc. 115 ¶¶ 2, 49.

In October 1984, Energy Fuels Nuclear, Inc. ("EFN") submitted to the Forest Service a proposed Plan of Operations for the Canyon Mine (the "Plan"). A.R. 193-221. Pursuant to the National Environmental Policy Act ("NEPA"), the Forest Service completed an Environmental Impact Statement ("EIS") to address the potential environmental impacts to the area and considered input from federally recognized Indian tribes. A.R. 461-693. On September 26, 1986, the Forest Service issued a Record of Decision ("ROD") approving a modified version of the Plan. A.R. 915-29. Several administrative appeals followed (A.R. 3932), and the Deputy Regional Forester and Chief of the Forest Service both affirmed the ROD.

The Havasupai Tribe filed a federal court lawsuit challenging approval of the Canyon Mine. *See Havasupai Tribe v. United States*, 752 F. Supp. 1471 (D. Ariz. 1990). Among other arguments, the tribe claimed that the EIS failed to comply with NEPA.[1] Following a thorough analysis of the EIS, the ROD, and the administrative record, the District Court granted summary judgment in favor of the Forest Service. *Id.* at 1489-1505. The Ninth Circuit affirmed in August of 1991. *See Havasupai Tribe v. United States*, 943 F.2d 32 (9th Cir. 1991).

Shortly thereafter, EFN began constructing the mine. EFN built access roads, storage buildings, a power line, a perimeter fence, diversion structures, a holding pond, a head frame and hoist, and support buildings. A.R. 10487; Doc. 146-1 at 17; Hangan Declaration, Doc. 53-4, ¶ 4.[2] Work on the mine shaft was started, and proceeded to a

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[1] The tribe's specific NEPA arguments included the following: the EIS (1) failed to consider the "no-action alternative" of not approving the Plan; (2) failed to give adequate consideration to the tribe's religious and cultural interests in the site; (3) was based on incomplete hydrogeological information; (4) failed to adequately consider the environmental impact of disposal of radioactive waste; and (5) failed to adequately consider the environmental cumulative impacts of mining in the region. *Havasupai Tribe*, 752 F. Supp. at 1490.

[2] When the Court cites to page numbers in documents filed in the docket (Doc.), the citation will be to numbers at the top of the page assigned by the Court's CM/ECF system, not to numbers at the bottom of the page as assigned in the original document.

depth of 50 feet. A.R. 10487. When uranium prices fell in 1992, EFN placed the mine on stand-by status. For the next several years the mine was maintained under the interim management portions of the Plan. A.R. 10314.

In 2010, the Forest Service designated Red Butte and the surrounding area, including the location of the Canyon Mine, as a Traditional Cultural Property ("TCP"), thereby making it eligible to be included in the National Register of Historic Places due to its "ongoing, and historic cultural and religious significance to multiple tribes." A.R. 10616.

In January 2012, the Secretary of the Department of the Interior ("DOI"), pursuant to the Federal Land Policy and Management Act ("FLPMA"), 42 U.S.C. § 1714(a), withdrew approximately 633,547 acres of public lands and 360,002 acres of National Forest System lands for up to 20 years from location and entry under the Mining Law of 1872 (the "Withdrawal"). 77 Fed. Reg. 2317- 01 (Jan. 17, 2012); A.R. 10308-31. The Withdrawal, which included the location of the Canyon Mine, had been proposed by DOI in 2009. 74 Fed. Reg. 35,887-01 (July 21, 2009). The DOI undertook extensive study and preparation of an EIS before finalizing the Withdrawal. The final EIS noted the existence of the Canyon Mine and stated its assumption that the mine would continue operations. A.R. 8657.

In August 2011, Energy Fuels Resources (USA), Inc. ("Energy Fuels"), a successor owner of the Canyon Mine, notified the Forest Service that it intended to resume operations under the Plan approved in 1986. A.R. 8547. In response, the Forest Service decided to complete a valid existing rights determination ("VER Determination") with respect to the Canyon Mine. The purpose of the VER Determination was to confirm that the owner had valid rights to the uranium mineral deposits. Although Energy Fuels had asserted in its initial letter to the Forest Service that it did not believe any additional government approvals were required before the mine reopened (A.R. 443), Energy Fuels agreed to withhold shaft sinking until the VER Determination was complete (Doc. 123-2 at 2-3). The VER Determination was finished on April 18, 2012, and found that Energy

Fuels had valid existing mineral rights at the Canyon Mine. A.R. 10483-528.

The Forest Service also undertook a "Mine Review." A.R. 10592-637. The review was conducted by a 13-person interdisciplinary team with expertise in minerals and geology, surface and groundwater, air quality, transportation, tribal consultation, heritage resources, vegetation, NEPA, and socioeconomic issues. A.R. 10597. Among other matters, the team evaluated the sufficiency of the Plan and the original EIS and ROD; historical and religious issues related to local tribes, including tribal consultation in connection with the EIS and ROD; sensitive tribal sites, including Red Butte; the effect of resumed operations on the quality of air, surface water, and groundwater; and the effect of resumed mine operations on wildlife and any threatened, endangered, or sensitive species. A.R. 10592-637.

The Mine Review was completed on June 25, 2012, and concluded that operations could resume at the Canyon Mine under the original Plan. The Mine Review made this finding:

> [T]he Forest [Service] undertook a review of the 1986 Environmental Impact Statement and Record of Decision, and associated documents. Resource specialists from the Kaibab National Forest and Southwestern Regional Office reviewed the documents to determine if any modification or amendment of the existing Plan of Operations was required and whether there was any new information or changed circumstances indicating unforeseen significant disturbance of surface resources. It was determined that no amendment or modification of the Plan of Operation was required. . . . Therefore, [Energy Fuels] will resume operations under the existing Plan of Operations.

A.R. 10594.[3]

Upon learning that the mine would be reopened, the Arizona State Historic Preservation Office ("AZSHPO") advised the Forest Service that it should undertake a full consultation under § 106 of the National Historic Preservation Act ("NHPA"), 16

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[3] The Mine Review also concluded that the Plan remained in effect in 2012. "According to the regulations, the plan covers the entire operation and is in effect from approval until the time that final reclamation is completed. . . . The approved 1986 [Plan] is currently in effect." A.R. 10598.

U.S.C. § 470f. A.R. 10139. Section 106 requires a federal agency charged with issuing a federal license for an "undertaking" to consult with various interested parties and evaluate the potential effects on TCPs, including identification of the affected properties, a determination of the potential adverse effects to the properties, and an identification of methods of mitigation. 36 C.F.R. §§ 800.2-800.7.

The Mine Review concluded that a full § 106 process was not necessary. A.R. 10593-637. Instead, the Forest Service undertook a reduced consultation process under 36 C.F.R. § 800.13(b)(3). The Forest Service sent letters to tribal leaders as well as the Advisory Council on Historic Preservation ("ACHP"), notifying them of renewed operations at the Canyon Mine and offering to meet and discuss potential adverse effects to the environment and areas of religious and cultural significance. A.R. 10690-91. The tribes and the ACHP urged the Forest Service to undertake a full § 106 review, but the Forest Service declined. A two-day consultation meeting was held with the tribes in January 2013.

Plaintiffs filed this lawsuit on March 7, 2013, seeking declaratory and injunctive relief under the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701-706. Doc. 1. Plaintiffs' amended complaint alleges four claims: (1) the Forest Service violated NEPA by not conducting an EIS in connection with the VER Determination; (2) the Forest Service violated the NHPA by failing to complete a full § 106 review prior to approving resumed operations at the Canyon Mine; (3) the Forest Service violated the NHPA by conducting a review under § 800.13(b)(3); and (4) the VER Determination failed to consider all relevant cost factors and therefore is arbitrary, capricious, and not in accordance with the law. All parties move for summary judgment.

II. Standard of Review.

The APA allows a court to compel agency action unlawfully withheld or unreasonably delayed. 5 U.S.C. § 706(1). A claim to compel action may proceed "only where a plaintiff asserts that an agency failed to take a *discrete* agency action that it is *required to take*." *Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 64 (2004)

(emphasis in original); *see Hells Canyon Preservation Council v. U.S. Forest Serv.*, 593 F.3d 923, 932 (9th Cir. 2010).

A court may set aside a final agency action under the APA only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). "This standard of review is 'highly deferential, presuming the agency action to be valid and affirming the agency action if a reasonable basis exists for its decision.'" *Nw. Ecosystem Alliance v. U.S. Fish & Wildlife Serv.*, 475 F.3d 1136, 1140 (9th Cir. 2007) (quoting *Independent Acceptance Co. v. California*, 204 F.3d 1247, 1251 (9th Cir. 2000)). The APA does not allow a court to overturn an agency action simply because the court disagrees with the action. *See River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1070 (9th Cir. 2010).

III. Was the VER Determination Required?

Plaintiffs argue that the VER Determination was required by law because of the Withdrawal, and therefore constituted "agency action" reviewable under the APA, a "major federal action" that triggered NEPA, and an approval of a new "undertaking" that triggered § 106 review under the NHPA. Because the nature of the VER Determination affects so many issues in this case, the Court will address it before considering other arguments made in the summary judgment briefing.

A. Nature of the VER Determination.

The purpose of the VER Determination was to evaluate whether the owners of the Canyon Mine had valid legal rights to the uranium ore they would be mining. As part of the Determination, certified mineral examiners employed by the Forest Service visited the mine site, reviewed mining claims records, evaluated ore deposits, toured facilities operated by the owner, and conducted an economic evaluation of the mine. A.R. 10482-527. The examiners concluded that the mining claims "were valid at the time of the [Withdrawal] and continue to be valid at the present time." A.R. 10482.

The Forest Service completed the VER Determination before approving renewed operations at the Canyon Mine, but the determination itself had no binding legal effect.

The Forest Service does not have responsibility for determining the validity of mining claims on federal lands. That responsibility has been delegated to the DOI, and specifically to the Bureau of Land Management ("BLM") within the DOI (the Forest Service is in the Department of Agriculture). The DOI, not the Forest Service, has adjudicative authority to declare mining claims valid or invalid. *Cameron v. United States*, 252 U.S. 450, 460 (1920) (Secretary of Interior charged with determining validity of mining claims); Forest Service Manual ("FSM") § 2814.11 (A.R. 7284).

Because the Forest Service supervises vast stretches of federal land that include mining operations, however, it can perform VER Determinations under an interagency agreement with BLM. FSM § 2814.11 (A.R. 7284); Linden Declaration, Doc. 53-2, ¶ 6. These determinations are made for internal purposes. As the First Service Manual explains, they enable the Forest Service to make "a decision on whether or not to contest the claim." FSM § 2819.1 (A.R. 7312). But the actual claim contest must be adjudicated by BLM and the DOI. FSM §§ 2814.11, 2819.1 (A.R. 7284, 7312). As the Forest Service Manual confirms: "No adjudicative power has been given to the Forest Service. Thus, statements about validity [of mining claims] are statements of belief and not formal determinations." FSM § 2819 (A.R. 7311).

Plaintiffs do not dispute these basic facts. They argue, however, that things changed when the land on which the Canyon Mine is located was withdrawn by the Secretary of the Interior. They argue that the Withdrawal, not statutes or regulations governing mining generally, required that a VER Determination be completed before the Canyon Mine could resume operations.

B. Legal Effect of the Withdrawal.

The Withdrawal affected more than one million federally-owned acres north and south of the Grand Canyon, closing them to mineral location and entry for a period of 20 years. 77 Fed. Reg. 2317-01 (Jan. 17, 2012); A.R. 10308-31. The Withdrawal did not prohibit all uranium mining on the withdrawn lands. Rather, it prohibited "location and entry," which is the process by which an individual enters public lands to find and

establish a valid mining claim. *Mount Royal Joint Venture v. Kempthorne*, 477 F.3d 745, 750 n.3 (D.C. Cir. 2007).

Prior to the Withdrawal, the lands were open for location and entry. The Mining Law of 1872 provides that "all valuable mineral deposits in lands belonging to the United States . . . shall be free and open to exploration and purchase[.]" 30 U.S.C. § 22. Individuals can enter federal land, explore for minerals, and stake their right to a claim by "[e]stablishing the exterior lines of a mining claim or site" and "[r]ecording a notice or certificate of location." 43 C.F.R. § 3832.1. Such claims can then become the subject of proposed plans for the operation of a mine. The Withdrawal removed the land from this open exploration and claim process and thereby foreclosed the establishment of new mining claims in the future.

The Withdrawal did not extinguish mining rights that already existed. To the contrary, it was "subject to valid existing rights." A.R. 10310. This means that existing mines like the Canyon Mine could continue to operate. Indeed, the Withdrawal's EIS specifically contemplated that four uranium mines, including the Canyon Mine, would continue in operation. A.R. 10314 ("There are four mines within the withdrawal area that have approved plans of operations that predate the Secretary's withdrawal proposal. The Pinenut, Kanab North, and Canyon mines were approved in the late 1980s and are operating under the interim management plans[.]").

The Withdrawal also contemplated that claim owners with valid existing rights at the time of the Withdrawal, but no operating mine, could submit a plan of operation for a uranium mine for approval:

> Withdrawals under section 204 of the FLPMA must be made subject to valid existing rights, which means that new mineral exploration and development could still be authorized under the withdrawal on valid existing mining claims. The . . . scenarios developed for the EIS indicate that potentially 11 mines could develop with a full withdrawal, including the four mines currently approved[.]

A.R. 10314-15.

The Withdrawal also addressed when VER Determinations would be required. It stated that *new* plans of operations would be approved only if BLM or the Forest Service first determined that the parties submitting the plans had valid existing mineral rights at the time of the Withdrawal:

> On withdrawn lands, neither the BLM nor the Forest Service will process a *new* . . . plan of operations until the surface managing agency conducts a mineral examination and determines that the mining claims on which the surface disturbance would occur were valid as of the date the lands were . . . withdrawn.

Id. (emphasis added).

This is consistent with relevant regulations and guidance documents. BLM regulations specifically address the rules that apply to withdrawn lands. They state that, after the date of a withdrawal, "BLM will not *approve* a plan of operations . . . until BLM has prepared a mineral examination report." 43 C.F.R. § 3809.100(a) (emphasis added). They do not suggest that a VER Determination is required for an already-approved plan of operations.

Section 8.1.5 of the BLM Surface Management Handbook addresses previously approved plans:

> [A]pproved Plans of Operations that were in place prior to the withdrawal or segregation date *are not subject to the mandatory valid existing rights determination procedures at 43 C.F.R. 3809.100(a)*. These operations may continue as accepted or approved and do not require a validity determination unless or until there is a material change in the activity. . . .

A.R. 11602.

This guidance comes from BLM, not the Forest Service. But as noted above, BLM is the primary agency responsible for determining mining claim validity, and its parent, DOI, is the agency that withdrew the lands at issue in this case. The guidance of BLM on the effect of the Withdrawal is therefore highly relevant. In addition, when the Forest Service was asked in a public forum whether it had regulations specifying when a VER Determination would be required on withdrawn lands, it provided this answer:

> The Department of Interior (BLM) is the adjudicator of mining claims for the federal mineral estate including minerals located on National Forest System Lands. The BLM does have regulations addressing when to require a valid existing rights determination for lands that have been segregated or withdrawn at 43 C.F.R. 3809.100(a). *It is the policy of the Forest Service to be consistent with BLM direction.* Once the lands have been segregated or withdrawn, the Forest Service will not *approve* a plan of operation without first determining if valid existing rights exist.

A.R. 7691 (emphasis added); *see also* Linden Declaration, Doc. 53-2, ¶¶ 6-7.

From these sources, the Court concludes that a VER Determination was not legally required before operations at the Canyon Mine could resume. The Canyon Mine Plan of Operations had been approved in 1986. A resumption of operations at the mine did not require approval of a new plan. Thus, the relevant regulations and policy statements did not require a VER Determination.

Plaintiffs argue that the Withdrawal was "subject to valid existing rights" (A.R. 10310) and that a VER Determination was therefore required. But there is a difference between valid existing rights and a valid existing rights determination, and neither the Withdrawal nor the FLPMA requires a determination. The fact that the Withdrawal was "subject to valid existing rights" meant that it did not extinguish valid rights in existence at the time of the Withdrawal; it says nothing about when or how a review of those rights must occur. When the Withdrawal did address the requirement of VER Determinations, it said they would be required only for "new" plans of operations. A.R. 10314-15.

Plaintiffs also cite to a statement from § 2803 of the Forest Service Manual which directed the Service to "[e]nsure that valid existing rights have been established before allowing mineral or energy activities in congressionally designated or withdrawn areas." Doc. 140-5 at 2. Plaintiffs argue that this sentence requires the Forest Service to complete a VER Determination before any mineral activity can occur on withdrawn lands, even activity at an already-approved mine. The Court does not read the sentence

so broadly. In light of the very specific guidance provided in the BLM regulations and Handbook, and the Forest Service's publicly stated policy of following that guidance, the Court reads the word "allowing" in this sentence to mean that the Forest Service will not allow *new* mining activities on withdrawn lands without first completing a VER Determination. This reading comports with the Forest Service's own statement that "[o]nce the lands have been segregated or withdrawn, the Forest Service will not *approve* a plan of operation without first determining if valid existing rights exist." A.R. 7691 (emphasis added). It also squares with the Withdrawal's requirement of a VER Determination only for a "new" plan of operations. A.R. 10314-15.[4]

In summary, because no new plan was required for the Canyon Mine after the Withdrawal, the relevant regulations and guidance documents did not require a VER Determination. Mining could have resumed without one.

C. The Practical Effect of the VER Determination.

Although not a legal requirement, the record suggests that completion of the VER Determination was a practical requirement before the Canyon Mine resumed operations. On September 23, 2011, the Forest Supervisor, Michael Williams, wrote a letter to the executive vice president of Energy Fuels. Mr. Williams explained that '[a] mineral exam is scheduled to determine if your company has valid existing rights for the Canyon Mine location. This is a requirement for any public domain lands managed by the Forest Service that have been withdrawn from mineral entry[.]" A.R. 12429; Doc. 126-12 at 1.

In a conference call with the Kaibab Paiute Tribe on January 10, 2012, in which Mr. Williams participated, an employee of the Forest Service explained that "the mineral exam will need to be completed before they start work at the Canyon Mine." A.R. 10335; Doc. 118-15 at 1. The next day, in a telephone conversation with the

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[4] The Court reaches the same conclusion with respect to § 2813.3 of Forest Service Manual cited by Plaintiffs: "Otherwise the use of validity determinations should be limited to situations where valid existing rights must be verified where the lands in question have been withdrawn from mineral entry[.]" A.R. 7310. The "situations" where such rights must be verified, as shown above, are the approval of new mining operations on withdrawn lands.

Hualapai Tribe, Mr. Williams stated that Energy Fuels "would not be able to move forward without VER under the mineral withdrawal." A.R. 10342; Doc. 118-18 at 1.

The VER Determination itself suggested that it was required for renewed operation of the mine: "It is Forest Service policy (FSM 2803.5) to only allow operations on mining claims within a withdrawal that have valid existing rights (VER)." A.R. 10486; *see also* 10487, 10489. Although this statement is correct to the extent it suggests that mining operations on withdrawn lands must have valid existing rights, it is incorrect, for the reasons explained above, to the extent it suggests that a VER Determination was legally required before the Canyon Mine could resume operations. The Forest Service concedes that the legal understanding of some of its employees was incorrect, but this does not change the fact that these employees took the position with Energy Fuels and the tribes that a VER Determination was required.

Other communications make clear that Energy Fuels chose not to proceed with renewed operations until the VER Determination was finished. A letter from Energy Fuels' executive vice president to Forest Service employees concerning the process of the VER Determination stated: "We would like to get the sample analysis turned around as early as possible so that we can hopefully close this out and proceed with our production plans." Doc. 118-16 at 1. An email from a Forest Service employee to representatives of the Kaibab Paiute Tribe, sent the day after the January 10, 2012 conference call mentioned above, contained this statement: "I called our geologist, and was told that [Energy Fuels] will not be doing any 'shaft sinking' at the site until the mineral exam is completed." A.R. 10348; Doc. 126-13 at 1.

Thus, even though the law did not require the VER Determination, these communications show that the Forest Service, Energy Fuels, and interested tribes all understood that mine operations would not resume until it was completed. It was a practical if not a legal requirement.

IV. Threshold Matters.

Defendants raise four threshold matters: (1) Plaintiffs lack Article III standing on

two claims, (2) Plaintiffs lack prudential standing on claim four, (3) the VER Determination is not a final agency action subject to judicial review, and (4) collateral estoppel bars two claims.

A. Article III Standing.

"To satisfy Article III's standing requirements, a plaintiff must show (1) it has suffered an 'injury in fact' that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180-81 (2000) (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992)).

Defendants argue that Plaintiffs lack standing to bring claims one and four. Claim one asserts that the Forest Service, in completing the VER Determination, violated NEPA by not conducting an EIS. Claim four asserts that the VER Determination failed to account for several costs. Defendants argue that Plaintiffs' "concrete interests" stem not from the VER Determination, but from the Plan approved in 1986. Several of the declarations submitted by Plaintiffs do not address the VER Determination; rather, they appear to seek modification of the Plan. Thus, Defendants argue, Plaintiffs have failed to demonstrate any injury traceable to the VER Determination.[5]

Plaintiffs argue that they suffered "concrete injuries to their environmental, cultural and procedural interests [that] stem directly from the [VER Determination] and the agency's failure to comply with NEPA and the NHPA." Doc. 151 at 6. They assert that the VER Determination permitted mining to resume and thus threatens their interests in the land surrounding the Canyon Mine. Plaintiffs have submitted the declarations of

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[5] Defendants also argue that Plaintiffs lack standing to bring claim two. Defendants characterize the claim as a direct challenge to the VER Determination, but claim two asserts that the Forest Service was required to conduct a consultation under § 106 of the NHPA before allowing mining to continue. *See* Doc. 151 at 7. It does not concern the VER Determination. Defendants' arguments, which focus entirely on the VER Determination, are therefore insufficient to challenge Plaintiffs' standing to bring claim two.

Don Watahomigie and Rex Tilousi on behalf of the Havasupai Tribe, Roger Clark on behalf Grand Canyon Trust, Kim Crumbo on behalf of the Sierra Club, and Robin Silver on behalf of the Center for Biological Diversity. Docs. 37-7, 37-8. They also submitted supplemental declarations of Clark and Silver. Docs. 151-1, 151-2.

Declarations of the tribal representatives show that they have historical and religious interests in the lands surrounding the mine and on which the mine is located. The Court concludes that federal action taken without due consideration of environmental or historical impacts of the mine would constitute a concrete and particularized injury to the tribes.

"[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity." *Friends of the Earth*, 528 U.S. at 183 (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)). Plaintiffs have done just that. Roger Clark states that resumption of mining "interfere[s] with my enjoyment of the lands within and surrounding Grand Canyon National Park[.]" Doc. 151-1, ¶ 20. He claims he decided not to visit the park on several occasions because of the "constant dust, noise, and traffic from trucks constructing roads and developing the Canyon Mine." *Id.*, ¶ 6. Robin Silver states that the mining activities "threaten to destroy my aesthetic enjoyment of the Red Butte area due to dust, heavy truck traffic, light pollution and noise," and also "limit and interfere with my local photographic opportunities." Doc. 151-2, ¶¶ 12, 13. Silver also notes the environmental impacts caused by mining. *Id.*, ¶¶ 13-17. In addition, several declarants state they are harmed because the Forest Service's failure to comply with NEPA deprived them of the opportunity to comment on and participate in the Forest Service decision. *See* Doc. 37-8.

Plaintiffs' declarations are sufficient to establish injury in fact and are fairly traceable to the VER Determination, which they assert permitted mining to resume. *See Cantrell v. City of Long Beach*, 241 F.3d 674, 682 (9th Cir. 2001) ("Once a plaintiff has established an injury in fact under NEPA, the causation and redressability requirements

are relaxed."). Therefore, the first two elements of standing are met.

Defendants argue that Plaintiffs have failed to demonstrate the third requirement – redressability. They argue that the VER Determination did not create any legal consequences and was not required. If the Court were to invalidate it, they argue, a new VER Determination would not be required and mining would resume.

This redressability position is essentially an argument on the merits. Defendants assert that Plaintiffs will fail to prove that the VER Determination was necessary and therefore invoked NEPA and NHPA requirements, and thus will fail in obtaining relief for their grievances. But the Court cannot consider the merits when deciding standing. The Court must assume the truth of Plaintiffs' claims and that Plaintiffs will succeed on the merits. *See Friends of the Earth*, 528 U.S. at 180-81 (the plaintiff must show that the injury will be redressed "by a favorable decision"); *Warth v. Seldin*, 422 U.S. 490, 503 (1975) (court must take the allegations of the complaint as true); *City of Waukesha v. E.P.A.*, 320 F.3d 228, 235 (D.C. Cir. 2003) ("Indeed, in reviewing the standing question, the court must be careful not to decide questions on the merits . . . and must therefore assume that . . . the plaintiffs would be successful in their claims."). Thus, even though the Court has concluded above, for convenience in the organization of this order, that the VER Determination was not legally required, it must assume that Plaintiffs will prevail when deciding whether they have standing to pursue their claims.

If Plaintiffs succeed on their claim that Defendants violated NEPA and the NHPA, the Court will order NEPA and NHPA procedures to be followed. *See Pit River Tribe v. U.S. Forest Service*, 469 F.3d 768, 779 (9th Cir. 2006). This could certainly redress Plaintiffs' procedural and aesthetic injuries. Thus, Plaintiffs have satisfied the elements of standing on claims one and four. *See W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 482-83 (9th Cir. 2011) (an organization has standing to bring suit on behalf of its members where a member would have standing to sue in his own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the

relief requested requires participation of the member in the suit).[6]

B. Prudential Standing on Claim Four.

Defendants argue that Plaintiffs lack prudential standing to bring claim four, which challenges the substance of the VER Determination. At oral argument, Plaintiffs stated that claim four is tied to the Mining Law of 1872, which sets forth the process by which miners establish valid rights to mineral deposits.[7] 30 U.S.C. §§ 22-54.

To establish their alleged violation of the Mining Law, Plaintiffs cite several cases articulating and applying tests for determining whether mining claims are valid. *See, e.g., Independence Min. Co. v. Babbitt*, 105 F.3d 502, 506-07 (9th Cir. 1997) (a validity determination requires the mineral examiner to do a "field examination; collect and analyze samples; estimate the value of the mineral deposit and the cost of extracting, processing and marking the minerals, including the costs of complying with any environmental and reclamation laws"); *Lara v. Sec'y of Interior*, 820 F.2d 1535, 1541 (9th Cir. 1987) (applying "prudent-man test"); *Hjelvik v. Babbitt*, 198 F.3d 1072, 1074 (9th Cir. 1999) (applying "marketability test"). They also cite Interior Board of Land Appeals decisions on the nature of valid claims. *See, e.g., Great Basin Mine Watch*, 146 IBLA 248 (1999); *Moon Mining v. HECLA Mining*, 161 IBLA 334 (2004). Plaintiffs argue that the Court should apply this law to the VER Determination and find it deficient.

But the Supreme Court has "interpreted [§ 702] of the APA to impose a prudential

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[6] The Court also notes that one who challenges the violation of "a procedural right to protect his concrete interests can assert that right without meeting all the normal standards" for traceability and redressability. *Lujan*, 504 U.S. at 572 n. 7. Such a litigant need only demonstrate that he has "a procedural right that, if exercised, *could* protect [his] concrete interests and that those interests fall within the zone of interests protected by the statute at issue." *Defenders of Wildlife v. U.S. Envtl. Prot. Agency*, 420 F.3d 946, 957 (9th Cir. 2005), rev'd in part on other grounds by *Nat'l Ass'n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644 (2007); *see also Natural Res. Def. Council v. Jewell*, 749 F.3d 776, 782-83 (9th Cir. 2014). Plaintiffs' NEPA and NHPA claims satisfy this requirement.

[7] Alternatively, Plaintiffs assert that claim four is brought as a stand-alone APA claim. Such a claim fails because "there is no right to sue for a violation of the APA in the absence of a 'relevant statute' whose violation 'forms the legal basis for [the] complaint.'" *El Rescate Legal Servs., Inc. v. Exec. Office of Immigration Review*, 959 F.2d 742, 753 (9th Cir. 1991) (quoting *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 883 (1990)).

standing requirement" in addition to the requirements of Article III. *Nat'l Credit Union Admin. v. First Nat'l Bank & Trust Co.*, 522 U.S. 479, 488 (1998). "For a plaintiff to have prudential standing under the APA, 'the interest sought to be protected by the complainant [must be] arguably within the zone of interests to be protected or regulated by the statute . . . in question.'" *Id.* (quoting *Ass'n of Data Processing Serv. Orgs. v. Camp*, 397 U.S. 150, 153 (1970)). This test "is not meant to be especially demanding; in particular, there need be no indication of congressional purpose to benefit the would-be plaintiff." *Clarke v. Securities Indus. Ass'n*, 479 U.S. 388, 399-400 (1987). But APA claims cannot be asserted when "the plaintiff is not the subject of the contested regulatory action" and "the plaintiff's interests are so marginally related to or inconsistent with the purposes implicit in the statute that it cannot be reasonably assumed that Congress intended to permit the suit." *Ashley Creek Phosphate Co. v. Norton*, 420 F.3d 934, 940 (9th Cir. 2005) (quoting *Clarke*, 479 U.S. at 399). Importantly, "whether a plaintiff's interest is within the zone of interests protected by a statute 'is to be determined not by reference to the overall purpose of the Act in question . . . , but by reference to the particular provision of law upon which the plaintiff relies.'" *Id.* (quoting *Bennett*, 520 U.S. at 175-76).

The Court is not aware of any case applying the "zone of interests" test to the Mining Law, and the parties have cited none. The Court must therefore look to the "obvious purpose" of the "particular provision" to which Plaintiffs tie their claim, *Bennett*, 520 U.S. at 176, and determine whether Plaintiffs' interests "are among the sorts of interests [the statute was] specifically designed to protect," *Nat'l Wildlife Fed'n*, 497 U.S. at 886.

Section 22 of the Mining Law provides that "all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase[.]" 30 U.S.C. § 22. "[A] private citizen may enter federal lands to explore for mineral deposits" and, if a discovery is made, "perfect[] the claim by properly staking it and complying with other statutory requirements." *California Coastal*

Comm. v. Granite Rock Co., 480 U.S. 572, 575 (1987). The Mining Law's "obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense." *United States v. Coleman*, 390 U.S. 599, 602 (1968).

Plaintiffs do not fall within the zone of interests protected or regulated by the Mining Law. That law regulates mineral interests and provides procedures by which mining claims may be discovered and protected. The purpose of a VER Determination, including the determination in this case, is to confirm that valid mineral rights have been acquired. Plaintiffs' interests are environmental and historical. They do not claim to hold mineral rights at the Canyon Mine site, nor do they assert economic interests in those mineral rights.

Claim four alleges that the VER Determination is flawed – that it failed to consider and properly evaluate relevant information when it concluded that the Canyon Mine had valid existing mineral rights. In essence, claim four challenges Energy Fuels' rights in the uranium at the Canyon Mine. But Plaintiffs do not assert competing interests in the uranium; they have not engaged in the procedures established by the Mining Law for acquiring mineral interests; and they did not participate in the VER Determination. Nor does the Mining Law protect the environmental and historical interests Plaintiffs assert in this case. Other statutes such as NEPA and NHPA protect such interests, but the Mining Law does not.

Because Plaintiffs' interests are not "marginally related to . . . the purpose implicit" in the Mining Law, *see Ashley Creek*, 420 F.3d at 940, they lack prudential standing to bring claim four. To hold otherwise would give environmental groups and tribes the right to challenge every grant of private mineral rights under the Mining Law. Mineral claimants would be forced into the courts, the costs associated with validating rights would increase, and the "obvious purpose" of the Mining Law – to reward and encourage mineral discovery – would be undermined.

The Ninth Circuit has often held that purely economic interests are inconsistent with the environmental interests protected by NEPA. *See, e.g., id.* at 945; *Nevada Land*

Action Ass'n v. U.S. Forest Service, 8 F.3d 713, 716 (9th Cir. 1993); *W. Radio Servs. Co. v. Espy*, 79 F.3d 896, 903 (9th Cir. 1996); *Ranchers Cattlemen Action Legal Fund United Stockgrowers of Am. v. U.S. Dep't Agric.*, 415 F.3d 1078, 1103-04 (9th Cir. 2005). Thus, plaintiffs asserting economic injuries lack prudential standing under NEPA. "The purpose of NEPA is to protect the environment, not the economic interests of those adversely affected by agency decisions." *Nevada Land Action*, 8 F.3d at 716. This case presents the same situation in reverse – the "obvious purpose" of the Mining Law is to protect economic interests in mineral deposits, not the environmental or historical interests held by Plaintiffs.[8]

Plaintiffs' argue that *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak*, 132 S. Ct. 2199 (2012), compels a different result. In *Patchak*, the Supreme Court held that the owner of property near the site of a proposed Indian casino had prudential standing to challenge the decision of the Secretary of the Interior to acquire nearby property under the Indian Reorganization Act. *Id.* at 2211-12. The government argued that the owner's interests in the land's use were not within the zone of interests of the Act, which focused on land acquisition. *Id.* at 2210. The Court disagreed, finding that the Act dealt with land use generally and required the Secretary to consider "potential conflicts of land use that may arise" from acquisitions. *Id.* at 2211 (internal quotations and citations omitted). Consequently, the owner's interests arguably fell within the zone of interests protected by the Act, as "neighbors to the use . . . are reasonable – indeed, predictable – challengers" to the agency decision. *Id.* at 2212.

Unlike *Patchak*, Plaintiffs' interests do not arguably fall within the zone of interests protected by the Mining Law. The statute in *Patchak* required the government to consider interests like those asserted by the plaintiffs. Plaintiffs have cited no

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[8] Plaintiffs also argue their APA claim is tied to the FLPMA. The Court rejects this argument because the sections of the statute to which Plaintiffs cite do not relate to validity determinations or mineral examinations. *See* 43 U.S.C. §§ 1701(a)(4), 1702(j), 1714(a). These sections deal with the DOI's authority to withdraw land and do not provide the Court with any relevant law to apply in deciding claim four. *See* 5 U.S.C. § 701(a)(2).

provision of the Mining Law that requires the government to consider their environmental or historical interests when assessing the validity of mineral claims. And the specific section of the Mining Law at issue here, which must be the focus of the Court's prudential standing analysis, is designed to open up federal land to mineral exploration and the establishment of valid mining claims. 30 U.S.C. § 22. It says nothing about the interests asserted by Plaintiffs. Nor can it be said that Plaintiffs are foreseeable challengers of a BLM or Forest Service decision validating mineral rights, especially when they have not cited a single case involving such a challenge.

Plaintiffs also cite *Thomas v. Morton*, 408 F. Supp. 1361, 1370 (D. Ariz. 1976), for the proposition that the general public has a "paramount interest" in protecting lands from the effects of invalid mining claims. But *Thomas* involved a mineral claim contest between private parties, not a suit by environmental plaintiffs. It does not support Plaintiffs' argument that the Mining Law protects Plaintiffs' interests.

In sum, the Court finds that Plaintiffs do not fall within the zone of interests protected by the Mining Law, and thus do not have prudential standing to bring claim four. The Court will grant Defendants' motion for summary judgment on that claim.

C. Final Agency Action.

In their motion to dismiss, Defendants argued that several of Plaintiffs' claims should be dismissed because the VER Determination did not constitute a final agency action subject to judicial review. Doc. 71. The Court disagreed, finding that the VER Determination "marked the consummation of the Forest Service's validity determination" and was "a practical requirement before the Canyon Mine resumed operations" under *Bennett v. Spear*, 520 U.S. at 154. Doc. 131 at 7. The Court found, for reasons discussed above, that the VER Determination was a practical if not a legal requirement. *Id.* at 9. Relying on Supreme Court and Ninth Circuit authority, the Court then concluded that such a practical requirement could satisfy the second prong of the *Bennett* test, which requires that the agency action be "one by which rights or obligations have been determined, or from which legal consequences will flow." 520 U.S. at 178 (quotation

marks and citation omitted); Doc. 131 at 9-10.

Defendants now argue that the Court erred in concluding that practical effects can satisfy the second prong of *Bennett*. Defendants rely primarily on *Columbia Riverkeeper v. U.S. Coast Guard*, 761 F.3d 1084 (9th Cir. 2014), a case decided two days before the Court issued its order on the motion to dismiss. The Court has reviewed *Columbia Riverkeeper* and does not find it contrary to the Court's previous decision. *Columbia Riverkeeper* appears to confirm that practical effects can satisfy the second prong of the *Bennett* test: "We agree that an agency's characterization of its action as being provisional or advisory is not necessarily dispositive, and courts consider whether the *practical effects* of an agency's decision make it a final agency action, regardless of how it is labeled." 761 F.3d at 1094-95 (emphasis added).

The court in *Columbia Riverkeeper* was faced with a very different set of facts. The Ninth Circuit found that the letter of recommendation in question did not, as a practical matter, have the effect of permitting shipment of liquefied natural gas. As the Ninth Circuit explained: "Nor does the record support Riverkeeper's argument that, as a practical matter, FERC always complies with the Coast Guard's letter of recommendation, which effectively gives it the force of law." *Id.*

The record is quite different in this case. The Court finds that the VER Determination, as a practical matter, had to be completed before the Canyon Mine could reopen. The Court therefore continues to conclude that the VER Determination constituted final agency action under the *Bennett* test.[9]

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[9] The Court admits that it has serious doubts as to whether a purely practical effect can satisfy the second prong of the *Bennett* test. Such a holding seems inconsistent with *Bennett*'s requirement of actions "by which rights or obligations have been determined, or from which legal consequences will flow." 520 U.S. at 178. But the cases discussed in the Court's ruling on the motion to dismiss (Doc. 131 at 9-10) and the language quoted above from *Columbia Riverkeeper* seem to indicate that practical results can suffice. Were it not for these cases, the Court would find that the VER Determination is not a reviewable agency action for the same reasons as *Fairbanks North Star Borough v. U.S. Army Corps of Engineers*, 543 F.3d 586, 594 (9th Cir. 2008).

D. Collateral Estoppel.

Defendants argue that claims two and three are barred by collateral estoppel because those claims were litigated in *Havasupai Tribe* following the approval of the Canyon Mine Plan. Doc. 147-1 at 7. Defendants dedicate only one paragraph of their combined 66 pages of opening briefs to this issue, for good reason. The Court previously rejected a similar argument based on *res judicata*. Doc. 131 at 14-15. The Court held that the claims brought by the Havasupai Tribe and others in 1988, more than 20 years before the Red Butte area was designated as a TCP, were not the same as the claims asserted under the NHPA in the amended complaint. *Id.* The Court continues to hold that view. Although Defendants argue that the consultation procedures under NEPA and the NHPA are essentially the same, the authorities they cite do not support this conclusion. Regulations do suggest that such consultations can occur at the same time, but they specifically identify matters that should be addressed under the NHPA that are not addressed under NEPA. *See* 36 C.F.R. §§ 800.8(a), (c). Collateral estoppel bars "successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment." *Taylor v. Sturgell*, 553 U.S. 880, 892 (2008). Because issues raised in the amended complaint under the NHPA were not litigated in the earlier litigation, collateral estoppel does not apply.

V. NEPA Compliance – Claim One.

"NEPA is a procedural statute that does not 'mandate particular results, but simply provides the necessary process to ensure that federal agencies take a hard look at the environmental consequences of their actions.'" *Sierra Club v. Bosworth*, 510 F.3d 1016, 1018 (9th Cir. 2007) (citation omitted). NEPA requires federal agencies to perform environmental analysis before taking "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). Plaintiffs claim that the VER Determination was a major federal action and that the Forest Service therefore violated NEPA by failing to perform an EIS in connection with the determination.

When the Forest Service received the proposed plan of operations for the Canyon Mine in 1984, it complied with NEPA and prepared a full EIS. A.R. 461-693. On the basis of the EIS, the Forest Service issued the ROD and took the "major federal action" of approving the Canyon Mine Plan on September 26, 1986. A.R. 915-29. The EIS and ROD were subsequently upheld in two levels of appeal within the Forest Service, by this Court, and by the Ninth Circuit Court of Appeals. Thus, there can be no doubt that full NEPA compliance occurred before operation of the Canyon Mine was approved.

Plaintiffs allege that the VER Determination constituted a new major federal action that triggered the need for another EIS of the Canyon Mine. The Court does not agree. As explained above, the VER Determination was not required as a matter of law before the Canyon Mine could resume operations. In addition, after completing the Mine Review, the Forest Service concluded that no modification or amendment of the existing Plan was necessary for mining activities to resume. A.R. 10594. Thus, the Plan approved in 1986 after a full EIS evaluation continued to govern operations at the Canyon Mine.

The Ninth Circuit has held "that where a proposed federal action would not change the status quo, an EIS is not necessary." *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 646 (9th Cir. 2014) (quoting *Upper Snake River Chapter of Trout Unlimited v. Hodel*, 921 F.2d 232, 235 (9th Cir. 1990)). The Ninth Circuit has also held that EIS requirements do not apply to mere continued operation of a facility. *See Upper Snake River*, 921 F.2d at 234-35 (holding that agency need not prepare an EIS before adjusting water flow from a dam because continued operation of the dam would have consequences "no different than those in years past"); *Burbank Anti-Noise Group v. Goldschmidt*, 623 F.2d 115, 116 (9th Cir. 1980) ("An EIS need not discuss the environmental effects of mere continued operation of a facility."); *City & Cnty. of San Francisco v. United States*, 615 F.2d 498, 501 (9th Cir. 1980) (finding EIS adequate where Navy evaluated effects of shipyard lease only in comparison to the decades-long prior use of the facility as a shipyard, rather than "as if the Navy were proposing to

establish this multi-million dollar industrial complex for the first time").

Like the above-cited authorities, a resumption of mining activities under the Plan approved by the Forest Service after full NEPA review did not constitute a new major federal action that required preparation of another EIS. The major federal action was the same as approved in 1986 – mining under the Plan of Operations.

Plaintiffs argue that "[i]f a federal approval is needed for a project, that approval action is a NEPA 'major federal action.'" Doc. 140-1 at 21. They assert that the VER Determination was an "approval" needed before mining could resume, and that the VER Determination therefore constituted a new major federal action requiring full NEPA compliance. The Court finds this argument unpersuasive for two reasons. First, as noted above, the VER Determination was not a required approval for mining operations to continue. The premise of Plaintiffs' argument is therefore incorrect. Second, the law does not provide that every federal approval amounts to a major federal action. This point was made clear in *Center for Biological Diversity v. Salazar ("CBD")*, 791 F. Supp. 2d 687 (D. Ariz. 2011), and the Ninth Circuit opinion affirming that decision.

CBD involves facts nearly identical to this case. The uranium mine at issue in *CBD*, known as the Arizona 1 Mine, is located on the north side of Grand Canyon National Park and is owned and operated by Energy Fuels. *CBD*, 791 F. Supp. 2d at 690. A plan of operations for the Arizona 1 Mine was approved by BLM in 1988 after completion of a full EIS. *Id.* When uranium prices fell in the 1990s, the Arizona 1 Mine was placed on stand-by status. *Id.* Several years later, in 2007, the owner provided notice that it intended to resume mining under the original plan of operations. BLM required the mine owner to update its reclamation bond and obtain a clean air permit, and then approved the renewed operations. *Id.* The plaintiffs, which included some Plaintiffs in this case, brought an APA action claiming that BLM's approval of the renewed mining operations constituted a major federal action that required a supplemental EIS. *Id.* The plaintiffs pointed to the update of the reclamation bond and the clean air permit as new steps that made the renewed mine operation a major federal action under NEPA.

The Court disagreed. It found that a supplemental EIS was not required because BLM had complied with NEPA in 1988 when it approved the original plan of operations for the Arizona 1 Mine. *Id.* at 698. The Court found that BLM's approval of the updated bond and the requirement of an air permit did not amount to a major federal action because they were "not an approval of a specific project by permit or regulatory decision." *Id.* at 704 (internal quotations omitted). Instead, the Court found that the "major federal action was taken more than 20 years ago" when BLM approved the mine's plan of operations after a full NEPA review. *Id.*

The Ninth Circuit affirmed. *Center for Biological Diversity v. Salazar*, 706 F.3d 1085 (9th Cir. 2013). The Ninth Circuit noted that approval of the mine's plan of operations in 1988 undoubtedly was a major federal action, but that it was completed when the plan was approved. *Id.* at 1095. "Before that action was complete, BLM performed the requisite environmental analysis." *Id.* "Accordingly, as far as the 1988 plan of operations is concerned, appropriate NEPA review took place and there is no ongoing 'major Federal action' that could require [EIS] supplementation." *Id.* (quotation marks and citation omitted). The fact that BLM required additional steps to be completed before mining could resume did not alter this conclusion. Those additional steps – updating of the bond and obtaining of the air permit – did not approve any new specific project and constituted mere ministerial tasks. *Id.* at 1095-96.

These holdings apply to the Canyon Mine. A full NEPA analysis was performed by the Forest Service when the Plan was approved in 1986. The major federal action – plan approval – was completed at that time. The fact that the Forest Service elected to conduct a VER Determination before the mine resumed operations, and that the owner agreed to wait until the determination was finished, did not constitute a new major federal action. The VER Determination was not a legal requirement. Nor were the resumed mine operations going to vary from the previously approved Plan. Like the bond update and the air permit required in *CBD*, the VER Determination was not an approval of a new

project.[10]

Plaintiffs argue that this conclusion conflicts with *Pit River Tribe*, which involved BLM's extension of expired leases on federal land for development of a geothermal plant. 469 F.3d at 768. The Ninth Circuit, in an opinion by the same judge who authored the Ninth Circuit opinion in *CBD*, held that extending the leases required preparation of an EIS because, without the extension, the lessee would have retained no rights on the leased property. *Id.* at 784. Extension of the leases thus constituted an affirmative grant of the right to build a geothermal plant. *Id.* ("Without the affirmative re-extension of the 1988 leases, Calpine would have retained no rights at all to the leased property and would not have been able to go forward with the Fourmile Hill Plant.").

Unlike the leases in *Pit River Tribe*, which would have expired without affirmative action by the government, the approved Plan for the Canyon Mine had no time limit. The interim management provisions of the Plan continued to govern the mine while on stand-by status. Energy Fuels' rights under the Plan were never terminated and did not require affirmative renewal. *See Center for Biological Diversity*, 706 F.3d at 1091-94 (holding that approved plan of operation for uranium mine remained in effect through periods when mine was inactive); 43 C.F.R. § 3809.423 (plan of operation remains in effect unless terminated by agency); A.R. 10598 (Mine Review determination that the Plan for the Canyon Mine had no time limit and remained in effect in 2012). The expiration of the leases in *Pit River Tribe* stripped the developer of all rights on the land. Here, the Withdrawal had no such effect, and the Court's decision does not conflict with the holding in *Pit River Tribe*.[11]

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[10] The Forest Service's Mine Review reached the same conclusion: "No new federal action subject to further NEPA analysis is required for resumption of operations of the Canyon Mine. The existing [Plan] remains in place and in effect, and there is no need for any amendment or modification of the [Plan]." A.R. 10629.

[11] Plaintiffs claim that another company, VANE Minerals LLC, recognized that the Withdrawal changed its legal rights to mine. VANE's activities, however, involved exploratory drilling and a request for approval of a *new* plan of operations. Doc. 140-9. As noted above, the Withdrawal specifically required that *new* plans of operations be approved only after a VER Determination was completed.

In sum, the Withdrawal had no effect on the operations at Canyon Mine, the VER Determination was not legally required, mining was to continue under the Plan that had been subjected to full NEPA review in 1986, and the VER Determination did not alter or amend the Plan. As noted above, EIS requirements do not apply to mere continued operation of a NEPA-approved facility. As in *CBD*, the major federal action in this case occurred more than twenty years ago and remains unchanged. Because issuance of the VER Determination did not trigger NEPA or require a new EIS, Defendants are entitled to summary judgment on claim one.

VI. NHPA Compliance – Claims Two and Three.

Before a federal agency implements, assists, or licenses an "undertaking," the NHPA requires the agency to "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register" of Historic Places. 16 U.S.C. § 470f. For purposes of this case, an "'undertaking' means a project, activity, or program . . . requiring a Federal permit, license, or approval[.]" 16 U.S.C. § 470w(7)(C).

NHPA regulations are promulgated by the ACHP. The regulations guide federal agencies in implementing the § 106 consultation process, which requires the agency to identify the affected historical properties, determine potential adverse effects, and identify methods of mitigation. 36 C.F.R. §§ 800.2-800.7. The regulations also require consultation with the public, the ACHP, the AZSHPO, and Indian tribes that "attach religious and cultural significance to historic properties that may be affected by an undertaking." *Id.*, § 800.2(c)(2)(ii).

Plaintiffs allege in claim two that the Forest Service was obligated to complete a full NHPA § 106 consultation because resumed operation of the Canyon Mine was an "undertaking" within the meaning of the NHPA. They allege in claim three that the Forest Service erred in applying the NHPA process set forth in § 800.13(b)(3), rather than (b)(1), and did not comply with (b)(3) in any event. The Court will address these claims

separately.[12]

A. Was There an Undertaking?

An undertaking is a "project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including . . . those requiring a Federal permit license, or approval[.]" 16 U.S.C. § 470w(7)(C). The standards for the existence of a federal undertaking are similar to those for a major federal action under NEPA. *See Dugong v. Rumsfeld*, 2005 WL 522106, at *12 (N.D. Cal. March 2, 2005) (citing cases from the Ninth, D.C., Fourth, and Fifth Circuits which noted the similar standards). Plaintiffs claim that the VER Determination constituted a permit, license, or approval, and that the resumption of mining at the Canyon Mine was therefore an undertaking requiring full NHPA compliance. The Court disagrees for two reasons.[13]

First, for the resumed mining operations to constitute an undertaking, the VER Determination must have been "a Federal permit license, or approval[.]" 16 U.S.C. § 470w(7)(C). As explained above, however, the VER Determination was not legally required before Energy Fuels could resume operations of the Canyon Mine. The Court cannot conclude that it constituted a federal permit, license, or approval when mining operations could have resumed without it.

Second, operations at the Canyon Mine are to resume under the original Plan. There is no new plan. If mining is the "undertaking" for purposes of the NHPA, that undertaking was approved in 1986. With no modification to the Plan and no requirement of a VER Determination, there is no new undertaking subject to NHPA compliance.

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[12] As Defendants note, claims two and three as described in Plaintiffs' summary judgment briefing go well beyond the claims laid out in the amended complaint, which simply allege that the Forest Service failed to initiate and complete a § 106 process. Doc. 115 at 25-27. The Court nonetheless will address the claims as described in the summary judgment briefing.

[13] Plaintiffs alleged in their amended complaint that the VER Determination, not the resumed operation of the mine, constituted the "undertaking" for NHPA purposes. Doc. 115, ¶ 79. In their summary judgment briefing and during oral argument, Plaintiffs clarified their position. They claim that the undertaking is the resumed operation of the mine and that the VER Determination is the license, permit, or approval for that undertaking. *See* Docs. 140-1 at 34; 151 at 28.

Plaintiffs admit in their amended complaint that a § 106 process was completed in 1986. Doc. 115, ¶ 85 ("The Forest Service conducted a Section 106 Process in connection with approving the 1986 Plan of Operation for Canyon Mine."). As described in the Mine Review, the 1986 process included consultation with AZSHPO and ACHP to develop a plan for archeological tests; archeological review of the proposed mine site and access roads; a cultural resources survey of the proposed power line location; notice to and responses from the Havasupai, Hopi, Hualapai, and Navajo tribes; consultation with these tribes; and meetings with the Havasupai and Hopi tribes. A.R. 10601-11. The Mine Review concluded that "[a] review of the NHPA Section 106 compliance analysis and the ROD for the Canyon Mine indicates that the agency did adequately address all the effects to historic properties that had been identified in the ROD." A.R. 10602; *see also* A.R. 10611 ("it appears that the [Forest Service] was diligent and thorough in its efforts to solicit tribal input and understand tribal concerns"); A.R. 10612 ("All of the Tribal comments were responded to and the EIS was substantially revised to reflect the information provided by the Havasupai and Hopi.").[14]

With the "undertaking" of mining having been approved in 1986 after compliance with § 106, the Court cannot conclude that resumed mining under the same Plan constitutes a new undertaking. The Court agrees with the conclusion in the Mine Review: "Since [Energy Fuels] has not proposed any new activities which would require modification of the existing [Plan] or a new [Plan], there will be no new federal undertakings subject to NHPA Section 106 compliance." A.R. 10601.

Of course, one significant change has occurred since the 1986 approval – Red Butte and surrounding land, including the location of the mine, have been designated a TCP and added to the National Register of Historic Places. Recognizing this change, the

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[14] In its decision on the sufficiency of the 1986 EIS and ROD, this Court noted that the Forest Service distributed more than 100 copies of the proposed Plan for the Canyon Mine to interested parties; received over 200 letters in response; and, following the decision to do a full EIS, distributed more than 2,000 scoping letters to federal, state, and local government agencies, Indian tribes, news media and other interested parties. *Havasupai Tribe*, 752 F. Supp. at 1476-77.

Forest Service chose to treat Red Butte's TCP status as a new discovery and to apply the NHPA regulations for new discoveries. The Forest Service followed the procedures in 36 C.F.R. § 800.13(b)(3). Plaintiffs claim this was error.

B. The Forest Service's Decision to Apply (b)(3) Was Reasonable.

Section 800.13 of the applicable regulations sets forth the NHPA's consultation process for "[p]ost-review discoveries." 36 C.F.R. § 800.13. These are discoveries of historic properties, or effects on historic properties, made after a § 106 process has been completed. Paragraph (a) states that agreements made during the § 106 process can anticipate such discoveries and lay out procedures for dealing with them. Paragraph (b) applies when no such procedures are in place. It states that "[i]f historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process . . . , the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties" and shall comply with subparagraphs (b)(1) through (b)(3). *Id.*, § 800.13(b).

Subparagraph (b)(1) applies when the § 106 process is finished but "the agency official has not approved the undertaking or . . . construction on an approved undertaking has not commenced[.]" *Id.*, § 800.13(b)(1). It requires the agency to comply with § 800.6, which sets forth detailed procedures for resolving adverse effects during a full § 106 process. *Id.* Among other requirements, § 800.6 requires that the agency adopt a memorandum of agreement evidencing the agency's "compliance with section 106" and governing "the undertaking and all of its parts." 36 C.F.R. § 800.6. The agency must "ensure that the undertaking is carried out in accordance with the memorandum of agreement." *Id.*

Subparagraph (b)(2) applies when the newly discovered site is relevant only for data collection purposes. § 800.13(b)(2). It is not at issue in this case.

Subparagraph (b)(3) applies "[i]f the agency official has approved the undertaking and construction has commenced[.]" *Id.*, § 800.13(b)(3). It requires the agency to "determine actions that the agency official can take to resolve adverse effects" and to

notify interested parties, including Indian tribes, "within 48 hours of the discovery." *Id.* Interested parties must respond within 48 hours of receiving notice, and the agency then must take into account their recommendations and "carry out appropriate actions." *Id.* By merely requiring that the agency "carry out appropriate actions," (b)(3) is less demanding than (b)(1) and its requirement of a detailed consultations process resulting in a memorandum of agreement that governs the undertaking in the future.

In conducting the Mine Review, the Forest Service recognized that Red Butte had not been listed on the National Register at the time of the previous § 106 process.[15] A.R. 10602. Therefore, the Forest Service decided to treat Red Butte as a newly discovered historic property and looked to § 800.13 of the regulations:

> Because the earlier definition [of historic property] did not include properties of traditional religious and cultural importance, Red Butte was only recorded as a TCP and evaluated as eligible on the NR after the [1986] ROD but before the project has been completed. Therefore, it could be considered a newly "discovered" historic property, and section 36 C.F.R. 800.13(b) of the regulations would apply.

A.R. 10603.

The question, then, was whether the Forest Service should proceed under subparagraph (b)(1) or (b)(3). Because the Canyon Mine had been approved in 1986 and construction of the mine had commenced, the Forest Service decided that subparagraph (b)(3) applied. *Id.* The Forest Service acknowledged that "[t]he Canyon Mine project is a somewhat unusual situation in that the Section 106 process was completed more than 20 years ago." *Id.* But the Forest Service concluded that it could provide the notice required by subparagraph (b)(3), allow the tribes and other interested parties 30 days to respond because there was no timing emergency requiring a 48-hour response, and address ways to avoid or minimize adverse effects on Red Butte from the Canyon Mine

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[15] In 1986, the NHPA did not allow tribal religious sites to be listed. A.R. 10602-03.

operations. *Id.* Notices were mailed on June 25, 2012, meetings were held with the tribes, a memorandum of agreement was considered, but this lawsuit intervened. *See, e.g.*, A.R. 10540 (email to SHPO regarding consultation for MOA); A.R. 10542 (email to ACHP regarding consultation for MOA); A.R. 10643-44 (consultation notice letters to chairman of Kaibab Paiute Tribes), 10690-91 (Havasupai Tribe), 10737-38 (Hopi Cultural Preservation Office), 10784-85 (Hopi Tribe), 10831-32 (Hualapai Tribe), 10878-79 (Hualapai Tribe), 10925-26 (Navajo cultural specialist), 10972-73 (Navajo Nation), 11019-20 (Kaibab Band of Paiute Indians), 11066-67 (Yavapai-Prescott Indian Tribe), 11113-14 (Yavapai-Prescott Indian Tribe), 11160-61 (Pueblo of Zuni); A.R. 11380 (Aug. 15, 2012 emails discussing Havasupai MOA) A.R. 11390-91 (Hopi meeting agenda); A.R. 11411 (Sept. 6, 2012 meeting notes with Kaibab Band of Paiute Indians); A.R. 11790 (Sept. 19, 2012 meeting notes and agenda re: Hopi Cultural Preservation Office); A.R. 11796 (Sept. 20, 2012 meeting notes and agenda re: Navajo Nation); A.R. 11799 (Sept. 20, 2012 meeting notes and agenda re: Pueblo of Zuni); A.R. 11809 (Oct. 4, 2012 meeting notes re: Havasupai Tribal Council); A.R. 11832 (Oct. 19, 2012 meeting notes re: Hopi Cultural Resources Task Team); A.R. 12238 (Jan. 7, 2013 intertribal meeting notes); A.R. 12387 (summary of communications with tribes).

Because Plaintiffs' claim is brought under the APA, the Court can set aside the Forest Service's decision to follow the (b)(3) procedure only if it was arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law. 5 U.S.C. § 706(2)(A). This is a "highly deferential" standard of review. *Nw. Ecosystem Alliance*, 475 F.3d at 1140. Plaintiffs make several arguments that do not satisfy this standard.

1. The Undertaking Was Approved Previously.

Plaintiffs argue that the "undertaking" in this case was the resumption of mining operations at the Canyon Mine, that the undertaking as so defined has never been approved before, and that § 800.13(b)(3) therefore did not apply. For reasons explained

above, however, the Court does not agree that the "undertaking" was the resumption of mining activities. Operations were to continue under the Plan approved in 1986, without modification. The "undertaking" was mining at the site, and that undertaking was approved by the Forest Service in 1986. Plaintiffs do not argue that a new Plan of Operations was required for mining activities to resume. Indeed, that argument was rejected by this Court and the Ninth Circuit in *CBD*. *CBD*, 791 F. Supp. 2d at 692-96; 706 F.3d at 1091-94. Thus, the Plan under which mining would continue was fully approved by the Forest Service in 1986 after a § 106 consultation process, and no new undertaking required another approval.

2. The Language of (b)(3) Is Not Limited to Emergencies.

Plaintiffs argue that § 800.13(b)(3) is an emergency measure that does not apply to the Canyon Mine. They cite the history of the regulation and argue that it was intended to apply when a historically significant property is uncovered in the midst of constructing an approved undertaking, which did not occur here. Doc. 140-1 at 41. The citations provided by Plaintiffs, however, are not persuasive.

Plaintiffs cite prior titles in § 800.13(b)(3). In one, the title refers to "[r]esources discovered during construction." 44 Fed. Reg. 6068, 6077 (Jan. 30, 1979). In the other, the title refers to "[p]roperties discovered during implementation." 51 Fed. Reg. 31115, 31123 (Sept. 2, 1986). Although these titles suggest that the section applies when a discovery is made in the midst of construction, the actual text of these earlier regulations is worded differently – it refers to discoveries that occur "after beginning to carry out the undertaking," which accurately describes the Canyon Mine situation. 51 Fed. Reg. at 31123; *see also* 44 Fed. Reg. at 6077 (noting that section applies if "an Agency Official finds or is notified *after* construction has started") (emphasis added). Text usually controls over titles in a statute or regulation. *See generally Bhd. of R.R. Trainmen v. Baltimore & Ohio R.R. Co.*, 331 U.S. 519, 528-29 (1947) (recognizing that "the title of a statute and the heading of a section cannot limit the plain meaning of the text"). Thus, the Court cannot conclude from these earlier versions of the regulation that (b)(3) was

limited to emergency situations.

More importantly, the Court must apply the current regulation. The title of the current version is "Post-review discoveries," suggesting that it applies to discoveries made after the § 106 review is completed and is not necessarily limited to events occurring in the midst of active, ongoing construction. 36 C.F.R. § 800.13(b). What is more, courts resort to statutory or regulatory history to construe statutes or regulations only when those statutes or regulations are ambiguous. *See United States v. Williams*, 659 F.3d 1223, 1225 (9th Cir. 2011). Subparagraph (b)(3) is not ambiguous. It applies when "the agency official has approved the undertaking and construction has commenced[.]" 36 C.F.R. § 800.13(b)(3). No further limitation is imposed. The undertaking in this case – operation of the Canyon Mine – was approved by the Forest Service in 1986 and construction commenced in 1991. As noted earlier, the mine owner built access roads, storage buildings, a power line, a perimeter fence, diversion structures, a holding pond, a 100-foot tall head frame, a hoist, and support buildings, and sunk the mine shaft to a depth of 50 feet. A.R. 10487; Doc. 146-1 at 17; Hangan Declaration, Doc. 53-4, ¶ 4. The situation at the Canyon Mine thus fell squarely within the plain language of subparagraph (b)(3).

3. Deference to the ACHP Is Not Warranted.

The ACHP is the agency that promulgates NHPA regulations, including § 800.13. 16 U.S.C. § 470s. In *Auer v. Robbins*, the Supreme Court held that an agency's interpretation of its own regulation is controlling unless it is plainly erroneous or inconsistent with the language of the regulation. 519 U.S. 452, 461 (1997). Plaintiffs argue that the ACHP interpreted subparagraph (b)(3) in this case and the Court must defer to that interpretation. For several reasons, the Court does not agree.

The "interpretation" relied on by Plaintiffs is contained in a letter the ACHP wrote to the Forest Service on August 1, 2012. The letter provides this explanation:

> In this situation, we understand that the Plan of Operations for the undertaking has been approved, and that some construction has occurred. Based upon the information you provided, it appears this construction

> activity has started and stopped over the years. The intent of Section 800.13(b)(3) is to provide an expedited review process where construction activities have begun and would be ongoing, and thus, the agency has limited time and opportunity for consultation. Should the Forest Service pursue this approach, we are concerned that it would continue the unproductive conflict between the Forest Service and the Indian tribes that consider Red Butte a sacred place. Further, because of the nature and timing of this undertaking and the current request to resume previously halted mining operations, we believe consultation in accordance with Section 800.13(b)(l) to develop and execute a Section 106 agreement is the appropriate way forward.

A.R. 11335.

The letter does describe the intent of (b)(3) as applying to emergency situations, but its recommendation that the Forest Service proceed under (b)(1) appears to be more tactical advice than an interpretation of the regulation. The ACHP suggests that the Forest Service use (b)(1) not because the language of that provision applies, but because the ACHP is concerned that applying (b)(3) "would continue the unproductive conflict between the Forest Service and the Indian tribes that consider Red Butte a sacred place." *Id.* This reasoning is more a comment on the situation facing the Forest Service than on the meaning of the regulation. The Court therefore doubts that the letter constitutes the kind of regulatory interpretation entitled to deference under *Auer*.

But even if the ACHP letter constituted an interpretation of (b)(1) and (b)(3), it is not entitled to deference. The Supreme Court has explained that "*Auer* deference is warranted only when the language of the regulation is ambiguous." *Christensen v. Harris Cnty.*, 529 U.S. 576, 588 (2000). "To defer to the agency's position [when a regulation is not ambiguous] would be to permit the agency, under the guise of interpreting a regulation, to create de facto a new regulation." *Id.*; *see also Bassiri v. Xerox Corp.*, 463 F.3d 927, 931 (9th Cir. 2006) ("Under *Auer*, as amplified by *Christensen*, the court must first determine whether the regulation was ambiguous.").

As noted above, § 800.13(b) is not ambiguous. Subparagraph (b)(1) applies when the agency "has not approved the undertaking" or "construction on an approved

undertaking has not commenced." Subparagraph (b)(3) applies when neither of the (b)(1) conditions is present – when the agency "has approved the undertaking and construction has commenced." Subparagraphs (b)(1) and (b)(3) thus cover all possible scenarios for discoveries of historical properties after a § 106 process is completed. If the undertaking is not yet approved, (b)(1) applies. If the undertaking is approved but construction has not yet commenced, (b)(1) applies. If the undertaking is approved and construction has commenced, (b)(3) applies. The Court sees no ambiguity in these provisions. Every eventuality is addressed.

Plaintiffs argue that the scenario in this case – the undertaking has been approved, construction has commenced, and construction has stopped – is not covered by the regulations. The Court does not agree. This scenario falls within (b)(3) because the regulations do not make work stoppage a factor in deciding which subparagraph applies. If an undertaking has been approved and construction has commenced, the criteria for (b)(3) are fully satisfied. Although undertakings where the construction has subsequently stopped may be a subset of the scenarios covered by (b)(3), it is a subset that is not assigned in the regulations to different treatment. It is fully covered by the (b)(3) criteria. Certainly it is not assigned to (b)(1), which applies only if there has been no undertaking approval or no start of construction.

Plaintiffs suggest that an ambiguity is created because the 48-hour provisions in (b)(3) clearly show that it is designed for emergency situations, and restart of the Canyon Mine is not an emergency situation. Although the 48-hour provisions do suggest that (b)(3) was designed primarily for emergency situations, nothing in (b)(3) states that it is limited to those situations. Subparagraph (b)(3) does not say that it applies when "the agency has approved the undertaking, construction has commenced, and 48-hour notice is necessary," or comparable language.

Because the Court does not find § 800.13(b) ambiguous, *Auer* deference is not warranted. *Christensen*, 529 U.S. at 588; *Bassiri*, 463 F.3d at 931. And with no deference being required for the ACHP interpretation, the Court cannot say that the

Forest Service's reading of § 800.13(b) – applying its plain language – was arbitrary and capricious, an abuse of discretion, or not in accordance with the law.

What is more, even if the Court were to find some ambiguity in § 800.13(b), *Auer* deference would be warranted only if the ACHP's interpretation is not "inconsistent with the regulation." *Auer*, 519 U.S. at 461. The Court finds that the ACHP interpretation is inconsistent with the plain language. Subparagraph (b)(1) applies only when the agency "has not approved the undertaking" or "construction on an approved undertaking has not commenced." Under no reading could this provision apply to the Canyon Mine, where the undertaking was approved in 1986 and construction commenced in 1991. ACHP's advice that subparagraph (b)(1) applies is simply contrary to the language of (b)(1).

As noted, the ACHP letter appears to be based more on the factual situation related to the Canyon Mine than the meaning of (b)(1) and (b)(3). But if viewed as an attempt to construe those provisions, the letter appears to create a new category under § 800.13(b) for undertakings approved, started, and then stopped. That category does not exist in the current version of the regulations. Accepting it would, as the Supreme Court warned, "permit the agency, under the guise of interpreting a regulation, to create de facto a new regulation." *Christensen*, 529 U.S. at 588.

The cases cited by Plaintiffs do not require a different result. *See* Doc. 140-1 at 42. The decision in *CTIA–The Wireless Ass'n v. FCC*, 466 F.3d 105,115-16 (D.C. Cir. 2006), did not address *Auer* deference – deferring to an agency's interpretation of its own regulation. It addressed deferring to an agency's interpretation of a statute through promulgated regulations. *Id.* at 116. That is a different kind of deference. *See Go v. Holder*, 744 F.3d 604, 612 (9th Cir. 2014) (Wallace, J., concurring) (noting the distinction recognized in *Price v. Stevedoring Services of America, Inc.*, 697 F.3d 820, 829 (9th Cir. 2012), between "an agency's informal interpretations of its own regulations [which are entitled to *Auer* deference] and of its governing statute [which are entitled to *Chevron* deference].") (brackets in original). Plaintiffs' other cases, *Stinson v. United States*, 508 U.S. 36, 45 (1993), *Karuk Tribe of California v. U.S. Forest Service*, 681

F.3d 1006, 1017 (9th Cir. 2012), and *Sayler Park Village Council v. U.S. Army Corps of Engineers*, 2002 WL 32191511, at *6 n.5 (S.D. Ohio, Dec. 30, 2002), simply restate the rule established in *Auer*. They do not detract from the fact that *Auer* deference applies only when a regulation is ambiguous, nor from the fact that an agency's interpretation of an ambiguous regulation must, if deference is to be accorded, comport with the regulation's language.

In summary, the Court does not find that the Forest Service's decision to apply (b)(3) was arbitrary, capricious, an abuse of discretion, or not in accordance with law.

C. Compliance with (b)(3).

Plaintiffs also argue that the Forest Service failed to comply with (b)(3). Plaintiffs claim that (1) no notice was sent out to interested parties within 48 hours, (2) no actions were proposed to mitigate adverse effects, (3) the local tribes' responses to the notice went unaccounted for, and (4) no reports of any actions were provided to interested parties. The Court disagrees with Plaintiffs' characterization of the Forest Service's efforts.

The same day that the Forest Service concluded (b)(3) applied, it sent a consultation letter to Don Watahomigie, Chairman of the Havasupai Tribe (A.R. 10690), as well as to the Hopi Tribe, Hualapai Tribe, the Kaibab Band of Paiute Indians, the Navajo Nation, the Yavapai-Prescott Indian Tribe, and the Pueblo of Zuni, to initiate consultation under § 800.13(b)(3). A.R. 12388. Plaintiffs argue that the notice was required within 48 hours of Energy Fuels' informing the Forest Service of its intent to reopen the Canyon Mine. As the Forest Service acknowledges, however, this was an unusual situation. A.R. 10603. It took some time for the Forest Service to determine what kind of review was required. Once it determined – correctly, as explained above – that the situation was governed by (b)(3), it sent the notice required by that section within 48 hours. A.R. 10603-04.

Over the course of the next several months, the Forest Service entertained objections and responses from the various tribes, met with representatives from various

tribes, conducted field visits, and engaged in discussions regarding the potential impacts of the Canyon Mine. A.R. 12388-89. For example, in August 2012, the Forest Service conducted field visits with representatives from the Zuni Cultural Resource Advisory Task Team at Red Butte. A.R. 12389. In September, the Forest Service met with the Kaibab Band of Paiute Indians in Pipe Springs, Arizona to discuss several projects, including the Canyon Mine. *Id.* Throughout September and October, Forest Service representatives responded to letters sent by various tribes and met multiple times with the Hopi Tribe in Kykotsmovi, Arizona; the Navajo Nation in Window Rock, Arizona; and the Pueblo of Zuni in Zuni, New Mexico. Representatives also hiked eight miles to Supai, Arizona to consult with the Havasupai Tribe. *Id.* In January 2013, the Forest Service and Energy Fuels met with representatives from multiple tribes and conducted a field visit to the Canyon Mine site. *Id.* The next day, a MOA workshop was conducted with several tribes in Flagstaff, Arizona. *Id.* Two months later, Plaintiffs filed this lawsuit, effectively ending the consultation process.

Notwithstanding the above, Plaintiffs assert that the Forest Service failed to take unilateral action to avoid or mitigate effects to Red Butte and falsely informed the tribes that the only mitigation measures that would occur would be voluntarily undertaken by Energy Fuels. Doc. 140-1 at 23-25. But the procedures set forth in (b)(3) do not direct the Forest Service to undertake unilateral action or impose a memorandum of agreement on the mine operator, and Plaintiffs' arguments again fail to recognize the extensive efforts the Forest Service did undertake to consult with the tribes, efforts that were cut short when Plaintiffs filed this lawsuit. The Forest Service engaged in discussions with the tribes in order to address their concerns and sought to memorialize their obligations in a MOA.

The Forest Service's ongoing environmental analysis and tribal consultation over the past twenty years evidences its efforts to comply with the NHPA. In 1985, the Forest Service traveled to the Supai Village to meet with representatives from the Havasupai Tribe for two days. *Havasupai Tribe*, 752 F. Supp. at 1495. When Energy Fuels'

predecessor submitted its original plan in 1984, over 100 copies were sent to interested parties and several meetings were held to address public and tribal concern. *Id.* at 1476-77. More than 2,000 scoping letters were sent to the media and interested parties and a "public scoping session" was held in Flagstaff, Arizona in May 1985. *Id.* at 1477. In 1994, the Forest Service sent a letter to the Havasupai, Navajo, and Hopi Tribes requesting permission to conduct water sampling for ongoing monitoring of the site. A.R. 5955. In February 2008, twenty letters were sent to representatives from the Navajo Nation, Havasupai Tribe, Hopi Tribe, and Hualapai Tribe regarding projects in the Kaibab National Forest, including the Canyon Mine. A.R. 7518-86. Follow-up letters were sent in May. A.R. 7589-643. In August 2008, a Memorandum of Understanding was reached between the Forest Service and the Havasupai Tribe to establish areas in which the Forest Service would carry out tribal consultations. A.R. 7646-54. In January 2011, the Forest Service sent emails to representatives from the Sierra Club addressing further analysis of the Canyon Mine EIS. A.R. 8517. In October 2011, the Forest Service confirmed dates and sent an agenda for a meeting with Havasupai tribal elders. A.R. 10140. Proposed meetings were also negotiated with the Navajo Nation, the Pueblo of Zuni, and the Hopi Tribe. A.R. 10239, 10240, 10263. Conference calls were scheduled and held regarding the Canyon Mine with the Kaibab Band of Paiute Indians, Hualapai Tribe, Navajo Nation, Yavapai Prescott Indian Tribe, and Pueblo of Zuni. A.R. 10282; 10283; 10286; 10291; 10297; 10298. In fact, the Forest Service reviewed all of the documents prepared in connection with the 1986 ROD when it was deciding whether to apply (b)(1) or (b)(3) and noted that the "tribal scoping process used during development of the EIS probably exceed the standards of the time." A.R. 10611.

In summary, for some twenty years the Forest Service has been engaging in environmental analyses and consultation meetings with tribes and environmental organizations regarding the Canyon Mine. Recognizing the unique situation it faced when mining was to resume, the Forest Service reviewed the regulations, found that (b)(3) applied, and engaged in consultation with the tribes to "seek reasonable ways to

minimize the effects" of mining at the site. A.R. 10604. It did this by providing immediate notice of its decision, initiating consultation with tribes and environmental groups, and planning and attending meetings to discuss cultural and environmental impacts over several months. Had this lawsuit not intervened, the Forest Service and the tribes might well have executed a memorandum of agreement regarding appropriate ways to minimize effects on Red Butte. The Court cannot conclude that the Forest Service's application of the (b)(3) process was arbitrary, capricious, an abuse of discretion, or not in accordance with law.

VI. Conclusion.

The Court finds that Plaintiffs have failed to establish a NEPA violation in claim one or a NHPA violation in claims two and three, and that Plaintiffs lack prudential standing to assert claim four. The Court accordingly will grant summary judgment in favor of Defendants.

IT IS ORDERED:

1. Defendants' and Defendant-Intervenors' motions for summary judgment are **granted** on all counts. Docs. 146, 147.
2. Plaintiffs' motion for summary judgment is **denied**. Doc. 140.
3. The Clerk shall enter judgment and terminate this action.

Dated this 7th day of April, 2015.

David G. Campbell
United States District Judge

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA
PRESCOTT DIVISION

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERSITY; SIERRA CLUB; and HAVASUPAI TRIBE, Plaintiffs, vs. MICHAEL WILLIAMS, Forest Supervisor, Kaibab National Forest; and UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture, Defendants, and ENERGY FUELS RESOURCES INC.; and EFR ARIZONA STRIP LLC, Defendant-Intervenors.	Case No. 13-8045-PCT-DGC AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. Plaintiffs Grand Canyon Trust, Center for Biological Diversity, Sierra Club, and the Havasupai Tribe challenge Defendants Michael Williams, Forest Supervisor for the Kaibab National Forest, and the United States Forest Service's ("Forest Service") failure to comply with environmental, mining, public land, and historic preservation laws in relation to the Canyon Uranium Mine. The Canyon Mine is located about 6 miles south of Grand Canyon National Park in the Kaibab National Forest. The Forest Service originally approved the Canyon Mine in 1986 based on a Plan of Operations, a requirement of the Forest Service's mining regulations, and an Environmental Impact Statement (EIS) and Record of Decision (ROD), pursuant to the National Environmental Policy Act (NEPA). The Mine was completely shut down in 1992 when the uranium market dropped. At that time, the operator -- Energy Fuels Nuclear -- had constructed some of the Mine's support facilities, but had not dug the mineshaft or extracted any uranium ore. The Mine remained closed for 20 years.

2. On September 13, 2011, Denison Mines -- a new operator that purchased the Canyon Mine -- informed the Forest Service that it intended to resume mining operations at Canyon Mine. Subsequently, on June 25, 2012, the Forest Service determined that the Canyon Mine could re-open and begin mining operations based on the 1986 Plan of Operations and the 1986 EIS. Since completion of the 1986 EIS, significant new information and changed circumstances have emerged concerning the Mine's operations and adverse environmental impacts. Nonetheless, the Forest Service decided not to "supplement' the 1986 EIS, or require a modification of the 1986 Plan of Operations.3.

3. After initial approval of the Canyon Mine, the Forest Service formally designated Red Butte and surrounding areas as a Traditional Cultural Property. This designation means Red Butte is eligible for inclusion in the National Register of Historic Places and meets the definition of a "historic property" under the National Historic Preservation Act (NHPA). The Forest Service also recognized that Red Butte is a sacred site to the Havasupai Tribe. The Forest Service's 1986 approvals did not analyze the

Canyon Mine's potential effects to Red Butte as a historic property under the NHPA. The Forest Service recently commenced consultation with the Havasupai Tribe concerning the Canyon Mine's impacts to Red Butte, and claims that it intends to continue consultation. The Forest Service is refusing to undertake and complete a NHPA Section 106 Process relating to adverse impacts to the Red Butte TCP, including consulting with the Tribe for the purposes of developing a Memorandum of Agreement, prior to allowing Canyon Mine to restart mining operations, as required under NHPA and its regulations, 16 U.S.C. § 470f, 36 C.F.R § 800.13(b)(1).

4. In 2012, the U.S. Department of the Interior (Interior) withdrew over one-million acres of federal public lands in northern Arizona from mineral location and entry under the 1872 Mining Law (the "Withdrawal"). Interior's decision was designed to address the threats posed by uranium mining in and around Grand Canyon National Park. The Canyon Mine is located on lands subject to the Withdrawal. Due to the Withdrawal, mining cannot occur at Canyon Mine unless and until the Forest Service finds "valid existing rights" are present on the Mine's two mining claims. The Forest Service conducted an evaluation process and concluded that Canyon Mine contained valid existing rights on April 18, 2012. This valid existing rights determination authorized mining operations at Canyon Mine to resume. Prior to issuing its valid existing rights determination for the Canyon Mine, the Forest Service did not comply with NEPA and the NHPA. Further, the Forest Service's valid existing rights determination violated the Mining Law, the Forest Service 1897 Organic Act, Federal Land Policy and Management Act, the 2012 Withdrawal, and the Administrative Procedure Act ("APA") by not considering all costs associated with developing the Canyon Mine.

5. Plaintiffs seek declaratory relief that the Forest Service has violated, and remains in violation of, the aforementioned environmental, mining, public land, and historic preservation laws in relation to Canyon Mine, and injunctive relief directing operations to cease and enjoining the Forest Service from authorizing or allowing any further mining related activities at the Canyon Mine site pending compliance with the law.

JURISDICTION

6. Jurisdiction is proper in this Court under 28 U.S.C. § 1331, 5 U.S.C. § 701, et seq., and 28 U.S.C. § 1346. This action involves the United States as a defendant and arises under the laws of the United States, including NEPA, the NHPA, and the APA. An actual, justiciable controversy exists between Plaintiffs and Defendants. The requested relief is proper under 28 U.S.C. §§ 2201-02 and 5 U.S.C. §§ 705 and 706. The challenged agency actions and/or inactions are subject to this Court's review under the APA. 5 U.S.C. §§ 702, 704, and 706.

VENUE

7. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(e) because the Canyon Mine is located on federal lands within Arizona. The Grand Canyon Trust is headquartered in Flagstaff, Arizona. Plaintiff Center for Biological Diversity has offices in Tucson and Flagstaff, Arizona. Sierra Club has offices in Phoenix, Arizona. The reservation and ancestral homelands of the Havasupai Tribe are located in northern Arizona. Defendant U.S. Forest Service also has an office within the district. The Canyon Mine is located in Coconino County.

PARTIES

8. Plaintiff Grand Canyon Trust ("Trust") is a non-profit corporation headquartered in Flagstaff, Arizona with over 3,500 members. The mission of the Grand Canyon Trust is to protect and restore the forests and canyon country of the Colorado Plateau – its spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude. One of the Trust's goals is to ensure that the Colorado Plateau is a region characterized by vast open spaces with restored, healthy ecosystems, and habitat for all native fish, animals, and plants.

9. Plaintiff Center for Biological Diversity ("Center") is a non-profit corporation with more than 50,000 members dedicated to the preservation, protection, and restoration of biodiversity and ecosystems throughout the world. The Center works

through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

10. Plaintiff Sierra Club is a non-profit, public interest environmental organization with over 590,264 members, whose mission is to explore, enjoy and protect the planet. The Sierra Club has over 11,000 members in Arizona as part of its Grand Canyon Chapter.

11. Plaintiff Havasupai Tribe ("Havasupai Tribe") has resided on the banks of Havasu Creek in the Grand Canyon, on the upper Coconino Plateau and along the Colorado River since time immemorial. The Indian Claims Commission determined that the Havasupai Tribe's aboriginal area, which had been exclusively occupied by the Tribe, generally extended from the Colorado River on the north to the Bill Williams Mountains on the south, and from the Little Colorado River on the east to the Aubrey Cliffs and the plateaus around Havasu Creek on the west. Havasupai Tribe v. United States, 20 Ind. Cl. Comm. 210 (1968). The Canyon Mine site is located approximately in the center of this area. The Havasupai Reservation was originally established by executive order in 1880, and was modified in 1882. Additional lands were added in 1944 to protect springs that feed Havasu Creek, and, in the 1975 Grand Canyon Enlargement Act, the reservation was expanded to approximately 185,000 acres. That Act prohibits commercial mining on the reservation. The Havasupai Tribe has 696 tribal members. Native plants, animals, springs, and other sites in Havasu Canyon, the adjacent Coconino Plateau, and along the Colorado River traditionally have been important to the Havasupai Tribe for subsistence, religious, ceremonial, medicinal and other purposes, and for traditional trails and trading routes. The Havasupai Tribe is concerned about the impacts of Canyon Mine on its sacred sites and natural resources in the area.

12. Plaintiffs Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's members use and enjoy the Tusayan Ranger District of the Kaibab National Forest, including the public lands that are near the site of, or that will be affected by the operation of, the Canyon Mine. Plaintiffs' members use and enjoy these national forest lands for

hiking, fishing, hunting, camping, and photography, and for engaging in other environmental, vocational, scientific, educational, religious, cultural, aesthetic, and recreational activities. Plaintiffs' members intend to continue to use and enjoy these public lands frequently and on an ongoing basis in the future, including this spring, summer, and fall of 2014. The Forest Service's failure to comply with laws described herein injures Plaintiffs and their members because uranium mining activities at the Canyon Mine, as well as associated activities such as truck traffic and ore haulage across public lands, injures Plaintiffs' ability to derive these benefits. Plaintiffs also have a procedural interest in the proper management of these lands in full compliance with public land, environmental and historic preservation laws and regulations. The Forest Service's legal violations deny Plaintiffs the ability to adequately participate in the public review process. These violations also prevent Plaintiffs access to information concerning environmental impacts from the Canyon Mine.

13. The members of the Havasupai Tribe have long utilized the area where the Canyon Mine is situated for a variety of religious, traditional and cultural purposes, including the performance of traditional ceremonies, gathering of native plants and other materials, and for other purposes, and their right of access to these lands for such purposes is specifically protected by 16 U.S.C. § 228i(c). The tribal members' ability to continue these practices, especially with respect to the highly significant site of Red Butte, which is immediately adjacent to the Canyon Mine site, will be severely adversely impacted by the commencement of mining operations at the mine.

14. The environmental, vocational, scientific, educational, religious, cultural, aesthetic, recreational, and procedural interests of Plaintiffs and their members have been and will continue to be adversely affected and irreparably injured by the uranium mining and related activities at the Canyon Mine. These are actual, concrete injuries caused by the Forest Service's refusal to comply with environmental laws. Plaintiffs' injuries will be redressed by the relief sought.

15. Defendant Michael Williams is sued in his official capacity as the Forest Supervisor for the Kaibab National Forest. Mr. Williams is the responsible official who oversees, regulates and approves mining activities located in the Kaibab National Forest.

16. Defendant United States Forest Service is an agency within the United States Department of Agriculture, and is responsible for the lawful management of the federal lands within the Canyon Mine project area. The Forest Service approved the Canyon Mine in 1986 and again in 2012, and refuses to comply with applicable laws.

LEGAL BACKGROUND

I. 1872 Mining Law And National Forest Mining Laws

17. The 1872 Mining Law authorizes the exploration and extraction of valuable hardrock mineral deposits on lands belonging to the United States, subject to certain conditions. 30 U.S.C. §§ 22, 26. It states in pertinent part: "All valuable mineral deposits in lands belonging to the United States … shall be free and open to exploration and purchase." Id. § 22. Uranium is a hardrock mineral subject to the Mining Law.

18. Congress authorized the Secretary of the Interior to "withdraw" an area that is otherwise open under the Mining Law. 43 U.S.C. § 1714(a); 43 C.F.R. § 2300.0-5(h). Mining in a withdrawn area is prohibited unless the claimant has valid existing rights, which means that the claimant has discovered a "valuable mineral deposit" on each mining claim. According to the Forest Service's Manual, "valid existing rights must be verified where the lands in question have been withdrawn from mineral entry." Forest Service Manual Section 2818.3.

19. The Forest Service Organic Act authorizes the agency to promulgate rules and regulations for the national forests "to regulate their occupancy and use and to preserve the forests thereon from destruction." 16 U.S.C. § 551. The Forest Service promulgated mining regulations pursuant to the Organic Act to "minimize adverse environmental impacts" to, among other things, air quality, water quality, scenic values, fisheries and wildlife. 36 C.F.R. §§ 228.1, 228.8. The regulations also require companies to reclaim

Forest Service lands adversely impacted by mining activities and post reclamation bonds to ensure funds are available to complete reclamation activities. Id. §§ 228.8(g), 228.13.

20. Before mining may commence on Forest Service lands, an operator must submit and the Forest Service must approve a "plan of operations" "if the proposed operations will likely cause a significant disturbance of surface resources." 36 C.F.R. §§ 228.4(a)(3), 228.5. A plan of operations must include: the name of operators and their lessees, assigns and designees; map of operations' area, included access roads and resources to be disturbed; and detailed information about the type of operations, access roads, duration of operations, a measures to be taken to comply with environmental protection laws. Id. § 228.4(c). The Forest Service is required to comply with NEPA upon reviewing and approving a plan of operations. Id. § 228.4(f). Supplements and modifications of approved plans may be required when there are "unforeseen significant disturbance of surface resources." Id. §§ 228.4(e), 228.5(c).

II. The National Environmental Policy Act

21. NEPA requires federal agencies to consider the environmental consequences of their actions. 42 U.S.C. § 4321 et seq. NEPA ensures that the agency will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to a larger audience to ensure the public can play a role in both the decisionmaking process and the implementation of the agency's decision. NEPA directs federal agencies to comply with its procedures "to the fullest extent possible," at the earliest possible time. Id. § 4332.

22. NEPA requires federal agencies to prepare a detailed EIS for any major federal action that may significantly affect the quality of the environment. 42 U.S.C. § 4332(2)(C). Agencies must evaluate the direct and indirect impacts of proposed actions, as well as the cumulative impacts. 40 C.F.R. § 1502.16. An EIS must be prepared if there are substantial questions as to whether a proposed action may have a significant effect. NEPA regulations identify several "significance factors," including the degree to which the

proposed action may affect public health or safety, unique characteristics of the geographic area, the degree to which the effects are likely to be highly controversial, the degree to which the effects are highly uncertain or involve unknown risks, the degree to which the action is related to other actions with cumulatively significant impacts, the degree to which the action may adversely affect cultural or historic resources, and the degree to which the action may adversely affect threatened or endangered species. Id. § 1508.27(b). Agencies must insure the professional and scientific integrity of an EIS. Id. § 1502.24. Agencies must involve the public in their NEPA processes. Id. § 1506.6(a).

23. An agency that has prepared an EIS cannot simply rest on the original document. NEPA imposes a continuing duty on agencies to supplement previous environmental documents. An agency must prepare a Supplemental EIS if there are substantial changes to the action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the actions or its impacts. 40 C.F.R. § 1502.9(c). In determining whether new circumstances or information is "significant," agencies consider the NEPA "significance factors." Id. § 1508.27(b).

III. The National Historic Preservation Act And Executive Order 13007

24. Congress enacted the National Historic Preservation Act to protect "historic properties," which means prehistoric or historic districts, sites, buildings, structures or objects that are included in or eligible for inclusion in the National Register of Historic Places, from actions of federal agencies. The NHPA requires that federal agencies, prior to taking actions that might adversely affect any such property, work to develop ways to avoid or minimize such effects. Congress amended the NHPA in 1992, providing that "[p]roperties of traditional religious and cultural importance to an Indian tribe . . . may be determined to be eligible for inclusion on the National Register." 16 U.S.C. § 470a(d)(6).

25. Section 106 of the NHPA requires that any federal agency having authority over an "undertaking" "shall, . . . prior to the issuance of any license, . . . take into account the effect of the undertaking on any district, site, building, structure or object that is

included in or is eligible for inclusion in the National Register." 16 U.S.C. § 470f. The NHPA defines undertaking as including activities "requiring a Federal permit, license, or approval." Id. § 470w(7). The Advisory Council on Historic Preservation (ACHP) is charged with adopting regulations implementing Section 106. Id. § 470s. The ACHP promulgated regulations that prescribe the details of the Section 106 Process and make clear that the Section 106 Process must be completed before an agency proceeds with any undertaking. 36 C.F.R. § 800.1(c).

26. In a Section 106 Process, the agency: (1) determines whether a proposed undertaking has the potential to cause effects on a property that is included or eligible for inclusion in the National Register (36 C.F.R. § 800.3); (2) assesses, in consultation with the relevant State Historic Preservation Officer (SHPO) and any Indian tribe that attaches religious and cultural significance to the property, the potential adverse effects from the undertaking (id. § 800.5); and (3) in consultation with the SHPO, the tribe (or tribes), and, if it chooses to become involved, the ACHP, "develop[s] and evaluate[s] alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects" on the historic property, and, upon reaching agreement on such measures, executes a memorandum of agreement (MOA) embodying the terms of the agreement. Id. § 800.6. The undertaking must then be carried out in accordance with the terms of the MOA. Id. § 800.6(c).

27. In 1996, President Clinton adopted Executive Order 13007, which provides procedural and substantive protection for Native American sacred sites. Executive Order 13007 directs federal land management agencies, including the Forest Service, to:

> (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and
>
> (2) avoid adversely affecting the physical integrity of such sacred sites.

Executive Order 13007, § 1(a) (61 Fed. Reg. 26,771 (May 24, 1996)). Executive Order 13007 defines a "sacred site" as "any specific discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its

established religious significance to, or ceremonial use by, an Indian religious; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." Id. § 1(b)(iii). The Executive Order also requires that Federal land management agencies adopt procedures to ensure notice is provided of actions that may restrict access or use of sacred sites, or adversely affect sacred sites. Id. § 2.

FACTUAL ALLEGATIONS

28. The Canyon Mine is a uranium mine. It is located in the Kaibab National Forest, approximately six miles south of the Grand Canyon National Park boundary. Uranium ore at the Canyon Mine is located within a geologic formation known as a "breccia" (broken rock) pipe, a cylindrical formation that extends deep into the earth. Within these breccia pipes, uranium ore is found at depths between 900 and 1400 feet.

29. In the early 1980s, the Forest Service approved exploration activities on mining claims that discovered uranium ore at the Canyon Mine site. These exploration boreholes encountered groundwater at depths between 140 feet and 2300 feet. Exploration activities drained groundwater located beneath the Canyon Mine site, eliminating an estimated 1.3 million gallons per year from the region's springs that are fed by groundwater.

30. In 1984, Energy Fuels Nuclear submitted to the Forest Service a proposed Plan of Operations for the Canyon Mine. Energy Fuels Nuclear proposed to mine uranium on two unpatented mining claims for five to ten years. Energy Fuels Nuclear claimed that during this period, the Canyon Mine will generate 200 tons of uranium ore per day.

31. On September 26, 1986, the Forest Service signed the Record of Decision, approving a modified Plan of Operations and permitting mining operations at Canyon Mine. The Forest Service's approval authorized the underground mining of the uranium and the disturbance of approximately 17 acres for the Mine's surface facilities. A vertical mineshaft would be constructed adjacent to the breccia pipe, and a second adjacent vertical

shaft would be constructed for ventilation and safety purposes. Several horizontal shafts would access the ore in the breccia pipe.

32. The Forest Service's approval required that the transportation of uranium ore to a Utah uranium mill avoid Grand Canyon National Park. The Forest Service's approval included the construction of an overhead powerline adjacent to an access road from Highway 64 to the mine site. The approval also included a reclamation plan and a $100,000 reclamation bond. The reclamation plan and bond addressed surface disturbances. The approval also required monitoring and mitigation plans, including requirements for a surface water diversion structure and a monitoring water well drilled to a depth of 2500-3000 feet. The Forest Service permitted the construction of a wastewater pond to store water removed from the mineshaft and surface runoff. Prior to beginning mining operations, the Forest Service also required the collection of radiological air data for one year to establish a baseline.

33. The Forest Service's approval permitted the onsite stockpiling of "waste rock" and up to 20,000 tons of uranium ore. Waste rock is ore that contains uranium, but is deemed uneconomical by the operator. The Forest Service did not limit the amount of waste rock that could be stockpiled and stored onsite. The Forest Service's approval did not dictate the duration that waste rock could be stored in stockpiles onsite.

34. The NEPA process that accompanied Mine approval began in December 1984 when the Forest Service initiated a scoping process. In February 1986, the Forest Service completed the Draft EIS for the Canyon Mine. The public was provided an opportunity to submit comments on the Draft EIS. In August 1986, the Forest Service completed the Final EIS for the Canyon Mine. Energy Fuels Nuclear began preparing the mine site for operations after the Forest Service completed its approval process.

35. In 1988, the Havasupai Tribe challenged the Forest Service's approval of the Canyon Mine, challenging, among other things, the agency's environmental analysis in its EIS. In 1991, the Ninth Circuit Court of Appeals upheld the EIS.

36. In 1989, the U.S. Environmental Protection Agency ("EPA") promulgated new Clean Air Act regulations to regulate certain underground uranium mining operations. 54 Fed. Reg. 51,694 (Dec. 15, 1989), as amended at 65 Fed. Reg. 62,151 (Oct. 17, 2000). The regulations require operators to comply with specific standards for radon emissions and obtain a permit from EPA. 40 C.F.R. § 61, Subpart B.

37. In the early 1990s, the price of uranium dropped. Energy Fuels Nuclear closed Canyon Mine. The mineshaft had not been dug. Energy Fuels Nuclear did not inform the Forest Service that it was stopping operations.

38. The Orphan Mine is located near the Canyon Mine, on the south rim of the Grand Canyon, and less than a mile from Grand Canyon Village within Grand Canyon National Park. The Orphan Mine operated from 1959 to 1969. In 1995, elevated levels of uranium and other radioactive materials were detected within Horn Creek, which flows into the Colorado River from the south rim of the Grand Canyon. The mine continues to leach radioactive materials into Horn Creek. The Park Service warns park visitors to not drink the water within Horn Creek "unless death by thirst is the only other option." The National Park Service is currently undertaking remedial investigations and cleanup activities of the Orphan mine pursuant to the Comprehensive Environmental Response, Compensation, Liability Act. Soil radiation levels around the Orphan Mine site are 450 times higher than normal. The remediation costs for the Orphan Mine' surface area are estimated at $15 million. The costs associated with remediating Horn Creek and the subsurface are unknown.

39. In 1996, the U.S Fish and Wildlife Service introduced the California condor to northern Arizona. The condor is listed as an "endangered" species under the Endangered Species Act, 16 U.S.C. § 1531, et seq. The condor is attracted to mining structures and water pits typically maintained at mine sites like the Canyon Mine. Condors are known to use the Canyon Mine site for foraging and the Canyon Mine site is located within an area designated as a condor management area.

40. In 1997, Dennison Mines acquired the Canyon Mine from Energy Fuels Nuclear. At that time, Denison Mines informed the Forest Service that operations were on "standby status."

41. In 2005, the United States Geological Survey completed the Report, Hydrogeology of the Coconino Plateau and Adjacent Areas, Coconino and Yavapai Counties, Arizona. Before this study, "little was known about the regional ground-water flow systems of the Coconino Plateau study area." The study demonstrated that the deep regional "R-aquifer" (Redwall-Muav Aquifer) underlies the entire Coconino Plateau, and is recharged by faults, fissures, fractures and other geologic formations in the subsurface, including via perched smaller aquifers that lie above the R-aquifer. The study also showed elevated levels of uranium contamination -- radioactive constituents and alpha particles -- in creeks, seeps and springs near former mine sites. The Canyon Mine site overlays the R-aquifer.

42. In 2008, the Forest Service reviewed water resources on the Coconino Plateau, including groundwater. The Forest Service determined that fractured bedrock provides conduits for downward movement of water and groundwater recharge. The agency's review also determined that local communities depend more on groundwater as their water sources than they did in the 1980s.

43. In March 2008, the Grand Canyon Watersheds Protection Act was introduced in Congress. This proposed legislation would permanently withdraw over one million acres of public and national forest lands in the vicinity of Grand Canyon National Park from location, entry, and patent under the Mining Law, subject to "valid existing rights." To date, this legislation has not been passed in Congress. The Canyon Mine is located on public lands that are covered by the Grand Canyon Watersheds Protection Act.

44. County, State, and Tribal governments have expressed support for protecting the Grand Canyon watershed from uranium mining. The Coconino County Board of Supervisors passed a resolution on February 5, 2008, opposing uranium development on lands in the proximity of the Grand Canyon National Park and its watersheds. The

Governor of Arizona wrote a letter to the Secretary of Interior on March 6, 2008, requesting the withdrawal of lands around the Grand Canyon from uranium development. The Arizona Department of Game and Fish wrote to Senator McCain on March 17, 2008, expressing concerns regarding the impacts to wildlife from proposed uranium development on lands in the proximity of Grand Canyon National Park, and identifying the Tusayan Ranger District as one of the areas of greatest concern. The Tribal governments in the region, including Plaintiff Havasupai Tribe (which in 2005 amended its constitution to prohibit any exploration for or mining of uranium on its reservation), were unanimous in their support for a withdrawal of these lands in the Grand Canyon watershed from uranium development.

45. On June 25, 2008 the U.S. House of Representatives' Committee on Natural Resources issued an "emergency resolution" pursuant to Section 204(e) of the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1714(e) and 43 C.F.R. § 2310.5 ("Emergency Resolution"). The Emergency Resolution directed the Secretaries of Interior and Agriculture to immediately withdraw the 1,068,908 acres of Federal lands subject to the Grand Canyon Watersheds Protection Act of 2008 from all forms of location and entry under the Mining Law for up to three years, subject to valid existing rights. The Emergency Resolution sought to maintain the status quo until Congress fully considers the Grand Canyon Watersheds Protection Act. The Canyon Mine is located on lands that are subject to the Emergency Resolution.

46. On July 21, 2009, after "carefully considering the issue of uranium mining near Grand Canyon National Park," the Department of Interior issued a Segregation Order and Proposed Withdrawal ("Proposed Withdrawal"). The Proposed Withdrawal removed approximately one million acres of federal public lands in the Grand Canyon watershed from location and entry under the Mining Law for two years, subject to valid existing rights, while the Department of Interior evaluated whether to withdraw some or all of these lands from new mining claims for 20 years. 74 Fed. Reg. 35887 (July 21, 2009). The Department of Interior reasoned that the Grand Canyon is an iconic American landscape

and World Heritage Site, which encompasses 1.2 million acres on the Colorado Plateau; currently draws 4.4 million visitors each year; is home to numerous rare, endemic, and specially-protected plant and animal species; and contains vast archeological resources and sites of spiritual and cultural importance to American Indians. The Secretary of Interior recognized that the Colorado River and its tributaries flow through the Grand Canyon and supply water to agricultural, industrial, and municipal users, including the cities of Tucson, Phoenix, Las Vegas, Los Angeles, and San Diego. The Secretary of Interior stated in a press release that the Proposed Withdrawal is necessary to "ensure that we are developing our nation's resources in a way that protects local communities, treasured landscapes, and our watersheds[.]" The Proposed Withdrawal covered the same lands identified in the Emergency Resolution and the Grand Canyon Watersheds Protection Act, and includes the Canyon Mine.

47. On August 31, 2009, the State of Arizona Department of Water Quality issued a groundwater permit to Denison. This permit covered adverse impacts to groundwater encountered during mining operations, including the construction of the mine shaft.

48. In 2010, the United States Geological Survey (USGS) issued a Report, "Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona." In this USGS evaluation, uranium and arsenic were two elements consistently detected in the areas disturbed by uranium mining in quantities above natural background levels. Samples from 15 springs and five wells in the region contained dissolved uranium concentrations greater than EPA's maximum allowed contaminants for drinking water. The USGS found that Horn Creek and Salt Creek Spring contained elevated levels of radioactivity from the Orphan Mine. The USGS further found elevated uranium concentrations within the Canyon Mine monitoring and water well. This USGS report also notes that fractures, faults, sinkholes, and breccia pipes occur throughout the area and provide pathways for downward migration of surface water and groundwater. The

USGS report further found that floods, flash floods, and debris flows occur in the region and can transport substantial volumes of trace elements and radionuclides.

49. The Canyon Mine site is situated in a small meadow located just four miles north of a prominent topographical feature known as Red Butte. Red Butte is one of the most important sites in the religious and cultural tradition of plaintiff Havasupai Tribe, and it also holds major religious significance for the Hopi, Navajo, Zuni and Hualapai Tribes. The Havasupai refer to it as "the Landmark," and it plays a central part in their origin story. The meadow where the mine site is located is also considered to be an extremely sacred site by the Havasupai, whose significance is tied directly to that of Red Butte. In 2010, the Forest Service determined that Red Butte warranted designation as a Traditional Cultural Property (TCP), which made it eligible for listing on the National Register, because of its historic, cultural, and religious significance to the Havasupai and the other Indian tribes. The Canyon Mine site is within the boundaries of the Red Butte TCP. The Forest Service TCP determination reflects the agency's awareness that the mine site is considered sacred by the Havasupai. The meadow was determined to be a "contributing element" to the TCP. Red Butte and the meadow are not only important to the Havasupai as locations that are prominent in their religious beliefs, but the Havasupai people have come to these places and utilized them for traditional ceremonies and other activities for centuries, and their ability to continue to use these sites for traditional practices is vital to the continuation of their traditional religious practices.

50. By letters dated August 22, 2011 and September 13, 2011, Denison Mines notified the Kaibab National Forest that it intended to start operations at the Canyon Mine under the original Plan of Operations and NEPA EIS and Record of Decision. The Canyon Mine is one of several uranium mines in the region that had been previously approved, closed due to market conditions, and is now intending to start again because the market price for uranium increased.

51. In October 2011, the Department of Interior's Bureau of Land Management issued the Final EIS that analyzed the Proposed Withdrawal. Interior's preferred alternative was to withdraw over a millions acres of public lands from mining.

52. On lands covered by the Withdrawal, the Forest Service may only allow mines to proceed if the claimant has a "valid existing right." In late October 2011, the Forest Service began a process to evaluate whether the two claims that make up the Canyon Mine contain "valuable mineral deposits," such that valid existing rights are associated with the Canyon Mine and it would not be subject to the Withdrawal. As part of this process, the Forest Service visited the mine site, Denison's offices, other Denison mines in the region, and the White Mesa uranium mill in Utah.

53. On December 1, 2011, Denison received a "General" Aquifer Protection Permit from the State of Arizona Department of Water Quality. This permit covered discharge from the Canyon Mine's ore stockpile.

54. On January 9, 2012, the Department of Interior finalized the Withdrawal after issuing the Record of Decision. The Withdrawal prohibits location and entry under the Mining Law, subject to valid existing rights, of approximately 1,006,545 acres of federal land in Northern Arizona for a 20-year period. The Withdrawal includes the public lands where the Canyon Mine is located.

55. The Withdrawal was based in part on the significant risks to groundwater and the water supply to millions of people in the Southwest from uranium mining in the Grand Canyon watershed. The Withdrawal EIS acknowledges that there are uncertainties regarding subsurface water movement and radionuclide migration. The EIS explained that the risks associated with uranium mining were extremely significant, although the probability that the risks would occur was low. Through the Withdrawal, the Department of Interior determined that a twenty-year withdrawal will allow for additional data to be gathered and more thorough investigation of groundwater flow paths, travel times, and radionuclide contributions from mining. The Department of Interior also determined that it was likely that the potential impacts to Tribal resources could not be mitigated. According

to the Department of Interior, any mining within the sacred and traditional places of Tribal peoples may degrade the values of those lands to the Tribes that use them.

56. On January 26, 2012, the Forest Service completed a review under the Endangered Species Act of the Canyon Mine because the California condor had been introduced to the Canyon Mine project area in 1996. The Forest Service concluded that the Canyon Mine may affect the California condor, but was not likely to "jeopardize" the condor's existence in the area. The Forest Service did not provide public notice or an opportunity to provide public input on this evaluation.

57. On February 9, 2012, the U.S. Fish and Wildlife Service responded to the Forest Service's evaluation of the Canyon Mine's impacts on the California condor. The Fish and Wildlife Service noted that the Forest Service did not provide a full description of the transportation aspects of the Canyon Mine sufficient for the Fish and Wildlife Service to determine the entire extent of the action area. The Fish and Wildlife Service recommended that a number of "conservation measures" be incorporated into the Canyon Mine project to improve protection for condors, including covering the wastewater ponds located on the Mine site and taking actions to prevent condor use of the Mine's powerlines for perching and foraging. These measures were not included in the Plan of Operations. The Fish and Wildlife Service did not provide public notice or an opportunity to provide public input on its review and recommendations.

58. On April 18, 2012, the Forest Service completed its validity examination for the Canyon Mine. The Forest Service concluded that a discovery of a valuable mineral deposit existed within the two Canyon Mine claims, known as claims Canyon 74 and Canyon 75. According to a summary published on the agency's website, "under present economic conditions, the uranium deposit on the claims could be mined, removed, transported, milled and marketed at a profit." But for the Forest Service's April 18, 2012 validity determination, mining could not occur at Canyon Mine due to the Withdrawal. The Forest Service did not provide public notice or an opportunity to provide public input concerning the agency's validity determination for the Canyon Mine.

59. The Forest Service has developed a Forest Plan for the Kaibab National Forest pursuant to the National Forest Management Act. Among other things, the Forest Plan is designed to "protect[] and preserv[e] the inherent right of freedom of American Indians to believe, express, and exercise their traditional religions." The Forest Plan includes provisions applicable to the Red Butte Traditional Cultural Property, such as

> (1) [c]omply with various legal mandates related to the management of heritage resources;
>
> (2) [c]onsult with Indian tribes to obtain tribal advice and input in the development and implementation of projects proposed in areas of known socio-cultural or religious significance; and,
>
> (3) [c]onsider rejection, denial, redesign or relocation of proposed resource uses or projects to allow in-place preservation of heritage resources in the following circumstances ... (c) Cultural values derive primarily from qualities other than research potential, and those values are fully realized only when the cultural remains exist undisturbed in their original context.

60. In April 2012, the Forest Service issued a draft of a Revised Forest Plan for the Kaibab National Forest. The draft identifies the Red Butte Management Area, which includes the Red Butte geologic formation of and the larger Red Butte Traditional Cultural Property. The Forest Service identifies the following "guidelines" for this Management Area:

> (1) Activities should be coordinated with tribes to minimize impacts to ceremonial activities;
>
> (2) Temporary closures should be implemented upon request by the tribes to provide privacy for traditional activities, and;
>
> (3) Commercial use such as outfitter guides, plant collection, and firewood cutting/collection in the Red Butte MA should not be permitted.

The Forest Service also identified desired future conditions for the Red Butte TCP:

> (1) Traditional practitioners have access to TCPs for ceremonial use and privacy to conduct ceremonies;
>
> (2) TCPs are preserved, protected, or restored for their cultural importance and are generally free of impacts from other uses;
>
> (3) The significant visual qualities of TCPs are preserved consistent with the TCP eligibility determination, and;
>
> (4) Traditional use of TCPs by the associated cultural groups is accommodated.

61. On June 6, 2012, the National Park Service (Park Service) issued "Issues and Concerns Regarding Proposed Groundwater Developments Near the South Rim, Grand Canyon National Park," a report prepared by the Grand Canyon National Park, Division of Science and Resource Management. The Park Service connected groundwater withdrawal with Grand Canyon's seeps and springs, and emphasized the significance of groundwater resources to the region's water supply and cultural resources. The Park Service Report also concluded that groundwater recharge occurs through faults, fractures and breccia pipes because other geological forms have low permeability. The Park Service further recognized the recent studies showing rapid groundwater recharge.

62. On June 25, 2012, the Forest Service completed its "Canyon Uranium Mine Review." This review was prepared without public input or involvement. The Forest Service determined that no modification of the 1984 Plan of Operations was required, "and that there was no unforeseen significant disturbance of surface resources." The Forest Service also determined that no supplemental environmental analysis under NEPA was required.

63. In the Canyon Uranium Mine Review, the Forest Service also considered whether "there is any further federal undertaking subject to NHPA Section 106 compliance required before Canyon Mine resumes operation [], and if there is new information or changed circumstances to the original analysis [sic]." The agency concluded that there were no new "undertakings" because proposed mining operation would occur in accordance with the previously approved Plan of Operations, and that the 1986 Section 106 Process had been completed in accordance with applicable law and standards. The Forest Service therefore determined that treatment of Red Butte should be governed by 36 CFR § 800.13, which applies to "Post Review Discoveries," and that the Mine's impacts to Red Butte are "unanticipated effects." The Forest Service made this finding despite the fact that it was aware of such effects for at least 25 years. The Forest Service also concluded that, because some work at the Canyon Mine site occurred 20 years earlier, consultation with the tribes should be governed by 36 CFR § 800.13(b)(3). This determination allowed the

Forest Service to avoid a full-scale Section 106 Process under 36 CFR § 800.6, including the required consultation and development of an MOA that dictates the necessary steps to minimize adverse effects on Red Butte, before mining operations at the Canyon Mine resumed. The Forest Service's Canyon Uranium Mine Review did not re-open the 1986 Section 106 Process.

64. On June 25, 2012, the same day that it gave the go-ahead to Denison Mines to restart the development of Canyon Mine, Defendant Michael Williams sent a letter to Don Watahomigie, Chairman of the Havasupai Tribe. The letter informed the Chairmen that the mine operator had notified the Forest Service that it intended to restart the mine. The Forest Service summarized the agency's Canyon Uranium Mine Review regarding potential impacts to Red Butte. Williams acknowledged that impacts to Red Butte had not been assessed in the prior Section 106 Process. Williams informed the Chairmen that the Red Butte TCP designation was a "new discovery" under the NHPA and mining at Canyon Mine would cause "unanticipated effects" to Red Butte. Nonetheless, Williams noted that the Forest Service decided that there was no reason to conduct a new Section 106 Process. Williams invited the Chairman to take part in a consultation "to discuss the project and begin to identify the actions to address the adverse effects to the Red Butte TCP."

65. In undated letter sent on or about July 11, 2012, Chairman Watahomigie informed the Forest Service that the tribe wanted to move forward with a Section 106 Process. In a subsequent letter to Forest Tribal Liaison Michael Lyndon on July 23, 2012, the Chairmen stated the tribe's position that construction had not yet "commenced" at the mine site and, pursuant to 36 C.F.R. § 800.13(b)(1), consultation must take place in accordance with 36 C.F.R. § 800.6. He also stated that the Plan of Operations for the mine should be modified so as to incorporate measures to minimize adverse impacts to Red Butte.

66. By letter dated August 1, 2012, the ACHP advised the Forest Service that it did not believe it would be appropriate for the Forest Service to address impacts to Red Butte under § 800.13(b)(3), and that "consultation in accordance with Section 800.13(b)(1)

to develop and execute a Section 106 agreement is the appropriate way forward." Section 800.13(b)(1) directs the agency to proceed with consultations with the tribes, the Arizona SHPO and, if it participates, the ACHP, to develop an MOA, under § 800.6, to address measures to avoid or mitigate adverse impacts to historic properties. The Arizona SHPO also advised the Forest Service that it believed that proceeding under § 800.6 was required by NHPA in this situation. The Forest Service disregarded the views of the ACHP and the SHPO.

67. Since then, only one consultation meeting has occurred, at which the Forest Service made clear that it had no intention of requiring any modifications to the Plan of Operations. The Forest Service stated that the mine operator would implement any agreed-on mitigation measures "voluntarily." The Forest Service claims the consultation process will proceed. Ground-disturbing activities at the Canyon Mine site have begun and are continuing.

68. On June 29, 2012, the Canadian company Energy Fuels Resources acquired the Canyon Mine and other uranium mines in the Grand Canyon Watershed from Denison Mines. Energy Fuels also purchased the White Mesa mill in Blanding, Utah from Denison Mines.

69. On September 13, 2012, the Forest Service issued to Energy Fuels a "Commercial Fuelwood Permit" for the "Canyon Mine Power Line Maintenance Project." Energy Fuels required the permit to clear trees that were impeding the powerline that supplied energy to the mine site. This permit expired on December 15, 2012. Numerous old growth ponderosa pine trees were cut during the fall of 2012 pursuant to this Forest Service permit. The Forest Service did not prepare any NEPA analysis, provide public notice, or allow for public comment prior to issuing this permit.

CLAIMS FOR RELIEF

First Claim
Violation of National Environmental Policy Act - Approving Mining On Lands Subject to Withdrawal

70. Plaintiffs hereby incorporate by reference all preceding paragraphs.

71. On January 9, 2012, the Secretary of Interior issued the Withdrawal. The Withdrawal includes public lands managed by the Forest Service, within the Kaibab National Forest. The Canyon Mine is within the Kaibab National Forest, and the area of the Withdrawal.

72. Mining claims with "valid existing rights" are exempt from the Withdrawal. 77 Fed. Reg. 2,563 (Jan. 18, 2012) (proclaiming withdrawal is "[s]ubject to existing rights"). A valid existing right requires finding that the relevant claims contain a "valuable mineral deposit." Absent a valuable mineral deposit, the claim lacks valid existing rights and mining operations may not occur within the area of the Withdrawal. According to the Forest Service Manual at § 2803.5, the agency must "[e]nsure that valid existing rights have been established before allowing mineral or energy activities in congressionally designated or other withdrawn areas." The Forest Service evaluates and determines a claim's validity through a Mineral Report.

73. The Forest Service approved the Canyon Mine in 1986 through a plan of operations. That Forest Service's approval did not include a finding that the Mine's claims contain valid existing rights. The Forest Service did not evaluate or determine whether or not a valuable mineral deposit existed within the Canyon Mine claims prior to the agency's 1986 Record of Decision for the Canyon Mine, or at any time prior to the Withdrawal.

74. In 2011, the Forest Service began an administrative process to determine whether the Canyon Mine's claims contain valid existing rights. On April 18, 2012, the Forest Service completed its valid existing rights determination with a Mineral Report. In the Report, the agency stated that:

> The purpose of this investigation is to conduct a valid existing rights determination on the subject claims. It is Forest Service policy (FSM 2803.5) to only allow operations on mining claims within a withdrawal that have valid existing rights (VER). This VER determination was prompted by a request to resume mining operations at Denison's Canyon Mine, within the Canyon 74-75 claim block. … The applicable dates to establish 'validity' in this particular case are July 21, 2009 (the initial segregation date), and the date of the mineral exam …

In the Report, the Forest Service determined that the two mining claims associated with the Canyon Mine contain a valuable mineral deposit. In that determination, the Forest Service

concluded that under present economic conditions, the claims could be mined, removed, transported, milled and marketed at a profit. The Forest Service has discretion to consider whatever costs are appropriate in evaluating whether claims could be mined, removed, transported, milled and marketed at a profit.

75. Based on this valid existing rights determination, the Forest Service approved the Canyon Mine notwithstanding the Withdrawal. The Forest Service's valid existing rights determination was a pre-requisite for mining operations to resume at the Canyon Mine due the Withdrawal.

76. The Forest Service's April 18, 2012 valid existing rights determination for the Canyon Mine is a major federal action significantly affecting the environment. See e.g., 42 U.S.C. 4332(2)(C); 40 C.F.R. §§ 1508.18, 1508.27. The Forest Service was required to involve the public, consider alternatives, and evaluate the potential environmental impacts resulting from the validity determination for the Canyon Mine in an environmental assessment or environmental impact statement, pursuant to NEPA. Id; 40 C.F.R. §§ 1501.4, 1502.4, 1506.6.

77. The Forest Service's failure to comply with NEPA before and in connection with its April 18, 2012 valid existing rights determination violated NEPA and constitutes agency action that has been unlawfully withheld and unreasonably delayed, within the meaning of the judicial review provisions of the APA. 5 U.S.C. § 706(1). This violation and inaction renders its April 18, 2012 valid existing rights determination arbitrary, capricious, an abuse of discretion, not in accordance with law, without observance of procedure required by law, and in excess of statutory jurisdiction, authority, or limitations, within the meaning of the judicial review provisions of the APA. 5 U.S.C. § 706(2).

Second Claim
Violation of National Historic Preservation Act - Approving Mining On Lands Subject to Withdrawal

78. Plaintiffs hereby incorporate by reference all preceding paragraphs.

79. The Forest Service's valid existing rights determination is an undertaking under Section 106 of the NHPA. Mining at the Canyon Mine under the terms of the Withdrawal could not occur but for the Forest Service's valid existing rights determination.

80. In 2010, Red Butte was designated a TCP. A TCP is eligible for inclusion in the National Register of Historic Places. Red Butte is a place of enormous cultural and religious significance to Plaintiff Havasupai Tribe, and is also of religious significance to other Indian tribes in the region.

81. Mining at the Canyon Mine will change the character and use of the Red Butte TCP, and will adversely impact the Red Butte TCP.

82. The Forest Service did not initiate and complete any NHPA Section 106 Process addressing the Canyon Mine's adverse impacts to the Red Butte TCP before approving mining activities through valid existing rights determination.

83. This failure to initiate and complete a Section 106 Process violated the NHPA. See 16 U.S.C. § 470f; 36 C.F.R. § 800.1(a) & (c). The Forest Service's failure to comply with the NHPA before and in connection with its April 18, 2012 valid existing rights determination constitutes agency action that has been unlawfully withheld and unreasonably delayed, within the meaning of the judicial review provisions of the APA. 5 U.S.C. § 706(1). This violation and agency inaction render the Forest Service's valid existing rights determination arbitrary, capricious, an abuse of discretion, not in accordance with law, without observance of procedure required by law, and in excess of statutory jurisdiction, authority, or limitations, within the meaning of the judicial review provisions of the APA. Id. § 706(2).

Third Claim
Violation of National Historic Preservation Act – Failure To Complete Section 106 Process

84. Plaintiffs hereby incorporate by reference all preceding paragraphs.

85. The Forest Service conducted a Section 106 Process in connection with approving the 1986 Plan of Operations for Canyon Mine. In that Section 106 Process, the Forest Service did not analyze impacts to Red Butte.

86. Since the original Section 106 Process, the NHPA was amended so as to include tribal cultural and religious sites as "historic properties" that are eligible for listing on the National Register. Since the original Section 106 Process, the Forest Service designated Red Butte as a TCP. As a TCP, Red Butte is now eligible for inclusion on the National Register of Historic Places. The designation of Red Butte as a TCP is newly discovered information. Mining activities will cause adverse effects to the Red Butte TCP.

87. Section 106 of the NHPA imposes a continuing duty on the Forest Service. In 2011, when the Forest Service was notified that operations at Canyon Mine would be restarted, no construction activities had occurred at the mine site for 20 years. Before operations were commenced at Canyon Mine, the Forest Service was obligated to reopen and complete a Section 106 Process, and consider the Mine's likely adverse impacts on the Red Butte TCP and develop measures to avoid, minimize or mitigate those impacts. Construction activities to prepare Canyon Mine for mining operations were initiated in the fall 2012. The Forest Service has not initiated or completed a Section 106 Process regarding impacts to the Red Butte TCP.

88. The Forest Service's failure to initiate and complete a Section 106 Process before construction activities began violated NHPA, 36 C.F.R. §§ 800.13(c) & (b)(1), and constitutes agency action that has been unlawfully withheld and unreasonably delayed. 5 U.S.C. § 706(1).

Fourth Claim
Violation of Mining Law, Federal Land Policy and Management Act, Withdrawal, 1897 Organic Act, and Administrative Procedure Act – Forest Service Valid Existing Rights Determination For Mining On Lands Subject to Withdrawal

89. Plaintiffs hereby incorporate by reference all preceding paragraphs.

90. In its valid existing rights determination for the Canyon Mine, the Forest Service concluded that mining claims at Canyon Mine contain a valuable mineral deposit, and thus mining operations could proceed notwithstanding the Withdrawal. The Forest Service's analysis was based on the "prudent-person test" (as refined by the "marketability test"), which requires that "there be, at the time of discovery, a market for the discovered material that is sufficiently profitable to attract the efforts of a person of ordinary

prudence." Stated another way, the "discovered mineral deposits are of such a character that a person of ordinary prudence would be justified in further expenditure of his labor and means with a reasonable prospect of success, in developing a valuable mine."

91. In the valid existing rights determination, the Forest Service concluded that the mining claims are so profitable as to satisfy the prudent person/marketability tests. In this determination, the Forest Service failed to consider all relevant factors including costs related to Canyon Mine approvals, operations and reclamation. For example, the Forest Service did not include reclamation costs. The Forest Service did not include the costs of groundwater monitoring. The Forest Service did not consider the costs of remediating contamination of the Colorado River and groundwater caused by mining activities. The Forest Service did not evaluate the costs associated with expanding the wastewater pond, clearing the utility corridor of trees, or minimizing adverse impacts of the Mine on public land resources, including Tribal resources such as the Red Butte TCP or the California condor. The Forest Service did not include all costs associated with compliance with environmental and other applicable laws, including the Clean Air Act radon emissions regulations. The Forest Service did not account for the costs of potential mitigation measures. These costs are relevant to the profitability of Canyon Mine's mineral deposits, and must be fully considered to determine whether each claim contains the requisite discovery of a valuable mineral deposit.

92. The Forest Service's valid existing rights determination was arbitrary, capricious, an abuse of discretion, not in accordance with law, without observance of procedure required by law, and in excess of statutory jurisdiction, authority, or limitations, within the meaning of the judicial review provisions of the APA. 5 U.S.C. § 706(2).

RELIEF REQUESTED

WHEREFORE, Plaintiffs respectfully request that this Court:

A. Declare that the Forest Service is in violation of NEPA, the NHPA, the Organic Act, FLPMA, the 2012 Withdrawal, the 1872 Mining Law, the implementing regulations and policies of these laws, and the APA;

B. Set aside and vacate any approvals or authorizations of exploration and mining operations at the Canyon Mine and related decisions and activities;

C. Enjoin the Forest Service from authorizing or allowing any further uranium exploration or mining-related activities at the Canyon Mine unless and until the Forest Service fully complies with all applicable laws;

D. Award to Plaintiffs their costs, expenses, expert witness fees, and reasonable attorney fees pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412 and the NHPA, 16 U.S.C. § 470w-4; and

E. Grant Plaintiffs such further relief as may be just, proper, and equitable.

Respectfully submitted,

Dated: April 22, 2014

/s/ Marc D. Fink
Neil Levine
Marc D. Fink
Roger Flynn
Richard Hughes

Attorneys for Plaintiffs

CERTIFICATE OF SERVICE

I certify that on April 23, 2014, I filed a true and exact copy of Plaintiff's AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF with the Court's CM/ECF system, which will generate a Notice of Filing and Service on the following:

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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

GRAND CANYON TRUST, *et al.*, Plaintiffs, v. MICHAEL WILLIAMS, Forest Supervisor, Kaibab National Forest, *et al.* Defendants.	Case No. CV-13-8045-PCT-DGC **DECLARATION OF HAROLD R. ROBERTS IN SUPPORT OF MOTION TO INTERVENE** (Assigned to The Honorable David G. Campbell)

I, Harold R. Roberts, declare under penalty of perjury, pursuant to 28 U.S.C. § 1746, that the following statements are true and correct.

1. I am the Executive Vice President and Chief Operating Officer of Energy Fuels Resources (USA) Inc. ("EFR USA") and am authorized to prepare and submit this declaration in support of the Motion to Intervene filed by EFR USA and its affiliate EFR Arizona Strip LLC ("EFR Arizona") (EFR USA and EFR Arizona, together "EFR").

2. I received a Bachelor of Science in civil engineering from Montana State University in 1975. I am currently a registered professional engineer.

3. I have been employed in and by the uranium industry since 1975. I have worked for Energy Fuels Nuclear, Inc. ("EFN"), EFR USA (including when it was

known as Denison Mines (USA) Corp.), and private consulting firms. Through these work experiences, I have gained substantial knowledge and experience in the exploration, development, and operation of uranium deposits, mines, and mills in the United States. I also am familiar with most aspects of mining and mine site rehabilitation and reclamation.

4. I have experience with and personal knowledge of uranium deposits and mines in Arizona, including the Canyon Mine that is the subject of this lawsuit.

5. I gained personal knowledge of the Canyon Mine through my current employment with EFR USA (including when it was known as Denison Mines (USA) Corp.), as well as through my past employment and involvement with EFN, which had an interest in the Canyon Mine.

6. The Canyon Mine is an underground breccia pipe uranium mine.

7. EFR Arizona currently owns the unpatented mining claims underlying the Canyon Mine, which is in Section 20, Township 29 North, Range 3 East, Gila & Salt River PM, Coconino County, Arizona, approximately six miles southeast of Tusayan, Arizona. The Canyon Mine is located on public land managed by the United States Forest Service ("USFS").

8. EFR Arizona paid valuable consideration to acquire the Canyon Mine unpatented mining claims.

9. USFS approved, and EFR's predecessors in interest at the Canyon Mine (EFN and previous owners) conducted, exploration activities on the Canyon Mine unpatented mining claims in the late 1970s and early 1980s. In October 1984, EFN submitted a proposed Plan of Operations for the Canyon Mine. USFS spent nearly two years conducting a comprehensive environmental review of the potential impacts from the Canyon Mine in an Environmental Impact Statement ("EIS"). In September 1986, based on the final EIS, USFS issued a Record of Decision ("ROD") approving the operation of the Canyon Mine under the proposed Plan of Operations, with certain modifications (the "Canyon Plan").

10. EFR USA is the operator of the Canyon Mine and the permittee under the Canyon Plan, and is authorized to develop and operate the Canyon Mine consistent with its terms.

11. During the nearly five years following USFS's approval of the Canyon Plan, EFN developed and completed the area of operations on the surface of the Canyon Mine site (*e.g.*, the main building, head frame, and evaporation pond, and collared and sunk the mine shaft to a depth of approximately fifty feet) in accordance with the Canyon Plan. In 1992, due to depressed uranium prices, the mine was put on standby status.

12. In 1997, International Uranium (USA) Corporation and IUC Arizona Strip, LLC (renamed Denison Mines (USA) Corp. and Denison Arizona Strip, LLC, respectively, in 2007 following a merger (together, "Denison")) purchased the Canyon Mine, the Canyon Plan, and the underlying unpatented mining claims from EFN.

13. From 1992 to 2011, EFN and Denison operated and maintained the Canyon Mine on standby status pursuant to the Canyon Plan and USFS's surface management regulations for mining activities.

14. In August 2011, Denison notified USFS of its intent to remove the Canyon Mine from standby status, and to resume active mining under and consistent with the Canyon Plan. In that notification, Denison confirmed to USFS that mining activities would not differ from those approved under the Canyon Plan, and that there would not be any unforeseen disturbances to surface resources or any other unforeseen impacts not previously reviewed by USFS in the EIS or otherwise in connection with USFS's approval of the Canyon Plan in 1986.

15. In July 2012, following a corporate merger and corporate spin-off transaction, Denison Mines (USA) Corp. and Denison Arizona Strip, LLC remained the owners and operators of the Canyon Mine and its related assets, but were renamed Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC, respectively.

16. Since 1986, EFN and EFR (including when it was known as Denison and International Uranium) developed and operated the Canyon Mine consistent with the terms of the Canyon Plan and all applicable state and federal laws.

17. EFR has spent considerable time and resources on the Canyon Mine. To date, it has spent in excess of $6 million acquiring, developing, permitting, and operating the Canyon Mine. EFR's predecessors spent much more than that in exploration and development at the mine.

18. EFR expects the Canyon Mine to produce approximately 70,000 tons of ore and over 1.4 million pounds of uranium, and to generate in excess of $88 million in revenue.

19. If Plaintiffs are successful in this lawsuit, EFR could lose its substantial investment in the Canyon Mine, revenue in excess of $88 million, and the value of the Canyon Plan and the mine's underlying unpatented mining claims. The remedy sought by Plaintiffs would have a substantial, negative impact on EFR.

20. If Plaintiffs are successful in this lawsuit, EFR could lose its ability to develop and use the unpatented mining claims indefinitely.

[Remainder of Page Intentionally Blank – Signature on Following Page]

I declare under penalty of perjury that the foregoing is true and correct. Executed on April 12, 2013.

Harold R. Roberts

3327807v1/21569-0005

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Southwestern Region
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File Code: 2810
Route To: (2800), (2810)

Date: APR 27 2012

Subject: Valid Existing Rights determination for mining claims at Canyon Mine

To: Forest Supervisor, Kaibab National Forest

Enclosed with this letter is a mineral validity report prepared by Forest Service certified mineral examiners; Michael Linden and Mike Doran, for the Canyon 74 and 75 mining claims. The conclusions of the report are that these mining claims (at the Canyon mine location) were valid at the time of the initial mineral segregation (withdrawal) date of July 21, 2009, and continue to be valid at the present time. If you have any questions, please contact Michael Linden, Regional Liaison for Minerals and Geology at (505) 842-3158.

Robert W. Cordts
ROBERT W. CORDTS
Director of Lands and Minerals

Enclosure

cc: Tracy Parker

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Southwestern Region
Albuquerque, New Mexico

MINERAL REPORT
(For Administrative Use Only)

2810 Lode Mining Claims
Kaibab National Forest
Canyon 74-75 Mining Claims

October 24-26, 2011
January 11, 2012
Dates of Examination

Name: Michael Linden, RCME # 24
Title: Salable Minerals Specialist, CNO
Date: 4/18

Name: Mike Doran, RCME # 26
Title: Locatable Minerals Lead, CNO
Date: April 18, 2012

CATEGORY: Valid Existing Rights Determination

BLM STATE OFFICE: Arizona

CLAIM NAMES AND SERIAL NUMBERS:

Canyon 74	AMC 22643
Canyon 75	AMC 22644

BRIEF OF SUMMARY AND CONCLUSIONS: We conclude that a discovery of a valuable mineral deposit existed at the time of the segregated withdrawal on July 21, 2009 within the limits of lode claims; Canyon 74 and Canyon 75, as required under the 1872 Mining law (30 USC 21-54). Furthermore, under present economic conditions, the uranium deposit on the Canyon 74 and 75 claims could be mined, removed, transported, milled and marketed at a profit.

4/17/2012

FS TECHNICAL APPROVAL:
Name: Greg Visconty, RCME # 28
Title: Locatables Minerals Specialist, CNO

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I. Summary, Conclusions and Recommendations

This report documents the results of a validity examination of two unpatented lode mining claims known as the Canyon 74 and 75 claims, located within the Tusayan Ranger District, Kaibab National Forest. The area containing the claim block is within the Northern Arizona Mineral Withdrawal that was segregated from the Mining Law for two years by Secretary of Interior, Salazar, on July 21, 2009, for approximately 1 million acres surrounding the Grand Canyon National Park region, including BLM and FS lands. By Secretarial order on January 9, 2012, the entire 1 million acre area that was under consideration for withdrawal was withdrawn for a period of 20 years by the Secretary of Interior.

It is Forest Service policy (FSM 2803.5) to only allow operations on mining claims within a withdrawal that have valid existing rights (VER). Certified mineral examiners: Michael Linden and Mike Doran conducted the validity exam, which was prompted by a request to resume development and mining operations at Denison's Canyon Mine, within the Canyon mining claim block.

Over the course of several months this past fall and winter (2011), field visits were made by the examiners to the Canyon claims, the core shed at the Canyon Mine, Denison's offices in Fredonia, Arizona, Denison's Arizona One uranium mine on the BLM Arizona strip, and Denison's White Mesa Mill in Blanding, Utah.

The Canyon 74 and 75 claims overlie a breccia pipe uranium deposit, which has been called the Canyon Pipe. Drilling by various uranium companies over the years has confirmed the presence of a breccia pipe that contains approximately 84,207 tons of uranium ore grading at 0.97% U3O8. This equates to roughly 1,633,345 pounds of uranium oxide.

We conclude that a discovery of a valuable mineral deposit existed at the time of the segregated withdrawal on July 21, 2009 within the limits of lode claims; Canyon 74 and Canyon 75, as required under the 1872 Mining law (30 USC 21-54). Furthermore, under present economic conditions, the uranium deposit on the claims could be mined, removed, transported, milled and marketed at a profit. We conclude that the test for discovery of a valuable mineral, as set out under Castle v. Womble, 19 LD 455 (1894) has been met, . " ..where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met". The Canyon 74 and Canyon 75 claims have valid existing rights that were established prior to the mineral withdrawal.

II. Introduction

A. Purpose and Scope

This report documents the results of a validity examination of two unpatented lode mining claims known as the Canyon 74 and 75 claims, located within the Tusayan Ranger District, Kaibab National Forest (figures 1 and 2). The area containing the claim block is within the Northern Arizona Mineral Withdrawal that was segregated from the Mining Law for two years by Secretary of Interior, Salazar, on July 21, 2009, for approximately 1 million acres surrounding the Grand Canyon National Park region, including BLM and FS lands. By Secretarial order on June 21, 2011, the area was declared an emergency withdrawal, to allow more time for the decision on the Draft Environmental Impact Statement (DEIS) for the proposal. A final decision was made by the Secretary of Interior on January 9, 2012. The preferred alternative in the DEIS was chosen and all of the lands under review (approximately 1 million acres) are now included in a 20-year withdrawal.

The purpose of this investigation is to conduct a valid existing rights determination on the subject claims. It is Forest Service policy (FSM 2803.5) to only allow operations on mining claims within a withdrawal that have valid existing rights (VER). This VER determination was prompted by a request to resume mining operations at Denison's Canyon Mine, within the Canyon 74-75 claim block. The subject claims are referred to collectively as the "Canyon claims" or the "Canyon deposit" in this report. The applicable dates to establish "validity' in this particular case are July 21, 2009 (the initial segregation date), and the date of the mineral exam, since there was no "gap' between the initial segregation date, the emergency withdrawal, and the Secretary's decision for a withdrawal.

The Canyon claims were originally staked in 1978 by Gulf Mineral Resources for uranium. Energy Fuels Nuclear, Inc. acquired the property from Gulf in 1982. Exploration drilling by Gulf, and then Energy Fuels in the time period 1978 – 1985 led to the discovery of a uranium-bearing breccia pipe at the Canyon claims. In 1997, the property was sold to Dension Mines Corp., the current owners.

A plan of operations for underground mining of the deposit was approved in 1986 after an EIS was completed. Following the approval, the Forest Service decision was appealed and litigated by local tribes and environmental groups. The decision to approve the plan was affirmed by the Federal District Court and also the 10th Circuit Court of Appeals. Due to a severe drop in uranium prices globally in the 1980's, the mine went into standby status and has been idled ever since. When the mine went into stand-by status, all surface facilities including access roads, electric utilities, shaft/hoist, storage buildings, sediment ponds, etc... had been built. Additionally, the vertical underground shaft development was started but it stopped at approximately 50 feet. A reclamation bond has been maintained on the property throughout this time period to the present. Recently Denison has informed the Kaibab NF that it wishes to resume operations at the Canyon mine as soon as possible, which has prompted this VER determination.

B. Methods of Investigation

We conducted a field examination of the subject claims during October 24-27, 2011. Part of the field work included verifying claim boundaries, documenting development activities at the claims, and observing drill core stored on-site. Our investigation also included reviews of land and mineral status documents including Master Title Plats (MTP), BLM Mining Claim Recordation files, and county recorded documents. We analyzed geological reports and maps from the USGS and the Arizona Geologic Survey, and others to obtain information regarding the geology and mineralization of the area. We reviewed case file documents from the FS Southwestern Regional Office and Kaibab

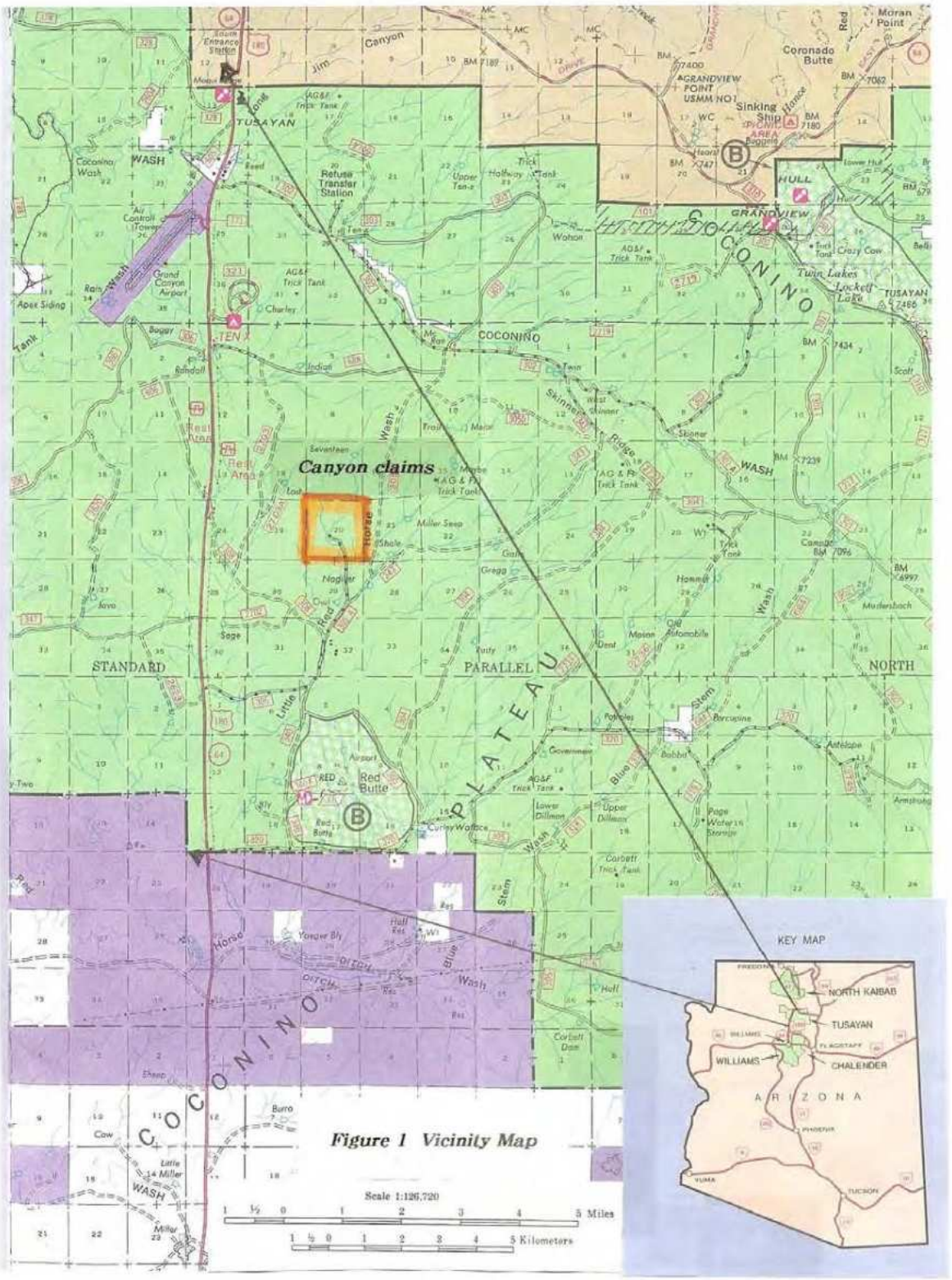


Figure 1 Vicinity Map

NF offices. We also reviewed Denison's records and data for the Canyon Mine and claims at their offices in Fredonia, AZ.

III. Land Status and Mining Claim Record Data

A. Lands Involved

The subject mining claims are located within the Kaibab National Forest, Tusayan Ranger District, Coconino County, AZ, (figures 1 –2). The legal description of the lands is as follows:

Gila and Salt River Principal Meridian, Arizona

T. 29 N., R.3 E., Sec. 20

B. Status of the Lands Involved

On July 21, 2009, the Secretary of Interior published a notice in the federal register announcing the 2-year segregation and proposed withdrawal for 633,547 acres of public land, and 360,002 acres of the Kaibab National Forest, including the entire Tusayn RD. The same lands were contained in an "emergency withdrawal" issued by the Secretary of Interior on June 21, 2011 for an additional six months for the purpose of allowing extra time for the EIS process on the withdrawal analysis to be completed and a decision to be made on the withdrawal. The Secretary issued his final decision on January 9, 2012 to withdraw all of the 1 million acres for a period of twenty years, including the 360,002 acres of the Kaibab NF.

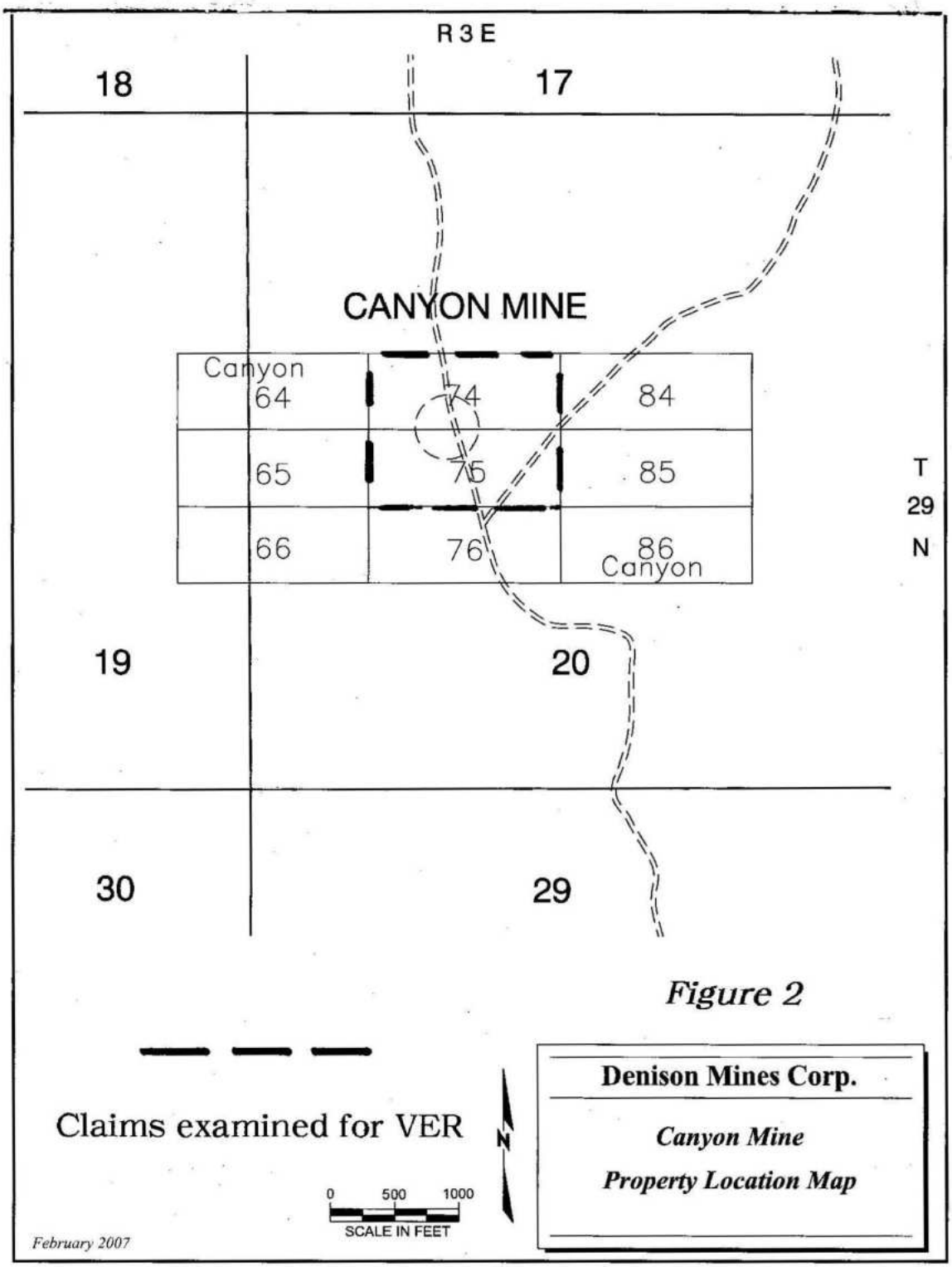
These actions described above withdrew the lands within the area from location under the general mining laws for twenty years. Prior to this, the subject lands were open to mineral entry and mining claims have been staked on portions of the Kaibab NF. Due to the withdrawal, all locatable operations within this area must have valid existing rights (VER) in order to be able to operate on these claims.

The BLM's automated case recordation data base, reviewed in October, 2011, shows there are no active leases, lease applications, or mineral materials permit on the Canyon claims.

C. Mining Claim Record Data

The subject lode mining claims were located on April 5, 1978 and are registered under Dension Arizona Strip LLC, an Arizona corporation. Only two of the 9 claims in the larger, adjacent claim block held by Denison were examined because the mine and associated surface facilities needed for the mine operations are contained on the subject claims. No other operations associated with the mine would occur on the other claims.

The claimants filed location notices with the Coconino County Recorder's Office shortly after location and with the BLM . Coconino County book and page numbers and BLM Mining Claim numbers are shown below in Table 1 and in Appendix A. Location notices, affidavits of assessment, and BLM and County records appear to be in order.


R 3 E
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CANYON MINE
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Figure 2
Claims examined for VER
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SCALE IN FEET
Denison Mines Corp.
Canyon Mine
Property Location Map
February 2007

TABLE 1

Mining Claim Recordation Information

Sources: BLM LR200 automated mining claim records

Name of Claim	BLM Serial Number	COUNTY Book	COUNTY Page	Location Date
Canyon 74	AMC22643	673	593	April 5, 1978
Canyon 75	AMC22644	673	593	April 5, 1978

IV. Geology and Physiographic Data

A. Physiographic Province and Regional Geology

The general region is part of the Colorado Plateau physiographic province of northern Arizona. This area is best known for its prevalence of colorful exposures of sedimentary rock, incised canyons, occasional volcanic exposures and an abundance of erosional features such as mesas, escarpments and buttes. The Coconino Plateau, which is a more local geomorphic feature within the Colorado Plateau, south of the Grand Canyon, is characterized by predominantly sedimentary rocks and generally flat or gently dipping terrain. Elevations are in the 6,000 to 7,000 foot range and support pinyon-juniper and ponderosa pine forests. Major structural features within this plateau include the Grandview Monocline, East Kaibab Monocline, Cataract Syncline, and Bright Angel Fault (Cox and Schwab, 2010).

The Coconino Plateau and surrounding Grand Canyon region share the same overall stratigraphic setting and sequence, which is detailed in figure 3. The typical "layercake" geology of the Grand Canyon rock layers occurs in the subsurface of the adjoining Kaibab NF, including the subject lands. The uppermost beds that are exposed at the surface on the Coconino Plateau include the Triassic-aged Chinle and Moenkopi Formations and the Permian-aged Kaibab Formation. The Moenkopi and Kaibab units form the majority of the surface exposures in the Tusayan RD area. The Moenkopi Formation is a thin-bedded, find-grained, red sandstone, shale and mudstone. The Kaibab Formation is chiefly a grayish, thick bedded, sandy limestone, with interbeds of dolomitic limestone, dolostone, sandstone, evaporites and red beds (McKee, 1974). It is the rim-forming rock at the Grand Canyon on the south rim.

B. Breccia Pipes on the Colorado Plateau

The Colorado Plateau hosts many uranium-bearing breccias pipes and numerous studies have documented their importance as a source of uranium resources for the country (Bliss, 1993, Weinrich, 1985, 1992). Over 17 million pounds of uranium have been produced from breccia pipe deposits on the Colorado Plateau over the last 50 years or so. Figure 4 (Weinrich and others, 1986) provides a schematic cross-section of a typical breccia pipe in the region. It shows which stratigraphic units typically can contain uranium mineralization. Dension geologists state that the thicknesses of the Coconino Sandstone and Hermit Shale vary as you go from the north to the south on the Colorado Plateau, due to facies changes in the original sedimentary units. In the north, the Hermit Shale is much thicker and the Coconino is thinner, as compared to the same rocks south of the Grand Canyon. This difference influences where the mineralization occurs in these two different areas.

The pipes are vertically-oriented structures that formed as a result of chemical dissolution of the deep Mississippian Redwall Limestone during previous Karst (solution cavities) cycles when the Redwall was closer to the land surface and subject to groundwater influences. As younger strata were deposited upon these sediments, collapse structures from the voids originating in the Redwall began to propagate upwards through younger strata, in some cases reaching the surface. The resulting breccias and voids created by this process were later filled-in with cementing matrix materials by subsurface fluids, some occasionally including metal-sulfides and uranium-bearing minerals. Finch (1992) outlines the USGS deposit model for solution-collapse breccias pipe uranium deposits. These pipes can contain economic concentrations of copper, other metal sulphides and most importantly, uranium (typically in the form of uraninite) as evidenced by the many pipes that have been mined (Hack, Pinenut, Kaibab, Arizona 1, Hermit, and others) or in the process of mine development on the northern Arizona (BLM) strip, north of the Grand Canyon. Characteristic features for mineralized pipes include high-grade discontinuous pods in the core and in the annular ring fractures that accompany many of the deposits. Inwardly tilted beds, bleaching/alteration of host rocks, and supergene mineralization are common features in the mineralized pipes. At least nine pipes (including the Canyon pipe) with at least some showing of uranium are known on the Tusayan RD of the Kaibab NF from exploratory drilling, (Weinrich, 1992).

Surface expressions of these pipes include circular depression features that are up to roughly a hundred meters in diameter, tilted beds, and inward drainage. Geochemical anomalies for Cu, Pb, Zn, and Ag in rock and soil are also found at the sites of mineralized pipes. Some breccia pipes do not reach the surface and these are generally only identified in erosional canyon walls that expose these structures. One theory (Spiering, 2009) holds that many more “buried” undiscovered breccias pipes are present on the Colorado Plateau and that advances in exploration geophysical techniques are helping to find these hidden pipes.

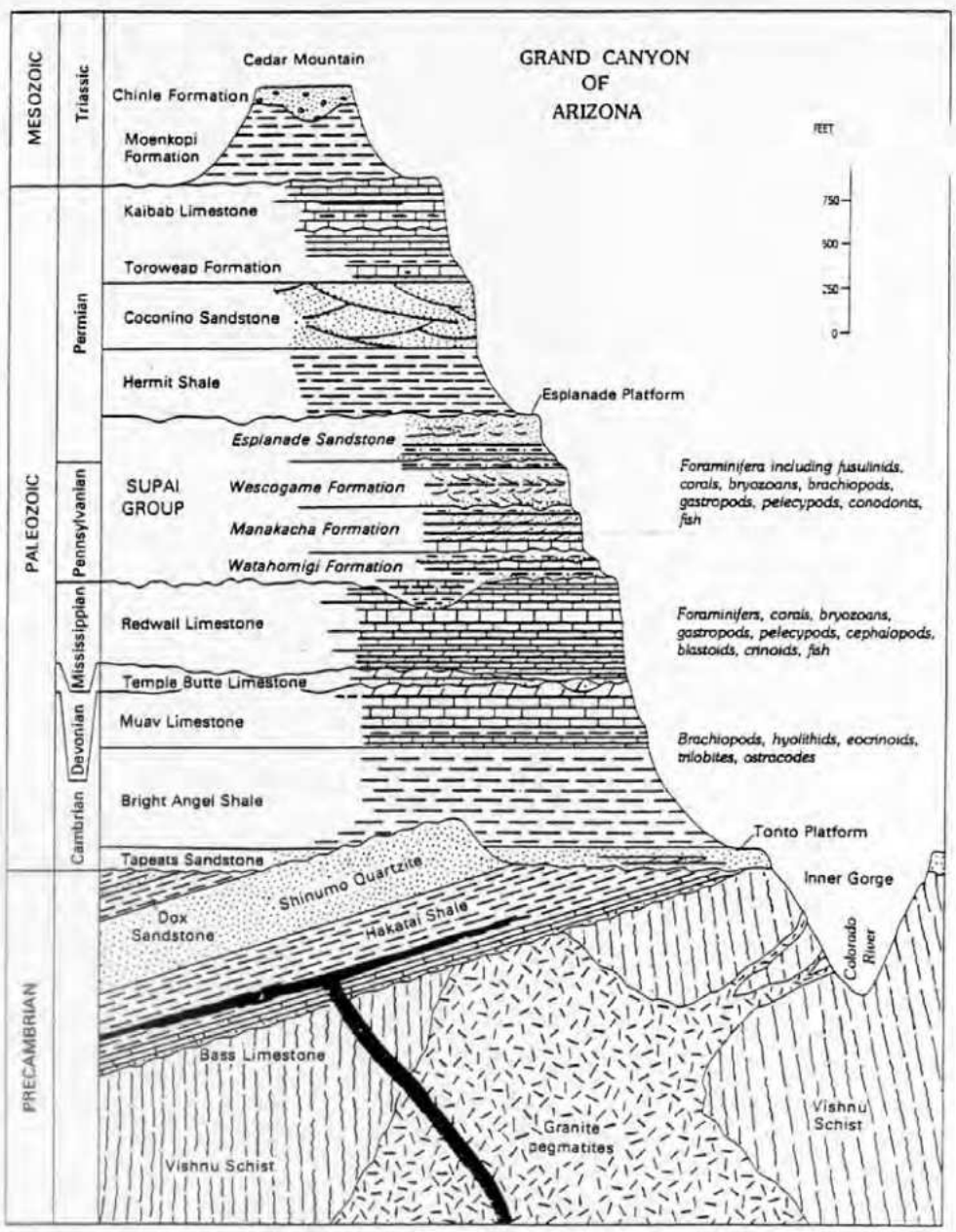

Figure 3. Stratigraphic column of the Grand Canyon and surrounding areas.

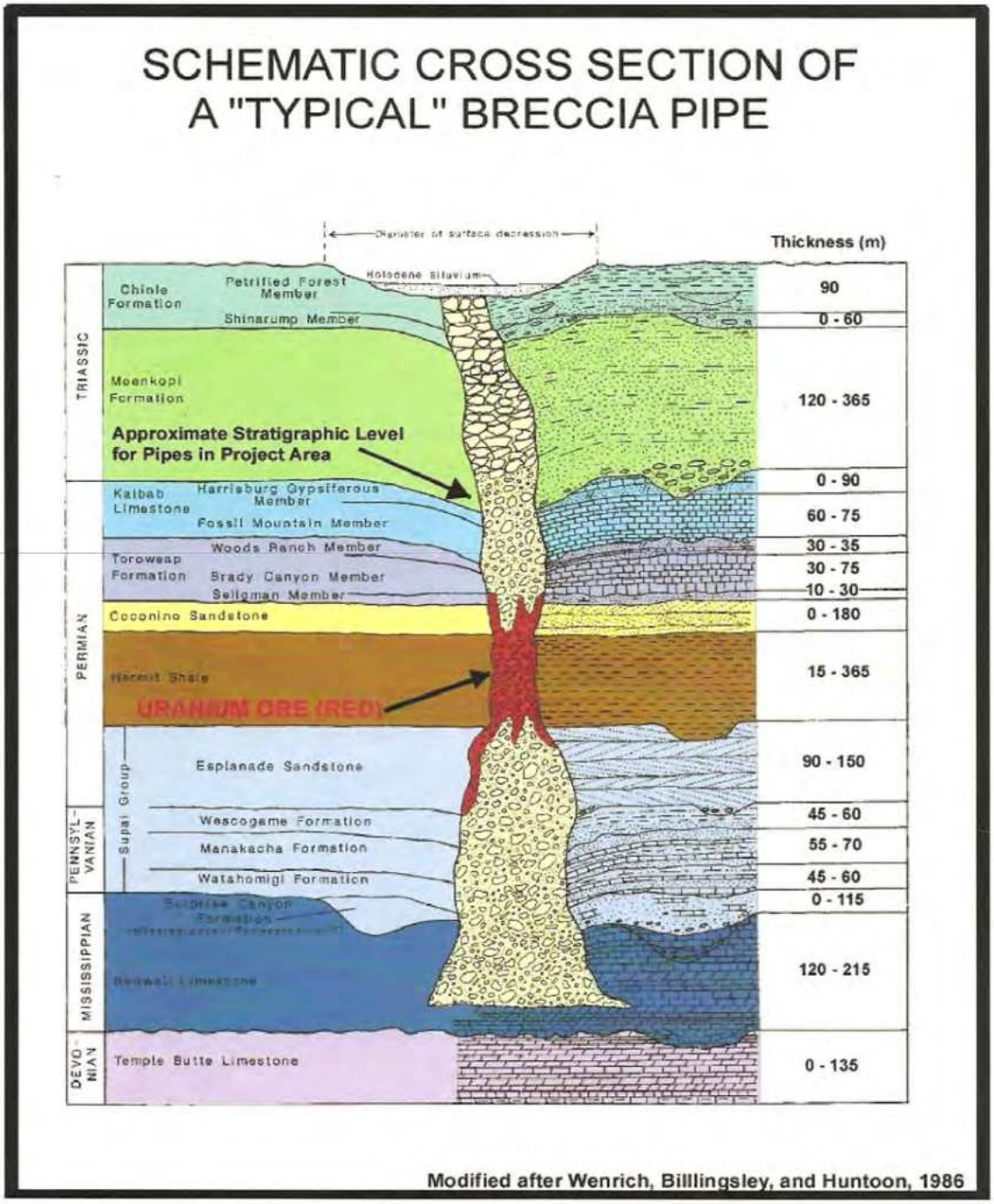

Figure 4. Schematic cross-section of a typical breccia pipe.

C. Site Geology

Topographically, the claims cover a natural, broad shallow depression, which is one of the indications of a breccias pipe in the subsurface. The subsurface geology of the subject claims is dominated by the same regional stratigraphic sequence that occurs in the Grand Canyon. Figure 3 is a representation of the rock units at depth. Table 2 describes the rock units penetrated in wells drilled into the breccia pipe at the subject claims. The formations of interest (from youngest to oldest) are the Moenkopi Formation, Kaibab Formation, Toroweap Formation, Coconino Sandstone, and Hermit Formation and Supai Group. These are the units that contain the breccia pipe structure at this location. The surface rocks exposed at the subject claims are part of the Moenkopi Formation. Drill logs for the Canyon mine show that the upper 10 feet of the surface contain the Moenkopi red sandstone and mudstones and then the Kaibab and older rock units are encountered at depth.

Table 2.

Rock Units Drilled at Depth on Canyon Claims

Geologic Unit	Depth and interval (feet below surface)	Thickness of unit (feet)
Moenkopi Formation	0-10	10
Kaibab Formation	10-340	330
Toroweap Formation	340-550	210
Coconino Sandstone	550-1,125	575
Hermit Shale	1,125 – 1,237	112
Supai Group (Esplande)	1,237 – 2,242	1,005
Redwall Limestone	2,242 – 2,670	428
Temple Butte Formation	2,670 – 2,780	110
Mauv Limestone	2,780 – 2,980	200
Bright Angel Shale	2,960 – 3,086	>126
Total Depth Drilled	3,086	

A good description of the Canyon breccia pipe is contained in the following excerpt from the NI-43-101 report (Pool and Ross, 2007) that was prepared.

> "Mineralization extends vertically both inside and outside the pipe over some 1,700 vertical feet, but ore grade mineralization has been found mainly in the Coconino, Hermit, and Esplanade horizons and at the margins of the pipe in fracture zones. Sulphide zones are found scattered throughout the pipe but are especially concentrated (sulphide cap) near the Toroweap-Coconino contact, where the cap averages 20 ft. thick and consists of pyrite and bravoite, an iron-nickel sulphide. The ore assemblage consists of uranium-pyrite-hematite with massive copper sulphide mineralization common in and near the ore zone. The strongest mineralization appears to occur in the lower Hermit-upper Esplande horizons in an annular fracture zone."

V. Field Sampling and Analytical Work

On October 24, 2011 the examiners met at the subject claims with representatives from Denison Mines; Harold Roberts, Executive V.P. of U.S. Operations, Dave Lipkowitz, Mine Production Engineer, Dave Ryckman, Senior Development Geologist and John Stubblefield, Mine Foreman.

Jessica Lopez-Pearce, geologist on the Kaibab NF, also accompanied the group on this field visit. During the field visit, we walked the claim boundaries for Canyon claims #74 and 75, noting corner, side, and end monuments (see Photos). The claims were well marked with wooden posts in rock cairns. The discovery point for these claims is the breccia pipe drilling that was done for the two claims (see Appendix B).

Drill core from previous exploration drilling on the site is stored at the Canyon Mine facility. During our initial visit, we examined several of the more mineralized drill core intervals and compared lithologic descriptions, chemical assays and gamma ray readings with our visual observations and scintillometer readings. Generally there is agreement with very high gamma radiation, drill core descriptions, and chemical assay data for drill core intervals that was stored on-site for the Canyon mine.

Equilibrium studies that compare "closed can" radiometric readings in the lab with chemical assays have been done by Energy Fuels Nuclear (the previous mining company on the claims) and it has been demonstrated to industry standards that for the uranium breccia deposits on the Colorado Plateau (including the Canyon Mine), there is essentially a 1:1 ratio between radiometric values of uranium and its daughter products and the corresponding chemical assays for uranium in the deposit (Spiering, personal comm., 2012). This fact has also been confirmed though actual mining and milling of the Hack #1, Hack #2, Hack #3, Pigeon, Kanab North, Pinenut, and Hermit breccia deposits in the Colorado Plateau province over the last 40 years (Pool and Ross, 2007). Weinrich (1985) concludes that the age of the uranium mineralization is Mesozoic in these breccias, well beyond the one million years required for equilibrium to be reached with regard to uranium and its daughter products . U.S.G.S. uranium expert, Van Gosen (personal comm., 2012) agrees with this general assessment, although no formal radiometric studies have been documented. Based on this empirical evidence, we conclude that the mining companies have demonstrated the radiometric-chemical relationship through their production over the years.

On October 25, 2001, we visited the company's offices in Fredonia, Arizona to review company data for the Canyon mine. On the morning of October 26, we went underground for a tour at their active Arizona One uranium breccia pipe mine on the BLM's Arizona Strip. On October 27, we went to Denison's White Mesa processing mill at Blanding, Utah for a tour of that facility.

On December 15, 2011, we met with Mark Mathisen, senior development geologist/geophyiscist for Dension. He explained the geophysical logs for the drill holes and how various calculations are made to the raw data collected in the field, based on the specific parameters that apply, including geophysical instrument "dead time", the presence of water down hole, and if gamma ray readings are taken through steel pipe or within an open hole. All of these factors can influence how the counts per second are translated into percentage of uranium oxide. Mathisen provided us with the company's gamma ray logs for specific drill holes we requested to review.

On January 11, 2012, the mineral examiners revisited the core shed at the Canyon mine for the purpose of taking several core samples for chemical verification purposes. On that day, we met Dave Ryckman from Denison Mines at the mine. The examiners randomly chose 8 intervals from available drill cores to verify the accuracy of the data. For each interval that we sampled for verification, we 1) observed and compared the core log descriptions, 2) photographed the section and 3) then took the remaining split of the core, which was ½ of the core, for the selected intervals. We choose intervals of 2-4 feet in length for the verification assays. We chose intervals that were in the upper, middle, and lower stratigraphic sections of the Canyon deposit. The samples were packaged and handled solely by the mineral examiners for chain of custody purposes and shipped to ALS Minerals labs in Reno, Nevada for testing. Results of these analyses and the 1984 company assays of the same

intervals are reported in Appendix E. In general, the ALS assay results for the Canyon cores confirm the presence of uranium and certain other associated metals (arsenic, copper, iron, etc) in the drill core intervals and are very similar to assays that Energy Fuels Nuclear had done on these same cores in the 1980s

VI. Mineral Exploration and Development Work

The subject claims have been explored at various times since they were located in 1978. From the company's NI-43-101 report, the following outlines the drilling work that has been done (Pool and Ross, 2007).

> "Gulf Resources drilled eight exploration holes at the site from 1978-1982 but only found low-grade uranium in this pipe. Additional drilling completed by Energy Fuels in 1983 identified a major deposit. Energy Fuels Nuclear drilled a further 36 holes from May 1983-though April 1985 to delineate the uranium mineralization and to determine placement of the mine shaft and water supply well. Additional drilling of six holes was completed in 1994."

We observed drill hole collars on the site as well as drill core stored at the mine (Photos 5, 9-13). Appendix B includes a map showing the location and deviation of drill holes. As with other breccias pipe mines in the district, surface drilling is augmented by long- hole underground drilling once the shaft has been sunk to an appropriate level.

After the plan of operations for mine development was approved by the Forest Service in 1986, surface facilities for the mine were begun. A 100 foot head frame was installed and the main shaft was dug to a depth of approximately 50 feet before development operations ceased. All surface facilities to run the mine at that time were constructed, including sediment ponds and power lines to the site. (See Appendices B and D for a layout of the surface facilities and for photos of same).

VII. Reserves and Resources

Classification of the Canyon Mine uranium deposit as reserves follows definitions in the Bureau of Land Management's (BLM) Mineral Examiners Handbook, H-3890-1 (Haskins, et al, 1989). The handbook classifies "proven" reserves as ore blocked out in three dimensions by actual underground mining operations or by drilling (Haskins, et al, 1989). The claimant (Denison) has done this with their exploration drilling. The handbook also goes on to state that for a group of claims, once a physical exposure of a valuable mineral has been shown on each claim, the claims can be grouped together and treated as a single deposit for purposes of reserve and economic calculations (Haskins, et al, 1989). Since a physical exposure has been made on both claims through drilling, claims Canyon 74 and 75 will be treated as one deposit.

Even though Denison uses the term "resources" to describe what they classify as economic ore body, much of the Canyon Mine uranium mineral deposit can be reasonably classified as Proven and Probable reserves using SME (Society for Mining, Metallurgy, and Exploration) reserve definitions (SME, 1999). Exploration drilling has blocked out three different ore bodies in two or three dimensions.

Possible (or inferred) reserves are defined as a mineral deposit whose existence is a reasonable possibility, as based primarily upon the strength and continuity of geologic-mineralogical relationships and upon the extent of ore bodies already developed, and a measure of whose continuity is therefore available. Past mining experience by Energy Fuels Nuclear and Denison has shown that proven and probable reserves were usually underestimated. It is reasonable to expect that final reserve

tonnages at the Canyon Mine will be higher than estimated. Much of the possible reserves will likely be converted to proven and probable with additional development drilling and final mine production (Pool and Ross, 2007). Despite the likelihood of increasing proven and probable reserves from possible reserves, possible reserves are not used in this report's economic evaluation.

VIII. Mining and Milling Operations

A. Mining

The proposed mining method to be used for development of this breccia ore body is a combination of modified block-caving and shrink-stoping. The underground workings are to include the main shaft, an escape shaft (also providing an air-flow path), cross-cut levels, and a series of 'corkscrew" workings to follow the ore. Appendix D, photograph #15 is a sketch of the underground workings at Denison's Arizona One Mine on the BLM's Arizona Strip, which would be very similar to what is proposed at the Canyon mine. Breccia pipe mining in the district is similar for all of the deposits. The sketch shows the working levels, main shaft, escape shaft, and working drifts that follow the ore in a cork-screw fashion within the roughly circular breccia zone. Large volumes of fresh air are pumped through the mine to reduce the radon gas levels to MSHA safety standards.

According to Dave Ryckman, Denison's senior development geologist, the ore deposit is contained in three separate ore zones, the upper, middle, and lower zones. As is typical for these deposits, more uranium ore is anticipated to be delineated once the underground drilling program commences.

B. Milling

On October 27, 2011, we were given a tour of the uranium processing mill at White Mesa, near Blanding Utah. Mill manager, Dan Hillsten, gave the mineral examiners a tour of the facility and explained the process steps. The facility is reportedly one of the only currently operating, conventional uranium mills in North America. The mill is owned and operated by Denison Mines, the same company that holds the Canyon claims.

Uranium ore is transported in trucks to the mill. Each truck contains about 25 tons of material. Haulage distance from the subject claims to the mill would be about 330 miles, one way. Once ore arrives at the mill, it is weighed and stored on-site in separate stockpiles. From there, ore from specific stockpiles is fed through a hopper and grizzly to screen and remove the oversize material. It then goes into the SAG grinding circuit of the mill, which pulverizes the rock down to -10 mesh to expose the surface area of individual mineral grains. At this point, samples are taken to quantify the uranium content of the specific batch which will be run through the mill. From there the ore is transferred as a wet pulp to a series of storage tanks where the leaching process begins.

Pulped ore is fed to multi-stage leaching circuit (Uranium Producers of America, 2011). Here the pulp is typically heated to enhance chemical reactivity. Leaching is started with the addition of sulfuric acid and the ore passes through several stages as leaching agents and oxidizer concentrations are added to dissolve the uranium optimally. Next, the ore slurry passes to a solid/liquid circuit or CCD (counter-current decantation), which is a series of large vessels where the slurry is mixed with wash-water to remove as much uranium as possible and also to separate the uranium-rich liquor from the leached solids, which will be sent to the tailings disposal cells. At the end of the CCD circuit, approximately 99% of the original uranium is in solution.

The uranium-bearing solution then goes to a solvent extraction (SX-EW) process which selectively removes the uranium from the solution and is collected by an organic solvent (typically kerosene). The barren solution can then be returned to the processing circuit or disposed of in the tailings system. The uranium is then stripped from the SX solvent by a saline solution. Uranium is precipitated from this strip solution by adding ammonia which forms a yellow-cake slurry. The yellow-cake is then dried and stored in 55 gallon drums as a final product for sale to further uranium processing steps on its way to becoming fuel for nuclear power plants.

IX. Economic Evaluation

A. Tonnage and Grade

Denison developed tonnage and grade estimates for the Canyon Mine from the results of 45 surface holes totaling 61,400 ft. with an average depth of 1,364 ft. (Pool, 2007). The database derived from this drilling includes 37,442ft. of eU3O8 values with 0.5 ft. lengths totaling 18,721 ft. of values. The mineral deposit straddles Canyon 74 and Canyon 75 mining claims (Figure 2). Since a physical exposure of valuable mineral has been made on both claims, the claims can be grouped together and treated as a single deposit for purposes of economic and reserves calculations.

Two different resource calculations have been made for the Canyon uranium breccia deposit. Pool and Ross (2007), who authored the NI-43-101 report, calculate the resource totals for Canyon at 70,500 tons, grading 1.08% uranium oxide, with a cut-off grade of 0.2% eU3O8, for a total of 1,523,000 pounds of uranium oxide. High uranium grades were cut at 6% in this model.

The National Instrument (NI 43-101) report is a mineral resource classification scheme used for the public disclosure of mineral project information. It is a codified set of rules for reporting and displaying information related to mineral properties owned by, or explored by, companies which report these results on stock exchanges within Canada. Therefore Denison's numbers are reasonable and acceptable for the mineral examiners evaluation of these two claims.

Denison conducted its own internal resource estimate, using Vulcan 3-D mine modeling software and the same basic assumptions as the Pool and Ross tonnage calculations. Based on the same data set and the same cut-off grade of 0.2%, Denison estimates a minable reserve of 84,207 tons grading 0.970% U3O8 which would yield a total of 1,633,345 pounds U3O8. High U3O8 grades were cut at 10%.

Uranium mineralization within the Canyon deposit occurs at three distinct vertical intervals; an upper zone, a middle zone and lower zone. The following ore deposit description is taken from Denison's internal documentation for the Canyon Mine project. The upper zone is contained within a vertical interval of 220 ft. between the elevations of 5,630 ft. and 5,410 ft. and spans a horizontal distance at its widest 120 ft. in diameter. The middle zone occurs between the elevations of 5,260 ft. and 5,110 ft. and at its widest spans a horizontal distance of 164 ft. in diameter. The lower zone occurs between the elevations of 4,890 ft. and 4,560 ft. and takes on an oval shape, at its widest, 100 ft. in diameter, along its major axis and 54 ft. in diameter along its minor axis.

It should be noted that much more drilling will be completed once the shaft is sunk down to the first level of the proposed underground mine. At that point, many hundreds of holes will be drilled from that vantage point to refine the current reserve estimates. From experience gained from Dension's properties with the other Colorado Plateau breccias mines, and from experience learned in mining

older breccias deposits (Energy Fuels Nuclear), the ore tonnage estimates will likely go much higher once other "un-tested' portions of the breccias pipe are drilled. Presently, there are still some voids in the breccia deposit structure that have not yet been tested thru drilling efforts, so resource estimates are very likely to increase when these voids are sampled by drilling. Similar scenarios have been reported from the other uranium breccia deposits that were mined on the Arizona strip including the Hack #1, Hack #2, Hack #3, Kanab North, and Pigeon mines, where average grade and available resources mined were shown to be higher once the mining commenced (Pool and Ross, 2007).

B. Capital Costs

Capital and operating cost estimates for the Canyon Mine were derived from Denison's recent and on-going experience from their Arizona One Mine north of the Grand Canyon in a similar ore deposit, as well as the Canyon Mine project. Costs for the Canyon Mine are expected to be similar to the currently operating Arizona One Mine.

A review of the company's cost estimates found them to be reasonable and at an adequate level of detail to spot check specific operating costs. Labor costs and transportation costs were spot-checked and independently confirmed.

A mine plan and capital costs were developed for the Canyon deposit by Energy Fuels in 1985. The plan included the sinking of a 1,500 vertical shaft with development levels between 900 ft. and 1,500 ft. The development program was expected to require 3 years for completion. Mine production would be approximately 200 tons per day. The company plans to move much of the surface infrastructure to the Canyon Mine. Much of the Arizona 1 work force will also go to the Canyon Mine.

Much of the surface development is complete which includes the main head frame, hoist house, warehouse and shop, sediment ponds, and power lines. These costs are considered "sunk' costs since they were previously completed for mine development and are fixed assets on the claims. Most of the capital expenses are underground development costs.

Table 3 below summarizes the Canyon Mine Capital costs. See Appendix C for specific costs.

TABLE 3: Capital Cost Summary

Capital Development	
Permitting and Engineering	$218,000
Mobilize Project	$45,000
Surface Facilities, rehab, impoundment, ore pad	$508,000
Pre-sink setup	$232,000
Shaft Sinking	$7,100,000
Station Excavation	$835,824
Capital Drift Development	$1,170,000
Raises, Vent Shaft, Ore Pass Development	$1,167,000
Final Development to the Bore Hole	$272,500
Pre-production Incline/ Decline /Sublevel Development	$1,575,000
Pre-production Utilities	+ $335,000
Total Capital Development	$13,458,324

Capital Equipment		
Surface Mobile Fleet		$828,000
Surface Fixed Plant		$700,000
Underground Mobile Fleet		$1,882,000
Underground Fixed Plant		$713,000
Salvage Value	+	($618,450)
Total Capital Equipment		$3,504,550
Total Capital Development + Capital Equipment		$16,962,874
Contingency on Total capital Costs		$1,696,287
Reclamation	+	$450,000
Total capital Costs		**$19,109,161**

C. Operating Costs

1. Mining

Denison plans to mine the ore body with a combination of modified block-caving and shrink-stoping mining methods currently used in their Arizona 1 Mine. Daily production is expected to be 200 tons. Including development, the minimal mine life is approximately 5 years. Table 4 below summarizes the total operating costs.

Table 4: Annual Mine Production Summary

Tons Mined	35,287
Estimated lbs U3O8 mined	623,940
Grade	0.970%
Cost per Ton Mined	$354.02
Cost per pound U3O8 Mined	$17.36

2. Milling and Haulage

Denison plans to truck all the Canyon Mine uranium ore to Denison's White Mesa Mill at Blanding, Utah. The mill is designed to treat 2,000 tons per day and receives mill feed from Utah, Colorado and industrial recycling sources. Milling of the higher grade ores from Arizona required minor modifications to the leaching circuit. The basic mill process is a sulphuric acid leach with solvent

extraction recovery of uranium and vanadium. No vanadium is recovered from the Arizona ores. Mill recovery is approximately 95%.

Table 5: Operating Cost per Ton Summary

Direct Costs		
Mining and Site G&A		$110.42/T
Ore Haulage		$66.00/T
Milling		$141.04/T
Indirect Costs		$36.56/T
	Total	**$354.02/T**

Estimated mining costs for the Canyon Mine are $110.42 per ton. Haulage costs are estimated to be $66.00 per ton. Milling costs are estimated to be $141.04 per ton. Indirect costs are estimated to be $36.56 per ton. Total operating costs are $354.02 per ton.

D. Commodity Pricing

We used the BLM's guidance (2000) for pricing of mineral commodities. The BLM guidance for commodities such as uranium, indicates that the mineral examiner is to look at the current price of the commodity at specific dates that are connected with the project; such as the initial segregation/withdrawal date for the claims, and the date of the mineral exam. Prices for uranium are then calculated using the monthly spot price over a period of 37 months (= the current month and the past 36 months). If we use the initial mineral segregation date of June, 2009, when the lands were first withdrawn from location under the Mining Law, as the date at which to look back at the 3 prior years and average the price (Mundi, 2012) over those past 37 months, we arrive at an average spot market price of $70.79/lb of uranium oxide. The spot market price on July 20, 2009 was $49.70. Along those same lines of reasoning, if we use the month of January, 2012, (the exam date) and look back over those prior 3 years and average those uranium spot prices for the past 37 months we arrive at an average price of just under $50/lb uranium oxide ($49.69).

Figure 5 is 5-year look at uranium oxide spot prices. The chart shows that the spot price of uranium rose to a high price of $136.22 in the summer of 2007, as a result of several global factors influencing the price of uranium. That price however was not sustainable and the price came back down to lower levels shortly after that.

It is also important however to understand that most uranium producers are tied into long-term contracts for delivery of uranium and these long-term contracts are typically higher than the spot price. These long-term contracts include provisions for cost inflation, fuel surcharges and other factors. For a comparison, see Figure 6 where long-term prices are consistently higher than spot prices. Dension reports that they currently have long-term contracts for roughly 50% of their sales from their operating mine on the Arizona Strip. Long term contract prices for uranium oxide ranged from $57 to $61 /lb. in the period January, 2009-January, 2012. Contracts are usually for periods of

4-5 years. Short-term prices have recently been $52/lb. Assuming a 50/50 split between long-term and short-term contracts for most uranium producers, a price of $56/lb. would be a good average price to use in the economic evaluation to represent the current price for uranium oxide. It should be remembered that this is the lower price of the two time periods to consider, since the earlier time-frame of July 21, 2009 and 36 months prior to that, would yield significantly higher prices using the BLM guidance policy. For purposes of our cost models, we used a price of $56/lb.

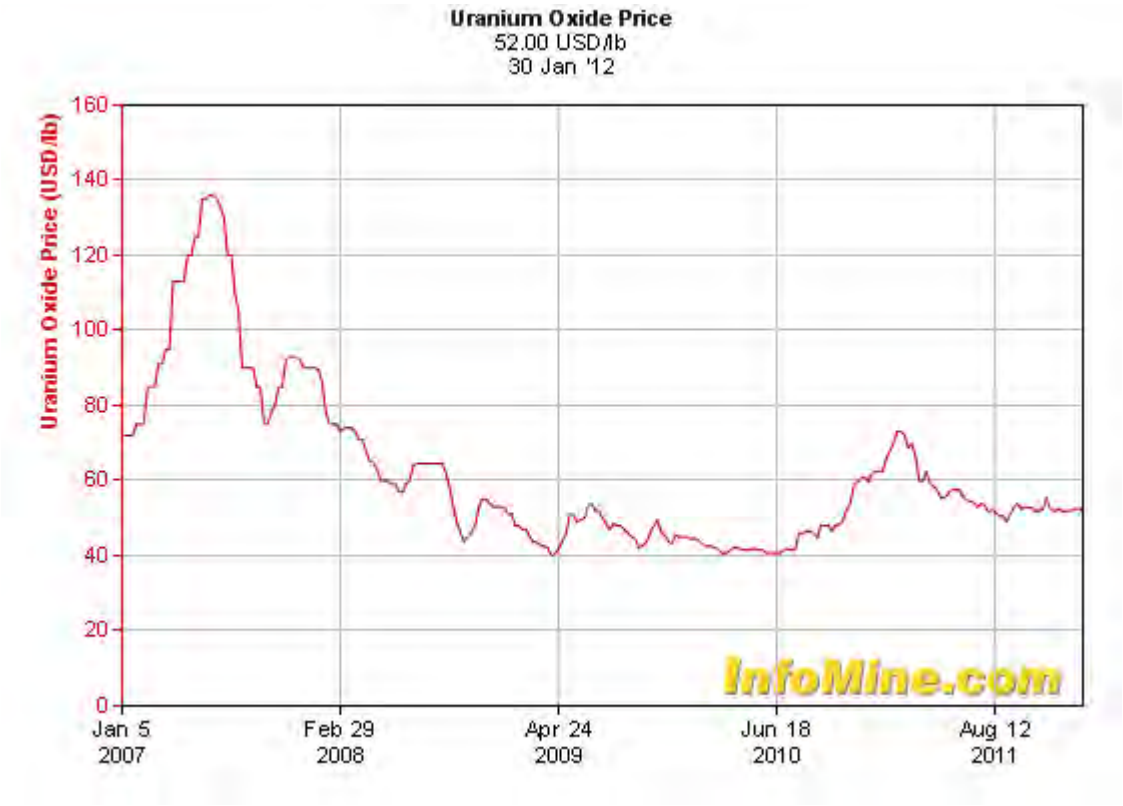

Figure 5. Spot price of uranium oxide from 2007 to 2012. Source: InfoMine.com.

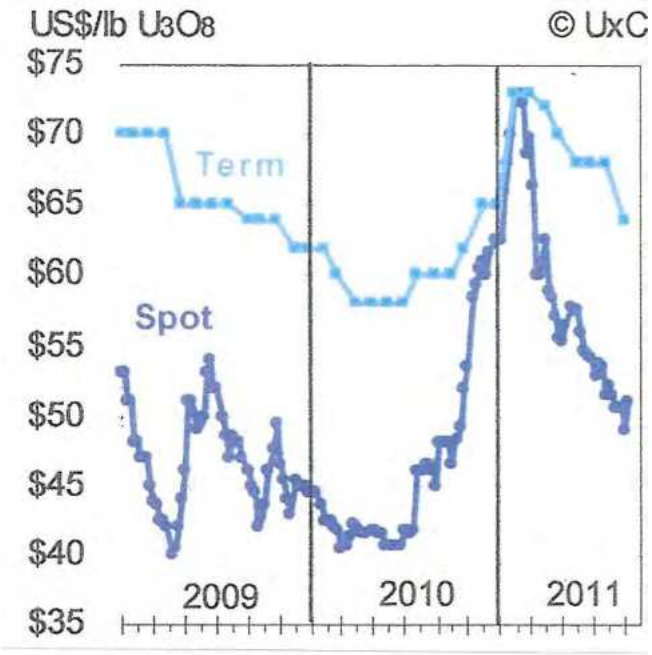

Figure 6. Long term and spot price for uranium oxide from 2009 to 2011. Source: UxConsulting

E. Confirmation of Company Costs

Specific labor and haulage costs were independently checked for accuracy. Denison pays it's underground miners an average of $22.87/hr. based on their experience. Independent data supplied by CostMine lists an average non-union rate for the western U.S mines is $26.67/hour (CostMine, 2011).

Denison's haulage costs are $57.00/ton. Independent data supplied by CostMine indicates that mining-related haulage costs in the western U.S. are between $46.20/ton and $62.04/ton (CostMine, 2011).

F. Feasibility Analysis

Using the company's capital and operating costs, we performed several independent discounted cash flow analyses using APEX (version 3.03, 2010), a computer software program specifically designed for the economic evaluation of mining projects. APEX software, with more than 150 users, is well-accepted as a reliable evaluation tool by the mining industry for a variety of commodities and mine designs. The data necessary to run APEX also includes reserve tonnages, production rates, ore grades, and commodity prices all of which have been described in previous sections. Applicable federal and state taxes were factored into the analyses (Appendix F- Cash Flow Schedule).

Basically, the discounted cash flow analysis procedure consists of the following sections: Revenue from production and sale of a product is determined for each year, from which is deducted the cash operating costs of mining, milling, transportation and administration. Other costs such as property taxes, production taxes, depreciation, and depletion are deducted to determine the net income before taxes. Income taxes are then deducted to determine net income after taxes. Capital investment for the year is then deducted. The result, commonly called cash flow or net cash flow is the stream of income generated by the project as a function of time. The sum of cash flows shows whether the proposed mining operation would result in a profit or a loss. The cash flow is then discounted at a specific discount rate to determine the net present value (NPV). The discount rate that exactly balances the NPV of expenditures against the NPV of receipts is called the internal rate of return (IROR) or return on the investment. The IROR is also used as a measure of the economic viability of the project.

A cash flow scenario was constructed using cost and commodity value data provided by Denison. The results of the APEX discounted cash flow analysis, with costs, production and value data as described above are shown in Table 6. Complete printouts of the APEX input data and results are provided in Appendix F (Cash Flow Summary).

Table 6 – Results of Cash Flow Analysis
(Results of analysis using APEX computer software Ver. 3.03, 2010)

Product Value	**$56.00 /lb. U3O8**
Net Sum of Cash Flows	**$29,350,736**
Net Present Value (NPV)	
@10% discount rate **@15% discount rate** **@20% discount rate**	**$22,250,758** **$19,336,119** **$16,755,429**
Internal Rate of Return (IROR)	**78%**
Payback Period	**1.08 years**

At a uranium (U3O8) price of $56/ lb., the proposed Canyon Mine would have an internal rate of return (IROR) of 78%. and a payback period of approximately one year. A sensitivity analysis using a lower uranium price was done using the same APEX software. Even at a lower price of $ 42.00 per lb. U3O8, mining would still be profitable with a rate of return of 36% (Appendix F-Sensitivity Analysis). The minimum rate of return for the mining industry is approximately 12% (Bhappu and Guzman, 1995).

X. Conclusions

We conclude that a discovery of a valuable mineral deposit existed at the time of the segregated withdrawal on July 21, 2009 within the limits of lode claims; Canyon 74 and Canyon 75, as required under the 1872 Mining law (30 USC 21-54). Furthermore, the company has shown that on July 21, 2009 and under present economic conditions, the uranium deposit on the claims could be mined, removed, transported, milled and marketed at a profit. We conclude that the test for discovery of a valuable mineral, as set out under Castle v. Womble, 19 LD 455 (1894) has been met, . " ..where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met". The Canyon 74 and Canyon 75 claims have valid existing rights that were established prior to the mineral withdrawal.

XI. References

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Photo 1. FS-CME Mike Doran at SE corner post for Canyon #74, NE corner of Canyon #75. Access road to the Canyon mine in background. Photo taken by M. Linden, 10-24-11.

Photo 2. FS-CME Michael Linden and Dave Lipkowitz of Denison Mines at SW corner of Canyon #74. Photo taken by M. Doran, 10-24-11.

Photo 3. Kaibab NF geologist, Jessica Lopez-Pearce, FS-CME Mike Doran and Dave Lipkowitz of Dension Mines at SW corner of Canyon #75. Photo taken by M. Linden, 10-24-11.

Photo 4. SE corner monument of Canyon #75. Note headframe and rock berm in background to the north. Photo taken by M. Linden, 10-24-11.

Photo 5. Drill hole brass cap for drill hole CYN #22 drill hole. Photo was taken in open meadow within fenced area for mine. Photo taken by M. Linden 10-24-11.

Photo 6. Headframe for shaft, dry house (at rear-left) and warehouse/shop (on right). Photo taken towards the north by M. Linden on 10-24-11.

Photo 7. Water tanks along edge of fenced area for mine. Photo taken by M. Linden, 10-24-11.

Photo 8. Plastic liner on water retention pond on west side of fenced area for mine. Photo taken by M. Linden, 10-24-11.

Photo 9. FS-CME Mike Doran examining core boxes with Dave Lipkowitz of Dension Mines. Note scintillomter meter on table. Photo taken by M. Linden, 10-24-11.

Photo 10. High-grade uranium ore (dark stringers and veins) in drill core from Canyon claims. Mike Doran holding specimen. Photo taken by M. Linden, 10-24-11.

Photo 11. Headframe at operating Arizona No. 1 uranium mine, owned by Dension Mines on BLM's Arizona Strip . Photo taken by M. Linden, 10-26-11.

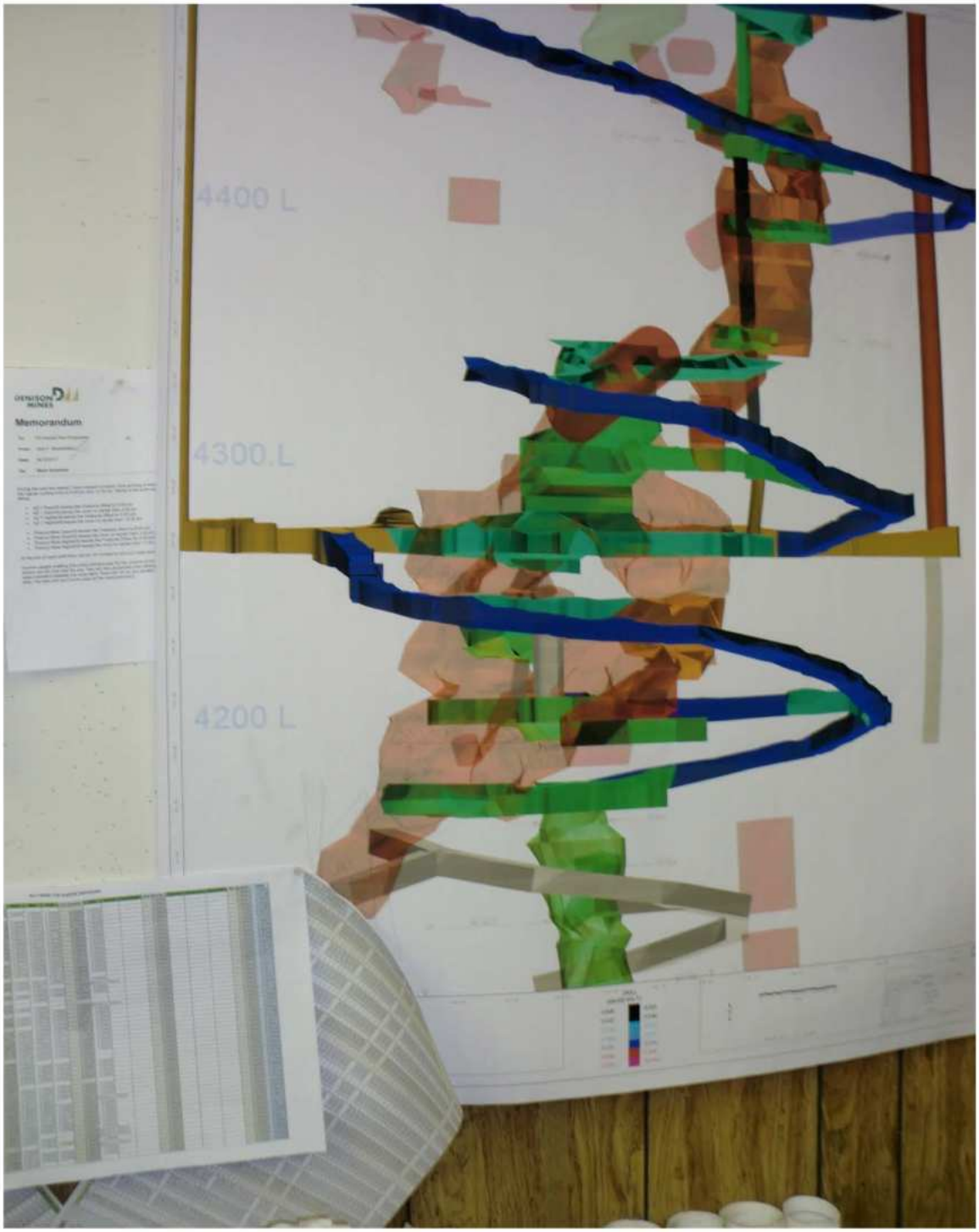


Photo 12. Drawing in mine office of underground breccia pipe mine workings at Arizona No. 1 mine. Straight, brown, vertical lines on each side are main and escape shafts, with horizontal drift. Blues and greens are drifts, spiral passageways, and stopes. Photo taken by M. Linden, 10-26-11. .

Photo 13. Sharp contact between bleached Hermit Shale host rock (below) and breccia (above) in underground workings at Arizona 1 mine. Photo taken by M. Linden, 10-26-11.

Photo 14. Uranium-bearing breccias underground at Arizona No. 1 mine.

Photo taken by M. Linden, 10-26-11.

Photo 15. Sharp contact between bleached (weakly mineralized) and unbleached Hermit Shale underground at Arizona No. 1 Mine. Photo taken by M. Doran, 10-26-11.

Photo 16. View of a portion of Dension's White Mesa mill in Blanding, Utah, where uranium ores are processed into yellowcake for the next step in nuclear fuel cycle. Photo taken by M. Linden, 10-27-11.

Photo 17. White Mesa mill manager Dan Hillsten (left) and Mike Doran walk past separate uranium ore piles ready to begin the mill cycle. Photo taken by M. Linden, 10-27-11.

Photo 18. SAG mill in the crushing/grinding circuit for the mill. Photo taken by M. Linden, 10-26-11.

Photo 19. Thickening tanks and mill process ponds used in the uranium mill cycle. Photo taken by M. Linden, 10-27-11.

Photo 20. View inside the main solution leaching building. Walkways are over large leaching vessels and tanks. Photo taken by M. Linden, 10-27-11.

MGL- Conference Call Outline

Introductions and Thanks

Content-

Update Tribe on Review
Answer Questions- close loop on previous questions
Ensure tribal comments are considered in review
Review is unfinished, cannot comment on conclusions
If there was a land management decisions- will consult w each tribe, but not knowing if there will be, want to take this opportunity to do the above

Process- Mike L go through chronology
Q and A

Relationship Make FS position understood

Chronology

1984 Proposal for uranium mining from EFN
KNF developed EIS
Preceeded gov to gov consultation, followed public scoping procedures
NOI in FR and letters to Havasupai, Hopi, and Navajo
Amended DEIS to include Indian Religious Issues
Issued EIS and ROD allowing construction of the Mine in 1986
Appealed by Hopi and Havasupai
Upheld by Chief of FS
Litigated by Havasupai under AIRFA, 1rst Amendment, etc
FS decision was upheld
Mine was constructed including 50' shaft, no uranium mining took place, placed on standby
Claim was kept current
1997 Denison acquired Canyon , AZ 1 and other mines thru bankruptcy
Denison applied for ADEQ permits for 4 mines
At that time, KNF staff expected Canyon Mine would require new Plan, which would trigger NEPA review, supplemental NEPA
BLM allowed reopening of AZ 1 with original Plan, no additional NEPA
Lawsuit, BLM decision upheld
Denison informed KNF it intends to open Canyon Mine with original Plan with no changes following AZ 1
Based on age of NEPA, Forest Sup has asked for review of Canyon Mine issue to determine what if any additional federal actions would be required prior to reopening the mine.

1/12/2012

We have not identified any new undertakings at this time, for a new undertaking we would do a Section 18 review, for this review, focused on any unanticipated effects

This is a new process for us and we are learning as we go

Unsure at this time if there will be additional analysis, if there is new analysis we will consult with tribe during that process

Even without knowing that, want to take this opportunity to talk w tribes and be transparent about the process

Also want to close the loop on previous questions from September

Understand Tribes want additional analysis, but also limited under Mining Law and regs

RECORD OF DECISION

NORTHERN ARIZONA WITHDRAWAL

Mohave and Coconino Counties, Arizona

January 9, 2012

RECORD OF DECISION

NORTHERN ARIZONA WITHDRAWAL

Mohave and Coconino Counties

--- ERRATA ---

January 2012

Section VII contains a typographical error which incorrectly reports the acres the U.S. Forest Service (USFS) consented to withdrawing on the Kaibab National Forest in Northern Arizona as 134,454 acres. The actual approximate acreage as documented in the Northern Arizona Proposed Withdrawal Final Environmental Impact Statement (Alternative B, October 2011, Table 2.7-1, page 2-31) and the USFS letter of consent dated January 6, 2012 is 355,874 acres. In all other respects the language of the Record of Decision is accurate.

JAN 11 2012

RECORD OF DECISION

NORTHERN ARIZONA WITHDRAWAL

Mohave and Coconino Counties, Arizona

I. SUMMARY

This document constitutes the Record of Decision (ROD) of the U.S. Department of the Interior (DOI) for the Northern Arizona Withdrawal. Pursuant to the authority granted to the Secretary of the Interior by section 204 of the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. § 1714, this ROD documents the decision to select Alternative B identified in the Northern Arizona Proposed Withdrawal Final Environmental Impact Statement (EIS) and withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona for a 20-year period in order to protect the Grand Canyon Watershed from adverse effects of locatable mineral exploration and development. The withdrawal does not affect use, management, or disposition of the lands other than under the Mining Law of 1872, 30 U.S.C. §§ 22-54 (Mining Law).

The lands are located near Grand Canyon National Park in northern Arizona and consist of lands managed by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). They contain significant environmental and cultural resources as well as substantial uranium deposits. The USFS has consented to the withdrawal of the lands under its jurisdiction.

II. INTRODUCTION

President Theodore Roosevelt withdrew the North Kaibab Ranger District of the Kaibab National Forest from mineral location and entry when he first created the Grand Canyon Preserve in 1906. Tribal lands bordering the park became off limits to uranium development when the Grand Canyon Parashant and Vermilion Cliffs National Monuments were created and the lands were withdrawn from mineral entry.

Uranium ore deposits were discovered and mines were opened in northern Arizona in the 1940s and 1950s. A price spike in uranium in the late 1970s triggered increased demand for exploration by mining companies. In the 1980s, the U.S. Geological Survey began studying the uranium deposits of the area and produced maps. These deposits consist of pipe-shaped breccia bodies generally no more than 300 feet in diameter that can extend 2,000 feet below the surface. Copper production from breccia pipes dates back to the late 1800s.

Exploration activities resulted in six new uranium mines that together produced 1,471,942 tons of uranium during the late 1980s-early1990s. Three of seven mines have been reclaimed. The remaining four were put into “maintenance” or standby status in the early 1990s due to declining prices for uranium and economic considerations.

From the period of 1978 – 1992, over 900 exploration holes were completed on the USFS-managed Tusayan Ranger District. One underground mine, the Canyon Mine, was proposed and approved on the District in the late 1980s in the same area.

Uranium is a mineral locatable under the Mining Law. Historically, the number of claims located and interest in development of existing claims appear to relate to the price of uranium. In 2004, mining-related activities increased on BLM and USFS managed lands tracking another surge in uranium prices. In 2007, the demand for uranium pushed the commodity price to over $130/lb before returning to the $40/lb range in 2009. This price spike prompted new interest in the breccia pipe uranium deposits on federal lands to the north and south of Grand Canyon National Park, causing thousands of new mining claims to be located in the area. In late 2007 and into 2008 mining-related activities slowed due to a downturn in uranium prices. The price of uranium declined from $135 per pound to below $42 per pound in June 2007. The price currently is at about $48 per pound. The increase in new mining claim locations during the period of 2004 to 2008 generated public concern that uranium mining could adversely affect natural, cultural, and social resources in the Grand Canyon watershed, which includes resources in Grand Canyon National Park. Over 10,000 mining claims had been located within the withdrawal area by 2009.

In response to the concern over potential environmental effects of uranium exploration and mining, a number of events occurred in 2008 and 2009 to bring attention to these lands and the potential for long term or permanent impacts to the Grand Canyon watershed. Among those events was legislation introduced by Representative Raúl Grijalva (D-AZ) in March 2008 (H.R. 4483) to permanently withdraw over 1 million acres from location and entry under the Mining Law, as well as from mineral leasing, geothermal leasing, mineral material sales, and the public land laws. The area proposed for legislative withdrawal includes federal lands north of Grand Canyon National Park administered by the Bureau of Land Management's (BLM) Arizona Strip Field Office and the USFS's North Kaibab Ranger District, and lands south of the Park in the Tusayan Ranger District administered by the USFS. The legislative withdrawal was reintroduced as H.R. 644 on January 22, 2009, and again in March 2011 as H.R. 855.

On July 21, 2009, the Department of the Interior published notice of the Secretary of the Interior's proposed 20-year withdrawal under the authority of FLPMA. The Secretary's proposed 20-year withdrawal covered essentially the same area (the "withdrawal area") as the proposed legislative withdrawal in H.R. 4483 and the subsequent bills; however, under the Secretary's proposal, the subject lands would only be withdrawn from location and entry under the Mining Law and would remain available for mineral leasing, geothermal leasing, and mineral materials sales and open to the public land laws generally.

Under section 204 of FLPMA, the July 21, 2009, publication of the *Federal Register* notice of the proposed withdrawal (Appendix A of the Environmental Impact Statement [EIS]) had the effect of segregating the lands involved for up to 2 years from the location and entry under the Mining Law, subject to valid existing rights, while the BLM evaluated the withdrawal application. On June 21, 2011, the Department of the Interior published Public Land Order 7773, which effected a six-month emergency withdrawal of the withdrawal area. The emergency withdrawal prevented the lands from opening to location and entry under the Mining Law upon expiration of the two-year segregation while the Department completed the decision-making process on the proposed withdrawal. The emergency withdrawal became effective on July 21, 2011, and ends January 20, 2012. The BLM, along with its cooperating agencies, has completed various studies and analyses of resources in the withdrawal area, including an environmental impact statement (EIS) under the National Environmental Policy Act of 1969, as amended 42 U.S.C. §§ 4321–4347 (NEPA). These

studies and analyses provided the basis for the final decision regarding whether or not to proceed with the proposed withdrawal or to select an alternative action.

The EIS addresses the potential direct, indirect, and cumulative effects on the human environment of the proposed withdrawal and alternatives to the proposed withdrawal. The EIS also discloses any unavoidable adverse impacts, impacts to the long-term productivity of affected resources, and any irreversible or irretrievable commitments of resources that result from the proposed withdrawal or the alternatives to the proposed withdrawal, including the No Action Alternative.

III. AUTHORITY

Section 204 of FLPMA provides the Secretary of the Interior with the authority to make, modify, revoke and extend withdrawals, subject to valid existing rights (43 U.S.C. § 1714). Withdrawals can be used to remove lands from the operation of the public land laws generally, including the Mining Law. The Secretary of the Interior can withdraw lands under the jurisdiction of another agency, but only with the consent of that agency (43 U.S.C. § 1714(i)).

FLPMA also directs that lands under BLM jurisdiction are to be managed under principles of multiple-use and sustained yield unless another law provides otherwise (43 U.S.C. § 1732(a)). FLPMA defines multiple-use as "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values" (43 U.S.C. § 1702(c)). The USFS has a similar multiple-use mandate (16 U.S.C. § 529, 531). This grants BLM and the USFS substantial discretion to balance the competing uses on particular parcels of land; it does not require every use on every parcel.

IV. OVERVIEW OF THE WITHDRAWAL AREA

The withdrawal area in northwest Arizona is located adjacent to Grand Canyon National Park and consists of three parcels: the North Parcel, with approximately 549,995 acres; the East Parcel, with approximately 134,454 acres; and the South Parcel, with approximately 322,096 acres. The North and East parcels are both north of the Park, while the South Parcel is south of the Park. The withdrawal will have no effect on mine development of any non-federal lands within its exterior boundaries. However, they are included within the boundary of the withdrawal in the event that they are acquired by the federal government sometime in the future, at which point the lands would become subject to the withdrawal.

Approximately 982,552 acres within the boundaries of the withdrawal are managed by the BLM or the USFS. The remaining 23,993 acres are split estate lands where the surface is non-federal but the locatable minerals are owned by the federal government. The withdrawal will withdraw all lands from location and entry under the Mining Law, subject to valid existing rights, regardless of surface ownership. This means that no new mining claims can be established to develop the locatable minerals in those lands or interests in lands. The withdrawal will not limit development of non-federal mineral estate or federal leasable or salable minerals (e.g., oil and gas leasing, sand and gravel permits), which are not subject to appropriation under the Mining Law.

Crafted by the immense power of the Colorado River, the Grand Canyon and the greater ecosystem that surrounds it have long been recognized as one of the Nation's most treasured landscapes. This area is known as a home or sacred place of origin to many Native Americans,

including the Havasupai, Hualapai, Navajo, Hopi, Zuni, Southern Paiute, and others, and its cultural significance goes back thousands of years. Although first afforded federal protection in 1893 as a Forest Reserve and later as a National Monument, the Grand Canyon achieved National Park status in 1919, three years after the creation of the National Park Service (NPS). The Park is a world heritage site and an international icon. The Grand Canyon National Park is dominated by the Grand Canyon, a twisting, 1-mile deep, 277-mile-long gorge formed during some 6 million years of geological activity and erosion by the Colorado River on the upraised earth's crust. The river divides the Park into the North and South rims, which overlook the approximately 10-mile-wide canyon. The Park encompasses 1,217,403.32 acres and in 2010 received 4,388,389 visitors. The Park is closed to location and entry under the Mining Law.

The three withdrawal parcels are located within the Colorado Plateau, which is characterized by highlands to the north and lowlands to the south and west. The three withdrawal parcels contain many of the unique geographical features that characterize the Colorado Plateau, such as river narrows, natural bridges, and slot canyons. The three withdrawal parcels contain a variety of plant life, from desert-type vegetation in the low-lying rocky areas to forests of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsugamenziesii*) and aspen (*Populus*sp.) in the higher elevations.

The Grand Canyon and the greater ecosystem surrounding it is a cornerstone of the region's economy with hunting, fishing, tourism, and other outdoor recreation generating billions of dollars in economic activity in the area. Millions of people living in seven states in the U.S. and in Mexico depend upon the Colorado River for water for drinking, irrigation, and industrial use, as well as for hydropower. The National Forest System lands in the area are located in the Kaibab National Forest, including lands on the Tusayan Ranger District and on the North Kaibab Ranger District. These lands are set aside for public recreation and a habitat for birds and animals.

Mineral resources, particularly high-grade uranium, are found in this area. Uranium mineralization was first discovered in the breccia pipes of northern Arizona in 1947. The uranium occurred in association with copper mineralization at the Orphan mine 2 miles west of the visitor center on the South Rim of the Grand Canyon (not within the withdrawal area). The first uranium ore was shipped by the Golden Crown Mining Company in 1956 to a buying station in Tuba City, Arizona. Before closing in 1969, the Orphan operation produced a reported total of 2,200 tons of processed uranium (U_3O_8).

Since the discovery of uranium in the Orphan Mine, extensive fieldwork has been conducted by government and private concerns to define the spatial extent of the breccia pipes in northern Arizona. The recognition of a relationship between uranium and copper mineralization sparked an investigation of several small copper deposits in the region. Uranium was identified in the Hack Canyon copper mine on the Arizona Strip in the 1950s. From the 1950s through the 1990s, 10 breccia pipes were developed or mined for uranium ore within the withdrawal area. Until the 1980s, the only mine producing uranium within the withdrawal area was the original Hack Canyon Mine, which had ceased production in 1964. Additional pipes were discovered in Hack Canyon in the 1970s, and production from these breccia pipes began in 1981. As the price of uranium went up in the late 1970s and 1980s, along with the demand for uranium products, exploration for uranium increased dramatically. Exploration uncovered six other breccia pipes with minable uranium ore during the early and mid-1980s, and production from these mines began with the Pigeon mine in 1984. By the end of 1990, collapse of the Soviet Union and decommissioning of large numbers of nuclear warheads made huge stockpiles of material available for use in nuclear electrical production. The subsequent plunge in uranium prices resulted in the cessation of all uranium production from the withdrawal area. Six breccia pipes, accessed from three mines, were

considered mined out and were closed or reclaimed (the four Hack Complex pipes, Pigeon, and Hermit) and four mines were placed in interim management until prices recovered.

In 2010 U.S. Geological Survey (USGS) was directed by the Secretary to develop the scientific basis for analysis in the Northern Arizona Proposed Withdrawal EIS. As a consequence, it developed Scientific Investigation Report 2010-5025 to characterize breccia pipe uranium ore and mining in Northern Arizona. That study estimates the undiscovered uranium endowment within the three withdrawal parcels, which was estimated to be 162,964 tons of U_3O_8 (about 326 million pounds). The endowment, as defined by USGS, included ore concentrations as low as 0.01%, which is lower than would be economical to mine. The Reasonably Foreseeable Development (RFD) scenarios developed for the Northern Arizona Proposed Withdrawal EIS estimated the quantity of uranium that could be mined economically to be 39,664 tons of U_3O_8 (79,328,000 pounds).

With the passage of FLPMA in 1976, the BLM was directed to conduct inventories for areas meeting the characteristics of wilderness as defined in the Wilderness Act of 1964. Several areas were determined to have those characteristics within what is now the proposed withdrawal area and, as a consequence, were designated as Wilderness Study Areas. The Arizona Wilderness Act of 1984 was an historic piece of legislation negotiated by a coalition of interests including representatives of environmental groups, uranium mining interests, the livestock industry, and others. That Act, specifically Title III, designated wilderness areas within the Arizona Strip, including Kanab Creek Wilderness, Mount Logan Wilderness, Mount Trumbull Wilderness, Paria Canyon–Vermilion Cliffs Wilderness, and Saddle Mountain Wilderness. The Act "release[d] certain lands not designated as wilderness for such management as is determined appropriate through the land management planning process of the administering agency." Areas previously designated as Wilderness Study Areas, including any within the withdrawal area, that were not designated by Congress as Wilderness in the act, were "released" from that designation and protections for maintaining wilderness characteristics were removed. The Act designated Wilderness in furtherance of the purposes of the Wilderness Act of 1964. The legislation recognized the uranium resource in the region and the Congressional Record notes that the boundary of one Wilderness area was adjusted to accommodate development of a uranium mine.

There are four mines within the withdrawal area that have approved plans of operations that predate the Secretary's withdrawal proposal. The Pinenut, Kanab North, and Canyon mines were approved in the late 1980s and are operating under the interim management plans contained in their approved mining plans of operation, but are not currently producing uranium ore. The Kanab North mine has been largely mined out and only a very small amount of ore remains. It is now being prepared for reclamation. The Pinenut mine was partially mined and is moving towards active mining and could be in production in the near future. The Canyon Mine was just being developed when uranium prices plummeted in the late 1980s, and though it has only about 50 feet of shaft, is being prepared for further development. The Arizona 1 mine has been operating since late 2009 and is expected to be mined out within the next year.

As of December 11, 2011, the withdrawal area contains 3,156 mining claims that predate the publication of the Notice of Proposed Withdrawal on July 21, 2009. Withdrawals under section 204 of FLPMA must be made subject to valid existing rights, which means that new mineral exploration and development could still be authorized under the withdrawal on valid existing mining claims. The RFD scenarios developed for the EIS indicate that potentially 11 mines could develop with a full withdrawal, including the four mines currently approved, as opposed to 30 mines (including the four mines currently approved) with no withdrawal. On withdrawn lands, neither the BLM nor the USFS will process a new notice or plan of operations until the surface managing agency conducts a mineral examination and determines that the mining claims

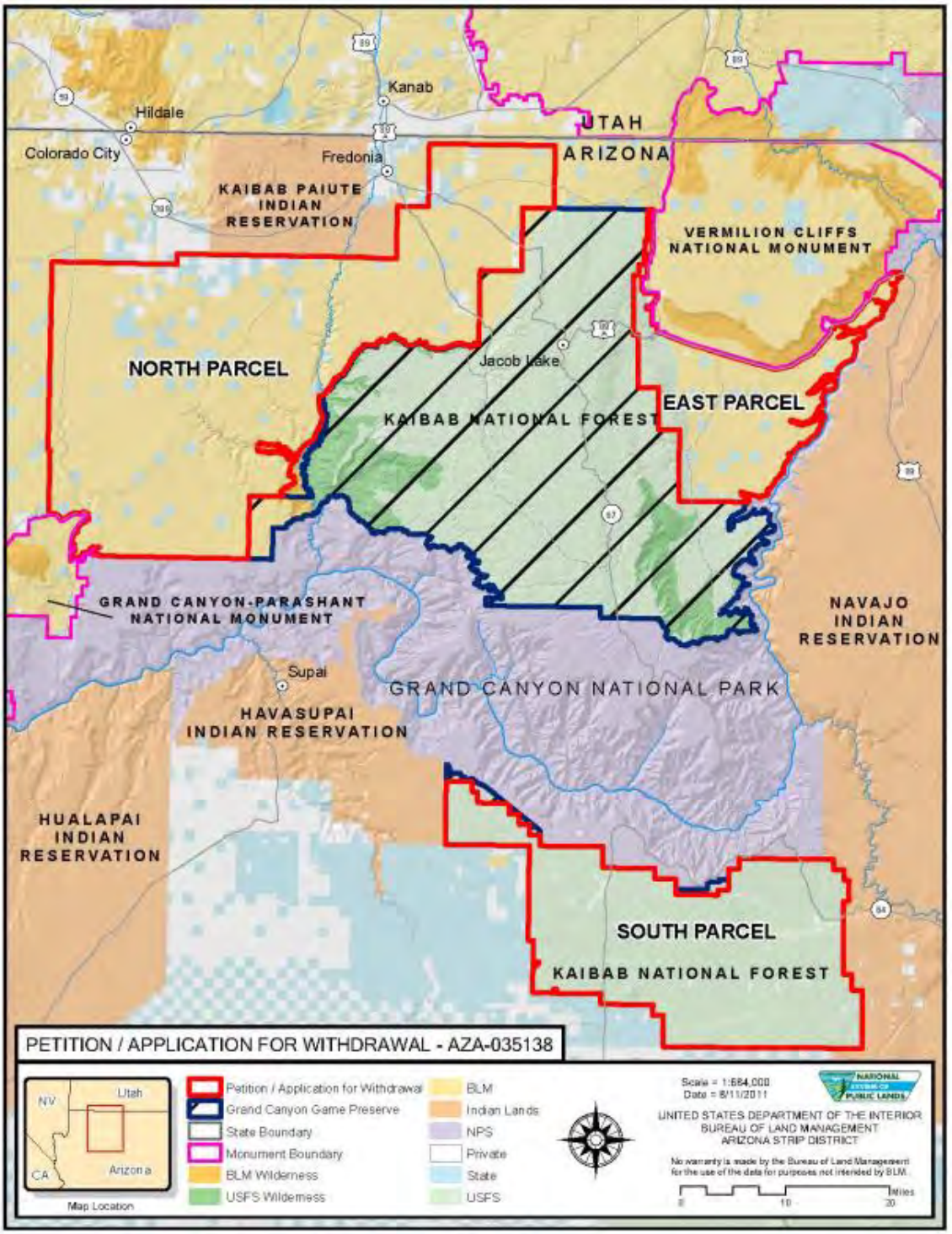
on which the surface disturbance would occur were valid as of the date the lands were segregated or withdrawn. Determining the validity of a mining claim is a complex and time-consuming legal, geological, and economic evaluation that is done on a claim-by-claim basis. For a mining claim to be valid, the claimant must make an actual physical exposure of the mineral deposit within the claim boundaries. For the mining claims containing breccia pipe deposits, unless erosion has exposed mineralization in a canyon, this would probably require exploratory drilling and sampling. The mining claim or site would need to have been valid as of the date of segregation, July 21, 2009, and have been maintained until the time of the mineral examination.

There are 26 confirmed breccia pipes within the withdrawal area known to have some level of mineralization. Of these, seven have been confirmed to have uranium resources, and those uranium resources have been estimated. It was assumed for purposes of determining the impacts of withdrawing the lands from the Mining Law that any mining claim containing these seven breccia pipes would be able to demonstrate valid existing rights and would be mined. Based on this reasonably foreseeable development, the analysis in the EIS assumes that there will still be mining activities in the withdrawal area under all alternatives, including the Preferred Alternative, which could result in impacts to the resources discussed below. However, mining activities would be limited with implementation of this withdrawal, since mining claims that do not constitute valid existing rights would not be developed and no new mining claims could be located.

V. DECISION

Department of the Interior: It is the decision of the Department of the Interior to select Alternative B as described in the EIS and withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona, as depicted on Map 1, for a 20-year period. A complete legal description of the withdrawal is contained in the Public Land Order. The withdrawal only affects the disposition of lands and locatable minerals under the Mining Law, subject to valid existing rights, and does not restrict the disposition, use, or management of the lands for any minerals subject to disposition by lease or sale. It also does not affect disposition, use, or management of the lands other than under the Mining Law, including access to and across the lands. In addition, the withdrawal does not apply to private mineral estate, although the withdrawal will remove from the operation of the Mining Law any lands or interests in lands within the outside boundaries of the withdrawal acquired in the future by the United States as long as the withdrawal is in effect. On Federal lands, exploration and mining would be subject to Federal surface management regulations and other applicable State and Federal laws. The USFS has consented to the withdrawal of land under its administration that is subject to this decision.

Map 1


Kanab
Hildale
Colorado City
Fredonia
UTAH
ARIZONA
KAIBAB PAIUTE INDIAN RESERVATION
VERMILION CLIFFS NATIONAL MONUMENT
NORTH PARCEL
Jacob Lake
KAIBAB NATIONAL FOREST
EAST PARCEL
GRAND CANYON-PARASHANT NATIONAL MONUMENT
NAVAJO INDIAN RESERVATION
Supai
GRAND CANYON NATIONAL PARK
HAVASUPAI INDIAN RESERVATION
HUALAPAI INDIAN RESERVATION
SOUTH PARCEL
KAIBAB NATIONAL FOREST
PETITION / APPLICATION FOR WITHDRAWAL - AZA-035138
NV
Utah
CA
Arizona
Map Location
Petition / Application for Withdrawal
Grand Canyon Game Preserve
State Boundary
Monument Boundary
BLM Wilderness
USFS Wilderness
BLM
Indian Lands
NPS
Private
State
USFS
Scale = 1:684,000
Date = 8/11/2011
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STRIP DISTRICT
No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by BLM.
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VI. RATIONALE FOR THE DECISION

Summary

Based on the analysis in the Northern Arizona Proposed Withdrawal EIS, the Department of the Interior has decided that, in accordance with the preferred alternative, a withdrawal of 1,006,545 acres from location and entry under the Mining Law, subject to valid existing rights, is warranted. Several key factors were considered in making this decision. In particular, the USGS report (SIR 2010-5025) included in the EIS acknowledged uncertainty due to limited data. The potential impacts estimated in the EIS due to the uncertainties of subsurface water movement, radionuclide migration, and biological toxicological pathways result in low probability of impacts, but potential high risk. The EIS indicates that the likelihood of a serious impact may be low, but should such an event occur, significant. A twenty-year withdrawal will allow for additional data to be gathered and more thorough investigation of groundwater flow paths, travel times, and radionuclide contributions from mining as recommended by USGS. Millions of people living in seven states depend on the Colorado River for drinking, irrigation, industrial use. Second, it is likely that the potential impacts to tribal resources could not be mitigated. Any mining within the sacred and traditional places of tribal peoples may degrade the values of those lands to the tribes that use them. Third, the RFD projected that potentially eleven mines, including the four mines currently approved, could proceed under a withdrawal of the 1,006,545 acres. This pace of development for the next twenty years is roughly equivalent to the pace of development that occurred during the peak of uranium interest in the 1980s when ten breccia pipes were developed and six were mined out. Thus, development of the uranium resource will continue even if all of the lands in the proposal are withdrawn. And finally, the set of circumstances and the unique resources located in this area support a cautious and careful approach. It is for these reasons that a decision is being made to withdraw 1,006,545 acres.

1. USGS Analyses and Water Resources

The USGS developed the Scientific Investigative Report 2010-5025 prior to preparation of the Draft EIS, which incorporates that Report by reference. As part of its evaluation, the USGS analyzed soil and sediment samples at six sites that experienced various levels of uranium mining in the Kanab Creek area north of Grand Canyon National Park, including mined and reclaimed sites, 3 approved mined sites where operations have been temporarily suspended, and exploratory drill sites that were drilled but not mined. Uranium and arsenic were two elements consistently detected in the areas disturbed by mining in quantities above natural background levels. Samples from 15 springs and five wells in the region contained dissolved uranium concentrations greater than the U.S. Environmental Protection Agency maximum allowed contaminant for drinking water. The springs and wells sampled are close by or in direct contact with mineralized ore bodies, and the concentrations detected are related to natural processes, mining, or both. The USGS also looked at surface water in the region. The report found that floods, flash floods, and debris flows caused by winter storms and intense summer thunderstorms occur in the region and can transport substantial volumes of trace elements and radionuclides. The USGS report notes that fractures, faults, sinkholes, and breccia pipes occur throughout the area and are potential pathways for downward migration of surface water and groundwater.

The USGS report acknowledges uncertainty as data is sparse in this region and often limited[1]. The timing and location of water quality information in the area is important because the potential effects of breccia pipe uranium mining may be localized and appear rapidly or may be more dispersed during longer time scales. The data evaluated for 1,014 water samples from 428 sites indicate that about 70 sites have exceeded the primary or secondary maximum contaminant levels for certain major ions and trace elements, such as arsenic, iron, lead, manganese, radium, sulfate, and uranium. The USGS concluded that a more thorough investigation is required to better understand groundwater flow paths, travel times, and contributions from mining.

The most prominent example of the uncertainty of impacts is with respect to how mining might affect perched aquifers. The EIS acknowledged that "… change in the quantity or chemical quality of the discharge from perched aquifer springs cannot be projected with the data available." For that reason, the EIS assumed that "… any mine located within the groundwater drainage area calculated for a spring might cause an impact ranging from none to major to that spring." A similar effect was projected for wells which are dependent on perched aquifers. Although the probability of any impact to springs ranged from 0% (in the South and East Parcels with full withdrawal) to 13.3%, (in the North Parcel with no withdrawal) the risk of those impacts to animal or human users of the water is unacceptable.

Uncertainty also affects the potential impacts to deep aquifer springs. Because the potential for migration of mine released radionuclides is unknown, the EIS assumes a relatively high concentration of potential discharge from mines to the R-aquifer. The R-aquifer is the principal aquifer in the area and includes the carbonate rocks of the Redwall Limestone, Muav Limestone, and Temple Butte Formation. Although, using this assumption, no R-aquifer spring would exceed Environmental Protection Agency minimum concentrations for drinking water, increases in radionuclides could occur.

The uncertainties of effects to water quantity and quality, also leads to uncertainties of effects to animals and humans. The effects of exposure of native plants and animals to increased levels of radionuclides are unknown. Some research has been performed, but Hinck noted in the 2010 USGS study that "… chemical and radiation effects thresholds for radionuclides are consistently limited to only a few species for most biological receptors, and limited data are available for wildlife species (Hinck et al. 2010). During the USGS study (Hinck et al. 2010), minimal chemical toxicity data were available for microbes, aquatic vascular plants, terrestrial invertebrates, and amphibians, and no data were found for reptiles, birds, or mammalian wildlife. Toxicity data are most abundant, but still limited, for aquatic invertebrates, fish, and laboratory test mammals." The potential effects of increased radionuclides in wildlife, livestock, or humans would be unacceptable.

[1] Although the USGS report, the EIS, and this ROD acknowledge uncertainty with respect to water quality and quantity as explained below, information that would help resolve that uncertainty is not "essential to making a reasoned choice among alternatives" (see 40 C.F.R. § 1502.22) since, as explained in the preceding paragraph, there is data regarding dissolved uranium concentrations near six previously-mined sites to inform a reasoned choice, and the EIS used reasonable conservative assumptions to estimate impacts as a method of addressing such unknowns. Although obtaining additional data to address the uncertainty regarding impacts on water quantity and quality is not essential to a reasoned choice, such data, particularly data collected on a site-specific basis as mines are developed, will nevertheless be helpful for future decisionmaking in the area.

2. Cultural and Tribal Resources

Although there is only one eligible traditional cultural property (Red Butte on the South Parcel) the entire area is recognized as the traditional homeland and use area for seven tribes. Many of these tribes include the Grand Canyon in their creation stories, and all continue to use all or portions of the withdrawal area for traditional tribal purposes. All seven tribes, the Havasupai Tribe, Hualapai Tribe, Hopi Tribe, Navajo Nation, Kaibab Band of Paiutes, the Paiute Indian Tribe of Utah, and the Zuni Tribe, uniformly believe that continued uranium mining will result in the loss of their functional use of the area's natural resources.

3. Other Resources

Many of the roads within the withdrawal area are unpaved. The volume of truck traffic expected without a withdrawal could create a major cumulative effect to visual resources resulting from dust emissions of vehicle passage. The withdrawal would likely reduce truck traffic by 98% for exploration, 63% at mines, and 67% related to ore transport.

As a result of projected surface and groundwater effects, wildlife may be impacted. These impacts may result in mortality of aquatic-dependent species such as aquatic plants, algae, benthic invertebrates, amphibians, fish, and other wildlife dependent on these rare surface water resources. Mining activity can result in changes to these habitats that may increase exposure of the biological resources to chemical elements, including uranium, radium, and other radioactive decay products. As discussed by the USGS (Hinck et al. 2010), uranium and other radionuclides can be transported through the environment and contribute to exposure of biological receptors via atmospheric deposition, dust, runoff, erosion and deposition, groundwater and surface water, and the food chain. As a result, biological receptors can be exposed to radionuclides through various pathways, including ingestion, inhalation, cell membrane–mediated uptake, cutaneous absorption, and biotic uptake/trophic transfer. The use of subterranean habitats (e.g., burrows), by birds, reptiles and mammals in uranium-rich areas or reclaimed mining areas, is of particular concern. These species spend a considerable amount of time in subterranean habitats, where individuals could potentially inhale, ingest, or be directly exposed to uranium and other radionuclides. The further identification of biological pathways of exposure and the compilation of the chemical and radiological hazards for these radionuclides are important for understanding potential effects of uranium mining on the northern Arizona ecosystem.

4. Continued Mining

Withdrawal of the entire withdrawal area will not result in cessation of uranium mining. Four mines are currently approved within the withdrawal. In addition, the RFD scenario in the EIS indicates that seven other breccia pipes could be developed if they are located within the boundaries of mining claims which are determined to have valid existing rights. Assuming these pipes were to be developed over the next 20 years, the total number of mines developed would be similar to the pace of development in the 1980s when the price of uranium was high and the region experienced a surge in mining interest. Consequently, even with a full withdrawal, the economic benefits of continued uranium mining could still be realized by local communities. While the lands are withdrawn, studies can be initiated to help shed light on many of the uncertainties identified by USGS in SIR 2010-5025 and by BLM in the EIS.

The withdrawal area is located in the Grand Canyon watershed and its environs and adjacent to the Grand Canyon National Park. As this area contains unique landscapes, is a sacred place for

numerous tribes, and receives visitors from all over the world, it is appropriate to tread carefully. Millions of people living in seven states depend on the Colorado River for drinking water, irrigation use, and industrial use. Unlike the Mineral Leasing Act, which provides the Secretary with discretionary authority to lease oil, gas, and other minerals, the Mining Law operates under principles of self-initiation by the miners themselves. Thus, on lands that are "open" to the Mining Law, individuals can locate new mining claims and sites without seeking prior approval from the Secretary. These mining claims and sites may become vested property interests if the claimant complies with the requirements in the Mining Law for validity. A withdrawal prevents new mining claims and sites from being located and property rights from being established. Withdrawals under FLPMA are made subject to valid existing rights, which means that mining activities in withdrawan areas may still be authorized, provided the mining claim or site is valid.

5. Conclusion

In sum, the RFD projects a greater increase in uranium mining activity over the next twenty years if these lands remain open to location and entry under the Mining Law. Even if all of the lands are withdrawn, such as under the preferred alternative, potentially 11 mines, including the 4 mines currently approved, are projected to be developed over the next 20 years—with as many as six operating at any given time. The EIS states that impacts are possible from uranium mining in the area, including, in particular, impacts to water resources. It also expresses uncertainty with respect to hydrology and groundwater flow in the area as well as the potential effects of increased radionuclides to plants and animals.

Given these factors, a withdrawal is the most appropriate option to influence the pace of reasonably foreseeable hardrock mining, particularly uranium, in this area to not only ensure protection of water resources, but also to ensure sustainable, long term uranium development. As development moves forward on previously-approved mines and mining claims with valid existing rights, the impacts associated with uranium mining on the Grand Canyon watershed will continue to be monitored and studied. Based on any such monitoring and study, it may well be that these lands or a portion thereof will be appropriate for re-opening to the Mining Law at some point in the future. This decision slows the pace of hardrock mineral development in a sensitive area and preserves the remaining uranium deposits in that area for possible future development.

VII. USDA CONSIDERATIONS

Consent by the Department of Agriculture

The Department of Agriculture consents to the withdrawal of approximately 134,454 acres of Kaibab National Forest lands in northern Arizona from location and entry under the Mining Law, subject to valid existing rights. A withdrawal is appropriate to help protect the natural, cultural, and social resources in the Grand Canyon watershed from the adverse effects of the locatable mineral exploration and development.

Kaibab National Forest Land Management Plan

Withdrawal decisions are outside the authority of National Forest Planning, so no plan amendment is required. Any development on existing mining claims that can prove valid existing rights will follow the same standards and guidelines identified in applicable Forest Plans.

VIII. CONSISTENCY WITH ARIZONA FIELD OFFICE RESOUCE MANAGEMENT PLAN (RMP)

The withdrawal decision is consistent with the Arizona Strip Field Office RMP decision DFC-MI-05 which states "Allow the ASFO to remain open to mineral leasing, location and sale except where restricted by wilderness designation, withdrawals or specific areas identified in this RMP."

Decision LA-MI-03 is changed through plan maintenance under 43 CFR 1610.5-4 to update acreages open or withdrawn to mineral entry.

IX. PRACTICABLE MEANS TO AVOID OR MINIMIZE ENVIRONMENTAL HARM

The withdrawal does not result in environmental harm, and is, itself, a practicable means to minimize or avoid such harm. For this reason, no additional means have been adopted for this action.

X. OVERVIEW OF THE ALTERNATIVES

The following alternatives were analyzed in the Northern Arizona Proposed Withdrawal Final EIS:

Alternative A: No Action
The proposed withdrawal would not be implemented and the proposed withdrawal area would remain open to location and entry under the Mining Law. New mining claims could be located, and exploration and mine development proposals would continue to be processed by the BLM or the USFS. This alternative serves as the baseline for measuring the impacts of the other action alternatives and reflects the management situation for all federal land within the withdrawal area at the time that the withdrawal proposal was published in the Federal Register.

Alternative B: Proposed Action (Preferred Alternative)
The proposed withdrawal would be implemented and the entire 1,006,545 acres of federal locatable mineral estate within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. On mining claims where valid existing rights are determined to exist, authorizations for new exploration and mining activities would continue to be processed by the BLM or the USFS.

Alternative C: Partial Withdrawal
Under this alternative, 648,802 acres of federal lands within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. This alternative would withdraw a large proportion of those areas, identified by analysis, having concentrations of cultural, hydrologic, recreational, visual, and biological resources that could be adversely affected by locatable mineral exploration and development. Alternative C would leave the remaining portion of the proposed withdrawal area with isolated or lower concentrations of these resources open to the operation of the Mining Law. The mitigation of potential effects from exploration or development would continue under the applicable surface managing agency regulations.

Alternative D: Partial Withdrawal

Under this alternative, 292,086 acres of federal lands within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. This alternative would withdraw areas, identified by analysis, where there is a relatively high concentration of cultural, hydrologic, recreational, visual, and biological resources that could be adversely affected by locatable mineral exploration and development. Alternative D would leave the remaining portion of the proposed withdrawal area with isolated or relatively low concentrations of these resources open to the operation of the Mining Law. The mitigation of potential effects from exploration or development would continue under the applicable surface managing agency regulations.

Environmentally Preferable Alternative

An Environmentally Preferable Alternative is judged using the criteria in the NEPA and subsequent guidance by the Council on Environmental Quality (CEQ), 1981. The CEQ has defined the environmentally preferable alternative as the alternative that will promote the National policy as expressed in Section 101 of NEPA. This section lists six broad policy goals for all federal plans, programs, and policies as follows:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural, and natural aspects of our National heritage, and maintain, whenever possible, an environment which supports diversity and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on these criteria, identification of the most environmentally preferable alternative involves a balancing of current and potential resource uses with that of resource protection, and the Preferred Alternative best fulfills that role. Therefore, the Preferred Alternative best meets the definition of the environmentally preferable alternative as it minimizes impacts through providing the greatest reduction in the potential impacts of hardrock mining to the environment.

Alternatives Considered But Eliminated From Detailed Analysis

Change in Duration of Withdrawal
An alternative was initially considered to change the time frame of the proposed withdrawal from 20 years to 10 years, or even to 5 years. However, it was determined a shorter term withdrawal does not warrant evaluation as a separate alternative because withdrawals can be renewed by the Secretary of the Interior, provided that the underlying reason for the withdrawal is still valid. Therefore, an alternative that consisted solely of changing the duration of the proposed withdrawal was eliminated from further detailed analysis.

Withdraw Only Lands with Low Mineral Potential
It was suggested early in scoping that a partial withdrawal of only the lands with low mineral resource potential be considered for withdrawal. Such an alternative was suggested as a possible

means to leave the high-potential lands available for mineral development, with a withdrawal to remove other lands with high nonmineral natural resource values from location and entry under the Mining Law. This alternative was eliminated from detailed analysis for several reasons. All the lands in the proposed withdrawal area are rated as having a high potential for uranium resources, lying within what USGS terms Favorable Area A (USGS 2010b). While certain specific areas within the proposed withdrawal area have attracted greater industry interest than others (the North and South parcels in particular), all of the lands involved in the proposed withdrawal are considered to be lands with some of the highest uranium potential in the country. Another factor affecting the feasibility of this alternative is that much of the uranium exploration and development activity to date tends to coincide with many of the areas that have the highest concentration of nonmineral resource values. This is evident when comparing the active and existing mines shown on the figures in this chapter with the areas depicted as having high concentrations of nonmineral resources. This coincidence suggests that mineral potential, or mineral development interest, would not be a useful discriminating factor in designing a partial withdrawal alternative that would meet the purpose of and need for action.

No Withdrawal—Phased Mine Development

This alternative was considered as a way to limit the level of exploration and development activity in place of a withdrawal. Under this alternative, potential impacts to resources in the Grand Canyon watershed would be protected by limiting mineral development to certain areas at certain times, with a limited amount of mineral exploration and development activity occurring at any one time. This "phased development" alternative was eliminated from detailed analysis because it does not address the relevant aspect of the mining issue—the location of the activity—and the effects from specific individual mines on area resources. The RFD scenarios described in Appendix B do not indicate the likelihood of multiple mines overlapping in time or location and creating such extensive cumulative impacts that phased development would be a particularly useful mitigation approach. The alternatives that prohibit mining in areas with sensitive resources under one of the withdrawal alternatives address more directly the issue of impacts from the development of multiple mines. Therefore, the phased mine development alternative, as a separate alternative, was eliminated from further analysis.

Permanent Withdrawal

During scoping, it was suggested that a permanent withdrawal be implemented instead of the proposed withdrawal for 20 years. The rationale for this is that if Grand Canyon resources require protection from the potential adverse effects of mining that protection should be for longer than 20 years.

This alternative was considered but eliminated from detailed analysis. Because a permanent withdrawal would require congressional action, the Secretary does not have the ability to implement a withdrawal for more than 20 years for areas aggregating more than 5,000 acres (FLPMA Section 204(c)).

Change the Mining Law

Many comments received in response to the Notice of Proposed Withdrawal and during scoping suggested that reforming or changing the Mining Law would address potential environmental impacts to the Grand Canyon watershed from development of locatable minerals. While the Mining Law is fundamentally a law for acquiring property rights, rather than an environmental law, presumably the comments were directed at increasing agency discretion to prevent mining. Making or amending law is an explicit function of the Congress, and proposals to change the Mining Law are currently under consideration before Congress. As such, it has been eliminated from detailed analysis.

New Mining Regulations

During scoping, it was suggested by members of the public and the Resource Advisory Council that instead of the withdrawal, the BLM and USFS should consider new locatable mineral exploration and development requirements, along with certain program initiatives, to protect the resources in the Grand Canyon watershed from the potential adverse effects of uranium exploration and development. During alternative formulation, the interagency team identified a number of potential new requirements for uranium exploration and development within the area proposed for withdrawal. Such requirements included processing and review requirements specific to notices and plans of operation, as well as regional monitoring programs, remediation efforts, targeted research initiatives, and coordinated interagency oversight, including the following:

- The BLM and USFS would require a plan of operations for all activity exceeding casual use in the area. Surface disturbance exceeding casual use, including exploratory drilling, could not be conducted under a notice but would require a plan of operations and be subject to NEPA analysis and the opportunity for public comment.
- The BLM and USFS would not approve a plan of operations in which the environmental analysis determines that substantial irreparable harm would occur to significant natural or cultural resources in the Grand Canyon watershed that could not be effectively mitigated. This requirement would be used where the plan of operations was considered unreasonable because it posed a substantial risk of causing impacts that would result in the permanent loss of significant values and irreplaceable resources that could not be mitigated using available technology.
- Before approving a plan of operations, the BLM or USFS would consult with the NPS on the operating and reclamation standards needed to prevent the impairment of Grand Canyon National Park System resources. Such measures would be incorporated into the BLM or USFS decision as conditions of approval when determined necessary to protect National Park System resources.
- The BLM and USFS would assess civil penalties, when necessary, in order to enforce their respective operating requirements.
- A compensatory off-site mitigation program would be established that could be used for regional mitigation at legacy uranium mine sites that require cleanup, or for responding to unanticipated events or conditions at mine operations that are found to be adversely affecting natural, cultural, or social resources in the Grand Canyon watershed.
- A cost recovery program would be used to fund federal agency monitoring and compliance activities determined necessary to oversee individual mining operations.
- The BLM and USFS would undertake an initiative, in conjunction with other federal and state agencies, to establish regional programs to monitor wildlife indicator species for effects resulting from uranium mining.
- The BLM and USFS would undertake an initiative, in conjunction with other federal and state agencies, to establish regional programs to identify, characterize, and monitor area groundwater and spring conditions for effects associated with uranium mining.
- The BLM and USFS would undertake an initiative, in conjunction with other federal agencies and tribal governments, to establish regional programs to identify and monitor other natural and cultural resources for effects associated with uranium mining.
- The BLM and USFS would establish a standing regional interagency workgroup to advise the federal land managing agencies on monitoring, research needs, and operating and reclamation performance standards.

Most of the requirements described above would require changing the BLM and USFS surface management regulations at 43 CFR 3809 and 36 CFR 228A, respectively, in order to be implemented. The rulemaking process is a public process that can be lengthy, and the final outcome is not certain until a final rule is published. Because any new regulations would depend on the outcome of some future regulatory process yet to be initiated, and its ability to be implemented is speculative, a separate alternative considering such measures and their effectiveness was eliminated from detailed analysis.

XI. PUBLIC INVOLVEMENT

Scoping

The scoping process used for the withdrawal EIS was initiated by publication of a Notice of Intent in the *Federal Register* on August 26, 2009. The formal period for submitting scoping comments was from August 26, 2009, through October 30, 2009, although scoping does not end until the EIS is completed.

BLM hosted two public meetings, one in Fredonia, Arizona, and one in Flagstaff, Arizona, in September and October 2009, respectively.

Draft Environmental Impact Statement

The Draft EIS was released to the public for a 45-day review and comment period on February 18, 2011. The review period was initiated by a Notice of Availability (NOA) published in the *Federal Register* by the Environmental Protection Agency, and announced by NOA published in the *Federal Register* by BLM on that date. The comment period was later extended 45 days, to total 75 days, concluding on May 4, 2011.

During the public comment period, four public meetings were held during the week of March 7 to 11, 2011. Meetings were held in Phoenix, Arizona; Flagstaff, Arizona; Fredonia, Arizona; and Salt Lake City, Utah. In addition, community meetings were held for tribes in Moccasin, Arizona, (Kaibab band of Paiute); Peach Springs, Arizona (Hualapai Tribe); and Cameron, Arizona (Western Navajo Nation).

Over the course of the public comment period, 296,339 comment submittals were received, approximately 1,400 of which included individual substantive comments.

Final Environmental Impact Statement

The Final EIS was released to the public on October 28, 2011. A Notice of Availability (NOA) was published in the *Federal Register* by BLM on October 27 and by the Environmental Protection Agency on October 28, 2011. The Final EIS includes responses to comments consistent with 40 CFR 1503.4 and guidance in BLM Handbook 1790-1, section 6.9.2.1. Changes to the Draft EIS for the Final included:

- Identification of the Proposed Action as the Preferred Alternative;
- An adjustment to the boundary of the North Parcel to exclude the Kanab Creek Wilderness Area, which is already withdrawn by Congress;
- An adjustment to the boundary of the North Parcel that corrected a mapping error discovered in the Draft, aligning the boundary along the Grand Canyon Game Preserve boundary.

- An adjustment to the South Parcel Boundary excluding 40 acres within the Navajo Nation that was erroneously included;
- Boundary adjustments noted above resulted in adjustments to Alternative acreages.
- Detailed legal descriptions of the withdrawal alternatives by Parcel included in an appendix;
- Numerous edits to improve the clarity and consistency of the analysis; and
- A refined economic analysis.

XII. ADDITIONAL INFORMATION

Although public comment was not sought, after release of the Final EIS and prior to publication of this Record of Decision, BLM received several hundred form letters and postcards supporting the withdrawal in the Preferred Alternative. In addition, two letters that contained substantive comments were received from industry representatives. The letters received during the review period were considered in making the decision on the withdrawal, and following are responses to substantive comments submitted.

One of the comments received stated that multiple commenters during the public comment period provided "…new information regarding the mineable uranium endowment of the withdrawal area that is about five to six times greater than what the BLM reported in the DEIS, new information regarding blind breccia pipes and their additional contribution to the uranium endowment of the withdrawal area above that previously expected by federal agencies…" BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS, which had already considered this point and noted that:

> While the commenter provided a statistical correlation of known mineralized breccia pipes to underlying geologic structures, no geologic explanation or new information was provided to justify the hypothesis that mineralized breccia pipes occur preferentially on the proposed withdrawal lands.
>
> The USGS Report is a peer-reviewed publication that provided the estimated uranium endowment for the proposed withdrawal area. While some commenters have presented alternate or supplemental approaches to assessing the uranium endowment from that provided by USGS, these alternate approaches have not been developed or peer reviewed to the extent that they can replace or supersede the USGS endowment assessment presented in SIR 2010-5025. As with many scientific fields, new information is constantly being collected which leads to new or refined conclusions. However, at present, the USGS Report contains the best credible information available regarding the uranium endowment estimate and was therefore used as the basis for the reasonably foreseeable development scenarios in the EIS." (Northern Arizona Proposed Withdrawal final EIS Table 5.6-4, page 5-169.)

Because the USGS report relied on published and peer reviewed data and was peer reviewed itself, BLM considered it the most credible information available regarding the uranium endowment.

One commenter also stated that the EIS should have contained an analysis of the reduction in greenhouse gas (GHG) emissions resulting from use of the mined uranium for electrical production in place of other fuels. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS, which noted that

> The EIS does not include an analysis of GHG "offsets" (i.e., uranium as a replacement for other energy sources) for several reasons. First, there is no guarantee that uranium mined from the proposed withdrawal area would be allocated exclusively to energy production. Some percentage may go to defense uses, medical applications, or other uses. In addition, with notable exceptions such as Iran and North Korea, processed uranium may be legally sold on the open market and shipped anywhere in the world. Finally, there is no assurance uranium would be used to replace—rather than simply augment—other energy sources such as coal, natural gas, hydroelectric, solar, or wind power. The analysis the commenter requests is beyond the scope of the EIS because the proposed action is a withdrawal of certain lands from location of hardrock mining claims that might result in the production of uranium, not the approval of any particular plan of operations or even consideration of the sitting and/or development of a nuclear reactor that might use uranium to produce electricity.

In sum, any attempted analysis of possible "offsets" from GHG emissions would be speculative.

A commenter also stated that the Arizona Wilderness Act of 1984 was not mentioned in the Draft EIS. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS which does recognize the act, and notes its effect in the area. The Arizona Wilderness Act of 1984 represented an historic piece of legislation negotiated by a coalition of people representing diverse views and interests. Neither the Act nor its legislative history contain any indication of an intent to remove from the Secretary the authority to withdraw land provided under FLPMA. The purpose of the Arizona Wilderness Act was to designate certain lands for inclusion in the National Wilderness System. This withdrawal, in contrast, is focused strictly on whether to withdraw lands from location and entry under the Mining Law, subject to valid existing rights. The withdrawal does not designate any lands within its boundaries as wilderness and has no impact on activities in the withdrawal area other than location and entry under the Mining Law, including activities that could impair wilderness characteristics. Nothing in the Arizona Wilderness Act demonstrates intent to resolve the wilderness question in Arizona for all time so as to prohibit future wilderness designations. Finally, most of the lands covered by this withdrawal were never considered or reviewed by Congress for possible Wilderness designation as part of the Arizona Wilderness Act because BLM inventory in the 1970s determined they do not possess characteristics of wilderness.

Another commenter asserted that the Purpose and Need changed frequently through the NEPA Process. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS because the Purpose and Need in the Draft EIS was derived directly from the stated purpose in the Secretary of Interior's *Federal Register* Notice of July 21, 2009, and refined to describe the agency's Purpose and Need in accordance with BLM NEPA Handbook H-1790-1. Once published in the Draft EIS, the Purpose and Need remained consistent throughout the EIS process.

Two commenters stated that the mining analysis from the RMP for the Arizona Strip BLM lands (completed in 2008) was not mentioned in the Northern Arizona Proposed Withdrawal EIS. BLM determined that these comments did not warrant any additional analysis or changes to the Final EIS. Although the RMP was completed relatively recently, uranium mining was not a major issue at the time it was being written. The RMP did not contain an analysis to the depth needed to satisfy the Purpose and Need of the Northern Arizona Proposed Withdrawal, which in part responded to the significant increase in the location of mining claims in the area at the time the planning process was completed. Finally, closing of lands to location and entry under the Mining Law is, by law, not a

decision that can be made through BLM's planning process (see section 202(e)(2) of FLPMA, 43 U.S.C. § 1712(e)(3)). The withdrawal process, which culminates in this ROD, is the appropriate decision-making process to evaluate the potential impacts of a closure to location and entry under the Mining Law.

Finally, two commenters stated that new information provided by themselves and others during the review period pertaining to the uranium resource and the changes to the EIS from Draft to Final constitute sufficient "new information" to warrant a Supplemental EIS. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS. As noted in Section 1.5.4 of the Final EIS, "most changes made to the EIS were editorial or clarified the EIS in response to public comments. However, in response to public comment and to correct errors discovered after release of the DEIS, the sections discussed below did undergo some changes beyond those of an editorial or clarifying nature." As explained further in the FEIS, BLM did not substantially alter the Proposed Action or any of the alternatives in a way that is relevant to environmental concerns. In addition, none of the information relied upon in support of these changes constitutes significant new information relevant to environmental concerns and bearing on the proposed action or its impacts. Therefore, supplementation of either the DEIS or FEIS is not required under CEQ regulations at 40 CFR 1502.9(c). None of the comments resulted in a substantial alteration to the Proposed Action and, to the extent any of them relied on new information, that information was not sufficient to show that the Proposed Action would affect the quality of the human environment to a significant extent not already considered.

Consultation with U.S. Fish and Wildlife Service

Consultation with the U.S Fish and Wildlife Service (FWS) in compliance with section 7 of the Endangered Species Act was conducted. A memorandum was sent on August 8, 2011, from the Arizona Strip District Manager requesting concurrence with a finding that "the Proposed Action May Affect, but is Not Likely to Adversely Affect" the 12 listed species within the Proposed Withdrawal area. BLM received a memo from the FWS concurring with that finding dated August 29, 2011. This completed the Section 7 consultation process.

Consultation with Arizona State Historic Preservation Officer

Consultation with the Arizona State Historic Preservation Officer (SHPO) in compliance with section 106 of the National Historic Preservation Act was conducted in coordination with the EIS process. A letter was sent to the Arizona SHPO on June 16, 2011, requesting concurrence with the determination by the BLM that the Proposed Withdrawal "…does not have the potential to cause adverse effects on historic properties." The Arizona SHPO responded with his concurrence on June 20, 2011. This completed the Section 106 process.

Tribal Participation

In August 2009, the BLM and USFS initiated government-to-government consultation via letter with the following American Indian governments regarding the proposed withdrawal: Chemehuevi Tribe, Colorado River Indian Tribes, Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, Las Vegas Paiute Tribe, Moapa Band of Paiute Indians, Pahrump Band of Paiutes, Paiute Indian Tribe of Utah, Pueblo of Zuni, San Juan Southern Paiute Tribe, Navajo Nation, White Mountain Apache Tribe, Yavapai-Apache Nation, and Yavapai-Prescott Indian Tribe. Seven tribes elected to actively participate in consultation on the project: the Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, Paiute Indian Tribe of Utah, Pueblo of Zuni, and Navajo Nation. Throughout the EIS process, nearly 40 meetings were held with these tribes.

Cooperating Agencies

The CEQ regulations at 40 CFR 1508.5 define a cooperating agency as any federal agency (other than the lead agency) and any state or local agency or Indian tribe with jurisdictional authority or special expertise with respect to any environmental impact involved in a proposal. Because of the size of the proposed withdrawal area and the resources potentially affected by the proposed withdrawal or alternatives, 15 agencies (federal, state, tribal, and county) with jurisdictional authority and/or applicable special expertise cooperated in the development of this EIS.

The cooperating agencies assisted with EIS preparation in a number of ways, including conducting or providing studies and inventories, reviewing baseline condition reports, identifying issues, assisting with the formulation of alternatives, and reviewing Preliminary Draft EIS text and other EIS materials. Not all of the cooperating agencies participated in all aspects of the EIS preparation. As lead agency, the BLM is responsible for the content of the EIS.

Coordination with Local Governments/Consistency with Local Government Plans

The BLM coordinated with local governments by attending meetings conducted by local government organizations and by maintaining open channels of communications between the Arizona Strip District Manager and elected county officials. Four Southern Utah Counties and two Northern Arizona counties participated as Cooperating Agencies. In addition, Washington, Kane, San Juan and Garfield Counties in Utah and Mohave County in Arizona formed the AZ/UT Coalition of Coordinating Counties. This coalition held four meetings, three of which were attended by managers from the BLM, and/or USFS. These meetings were held with industry representatives and others in attendance to discuss the withdrawal and to coordinate comments on the EIS and directly to the Secretary of the Interior. The meeting/hearing dates attended by BLM or National Forest management were: March 21, 2011, meeting in St. George, Utah; April 18, 2011, meeting in Fredonia, Arizona; and September 7, 2011, hearing in St. George, Utah. At the meeting held on April 18, 2011, the Coalition passed a resolution supporting Alternative A (No Action) as the Preferred Alternative.

The withdrawal affects federal lands in Coconino and Mohave counties in Arizona. Review of plans in those counties indicates that the withdrawal is not inconsistent with either plan. However, Mohave County passed a resolution on May 12, 2008, (County Resolution 2008-10) that supports multiple-use of public lands in general, and lists uranium mining as one of those uses. It also passed a resolution in February, 2009, (County Resolution 2009-040) that supports continued uranium mining on the Arizona Strip. Coconino County passed a resolution in 2008, (County Resolution 2008-09) opposing uranium mining in the county. The withdrawal will be consistent with the Coconino County Resolution 2008-09, but inconsistent with Mohave County Resolutions 2008-10 and 2009-040.

FEDERAL COOPERATING AGENCIES

- U.S. Forest Service
- National Park Service
- U.S. Fish and Wildlife Service
- U.S. Geological Survey

STATE OF ARIZONA COOPERATING AGENCIES

- Arizona Game and Fish Department
- Arizona Geological Survey
- Arizona Department of Mines and Mineral Resources
- Arizona State Land Department

TRIBAL GOVERNMENTS AS COOPERATING AGENCIES

- Hualapai Tribe
- Kaibab Band of Paiute Indians

COUNTY GOVERNMENTS AS COOPERATING AGENCIES

- ***Coconino County, Arizona***: The majority of the withdrawal area is located in Coconino County. Arizona Department of Commerce (ADOC) official population estimates for Coconino County are 136,735 for July 1, 2009 (ADOC 2009b). Coconino County's commercial economy is largely tourism-based accounting for a large percentage of the county's jobs and tax income.

- ***Mohave County, Arizona:*** A large portion of the withdrawal area north of the Grand Canyon is in Mohave County. The official ADOC population estimates for Mohave County are 206,763 for July 1, 2009 (ADOC 2009c). Leading industries in the county are retail trade, tourism, construction, and health care and social services.

- ***Kane County, Utah:*** Because of its proximity to the withdrawal area and its historic dependence on the Arizona Strip as a significant source of income and employment for its residents, Kane County participated as a cooperating agency in the EIS process. Kane County had an estimated population of 6,577 in 2008 (U.S. Census Bureau [Census Bureau] 2008a). Like Coconino County, Kane County's economy is primarily tourism based. Lake Powell, Zion National Park, and other recreation sites attract tens of thousands of visitors each year. As a result, the leisure/hospitality services sector is the leading employment sector. The mining industry is also a significant employer in Kane County. Mining wages and salaries per job have consistently been the largest in the study area and have experienced steady growth from 1980 through 2000. However, it should be noted that the number of mining jobs in Kane County has been low since at least 1980 (BLM 2008c).

- ***San Juan County, Utah***: San Juan County had an estimated population of 15,055 in 2008 (Census Bureau 2008a). One of the major employment sectors driving San Juan County's economy is mining. Denison Mines (USA) Corporation (Denison) and the recently closed Lisbon Valley Copper Mine are located in the county and have both historically, as well as recently, provided employment for county residents. The White Mesa Uranium Mill, located 6 miles south of Blanding, is used for processing uranium ore mined in the proposed withdrawal area. The proposed withdrawal or alternatives could change the amount of ore transported to the mill. Because of its economic connection with mining in the proposed withdrawal area, San Juan County participated as a cooperating agency in the EIS process.

- ***Washington County, Utah:*** Washington County had an estimated population of 137,589 in 2008 (Census Bureau 2008a). The Arizona Strip (where the North and East parcels are located) has historically been recognized as a primary source of income and employment for many of southern Utah's residents. For this reason, Washington County was a cooperating agency in the EIS process. Over the past decade, Washington County has experienced major population growth. From 1990 to 2008, the total population increased by 183.3% and is expected to continue growing. Manufacturing, wholesale and retail trade, construction, and tourism- and recreation-related services are the leading industries. Nearby Grand Canyon National Park, Zion National Park, Dixie National Forest, and Snow Canyon State Park are important recreational attractions.

- ***Garfield County, Utah***: Garfield County had an estimated population of 5,172 in 2010, up from 3,980 in 1990 (Census Bureau 1990; 2008a). It is located in south central Utah, north of Kane County and west of San Juan County and includes large swaths of open desert as well as nationally designated scenic places such as Bryce Canyon National Park, Grand Staircase-Escalante National Monument, Capital Reef National Park, and a portion of Canyonlands National Park. Garfield County joined the EIS process as a cooperating agency in August 2011. The Shootaring Canyon Uranium Processing Facility (mill) is located in Garfield County near the small town of Ticaboo. The mill has been in stand-by status since 1982.

XIII. FINAL AGENCY ACTION

Pursuant to section 204 of the Federal Land Policy and Management Act of 1976, it is my decision to withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona, as depicted on Map 1, for a 20-year period. My approval constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4. Any challenge must be brought in federal district court.

Ken Salazar 1/9/2012

Ken Salazar
Secretary
U.S. Department of the Interior

Date

Appendix B

LOCATABLE MINERAL RESOURCES— REASONABLY FORESEEABLE DEVELOPMENT SCENARIOS

B.1 INTRODUCTION

B.1.1 Purpose

The purpose of the reasonably foreseeable development (RFD) scenarios presented in this appendix is to provide a prediction of the level and type of reasonably foreseeable future locatable mineral exploration and development that could occur in the proposed withdrawal area. A predicted level of activity is first prepared for the No Action Alternative (Alternative A, Section B.8.1). The resulting development scenario is then adjusted based on the constraints of each alternative (Sections B.8.2 through B.8.4) and provides a uniform set of assumptions about reasonably foreseeable future locatable mineral exploration and development. These activity assumptions, in conjunction with existing conditions, serve as the basis for the impact assessment of each alternative as presented in Chapter 4 of the environmental impact statement (EIS). The RFD is by its nature speculative in attempting to predict future types and levels of locatable mineral exploration and development. The important feature of the RFD is not its numeric accuracy when it comes to the number of drill holes, ore tonnage, mines, or acres, but rather that it uses consistent assumptions to portray the relative levels of reasonably foreseeable future actions across the alternatives.

The RFD analysis is organized first with a discussion of provisions contained in the General Mining Law of 1872 (Mining Law), the legal framework under which mineral exploration and development occur in the study area (Section B.2). This is followed by an outline of the steps involved in developing a mineral deposit, beginning with the existing regulatory framework (Sections B.3 and B.4). Current activity levels are profiled (Section B.5), followed by an assessment of development potential (Section B.6) and future trends and assumptions for commodity markets, technology, and legal frameworks (Section B.7). Finally, predictions regarding the anticipated mineral exploration and development are presented, along with likely variation by EIS alternative (Section B.8). A summary of the RFD analysis for each alternative is included in Section B.9, along with a summary of all assumptions used to develop this analysis.

B.1.2 Scope

An RFD scenario is a prediction based on the known or inferred locatable mineral resource capabilities of the lands in the proposed withdrawal area using a set of assumed future economic, regulatory, and legal conditions. As such, it is subject to change as additional mineral resource data become available or as the economic, regulatory, and/or legal circumstances change. While historic mine development can give some idea of future development, there are other factors that affect the pace of future development. The pace of future development may not mimic that of the past because of changing prices or markets (see the subsection under B.8.1 on uncertainty factors), changing technologies that may improve exploration success, or the possibility of being able to improve mining success by building on information collected through exploration in years past. These factors contribute to a different assumed future development pattern than was experienced in the past.

The scope of this RFD analysis incorporates only locatable minerals; salable and leasable resources are not considered because they would not be subject to the proposed withdrawal. The mineral development

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claims and using professional judgment and knowledge, of breccia pipes that may represent targets for future mining proposals.

B.6 MINERAL POTENTIAL

Two factors are assessed in order to determine the mineral potential of an area: occurrence potential and development potential. Occurrence potential is the likelihood of the presence of locatable minerals, regardless of administrative, geographic, or economic constraints on development. Development potential is the ability to physically access and mine those deposits. In the proposed withdrawal area, there are few geographic constraints on the development of breccia pipes. Even where geographically unfavorable (i.e., canyons or steep slopes), the mine site can be located elsewhere and the ore bodies can be developed by lateral techniques.

Occurrence potential for uranium within the proposed withdrawal area has been detailed previously by Finch et al. (1990). The entire proposed withdrawal area is included in "Favorable Area A," which is the area that has the highest level of development potential for uranium. Similarly, based on the criteria set forth in the BLM Manual 3031, the mineral potential classification for uranium is high occurrence with high level of certainty throughout the entire proposed withdrawal area. The geological environment, reported mineral occurrences and/or geochemical/geophysical anomaly, and known mines/deposits indicate a high potential for uranium resources. Available data provide abundant direct and indirect evidence to support the possible existence of mineral resources.

Based on historic discoveries and mine development, the North Parcel is considered to be the most prospective, followed by the South Parcel and then the East Parcel (BLM 2010). Thirty confirmed breccia pipes occur on the North Parcel; five of these have already been mined out, and three have been developed or are currently being mined. Fourteen confirmed breccia pipes occur on the South Parcel; none of these have been mined, and only one has been developed. The East Parcel contains only a single confirmed breccia pipe.

Development potential is also tied to the regulatory process. Development of a breccia pipe requires compliance with all federal, state, and local laws and regulation, which includes obtaining BLM or Forest Service approval on federal lands and agency completion of environmental analysis under NEPA. Some permitting, such as permitting for dredge and fill under Section 404 of the Clean Water Act, is highly site-specific and may increase the difficulty of developing a specific breccia pipe. A full list of required permits for mine development is included in Attachment B-1.

B.7 FUTURE TRENDS AND ASSUMPTIONS

B.7.1 Commodities of Interest

The scope of this RFD analysis incorporates only locatable minerals; salable and leasable resources are not considered because they would not be subject to the proposed withdrawal. The primary mineral commodity of interest in the area will continue to be uranium. Other precious metals and rare earth metals could be recovered from breccia pipe deposits concurrent with uranium mining, including gold, silver, copper, and vanadium. However, values from recovery of these metals are assumed to not be sufficient to drive mine development.

B.7.2 Commodity Markets

The economics of mining in the proposed withdrawal area will continue to be driven by the relationship between uranium production costs and market price. While production costs can be controlled or anticipated through management and technology, the significant unknown factor will continue to be the price of uranium. The overall profitability of an operation, and hence the level of activity at the prospecting, exploration, and mining phases, for development of breccia pipes will be closely related to the price of uranium.

Uranium has been subject to constant variations in price, supply, and demand over the past half-century as a result of several factors, including the amount of uranium supplies worldwide, dollar value, and energy demand. Figure B-3 illustrates the relationship between uranium requirements (or demand, represented by the blue line) and uranium production (or supply, represented by the red line). The peak production of uranium occurred around 1979–1980.

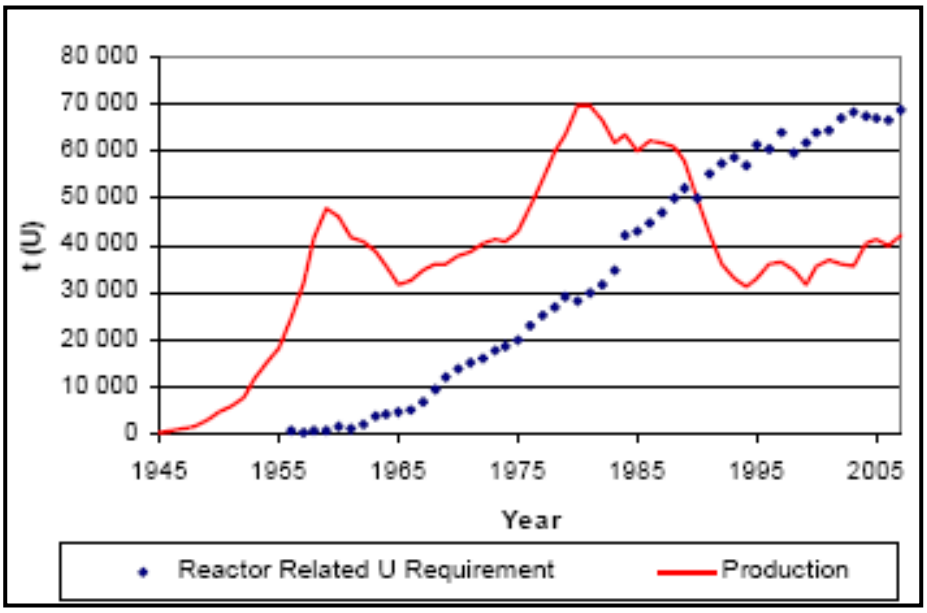

Figure B-3. Worldwide annual production and reactor-related requirements (1945–2005) (Source: International Atomic Energy Agency 2009).[2]

Worldwide uranium demand has climbed steadily since the 1950s, more recently leveling off at approximately 70,000 tons of uranium per year. Annual uranium production far exceeded uranium demand until about 1990. Since 1990, driven by a collapse of uranium commodity prices (see Figure B-3), production has been significantly less than demand; worldwide, uranium stockpiles produced before 1990, rather than current production, are being used to fully meet uranium demand.

Figure B-4 displays uranium prices (U.S. dollars per pound [$/lb]) on the spot market over the past 15 years. Uranium prices throughout the 1990s remained low, less than $20/lb, following the collapse of uranium commodity prices in the 1980s and the influx of various stockpiled sources of uranium into the marketplace, including weapons-grade enriched uranium from the former Soviet Union and U.S.-held government stockpiles. Only since 2003 have uranium prices risen. The peak in 2007 was driven largely by global speculation, and prices have since settled to approximately $40/lb.

[2] U = uranium.

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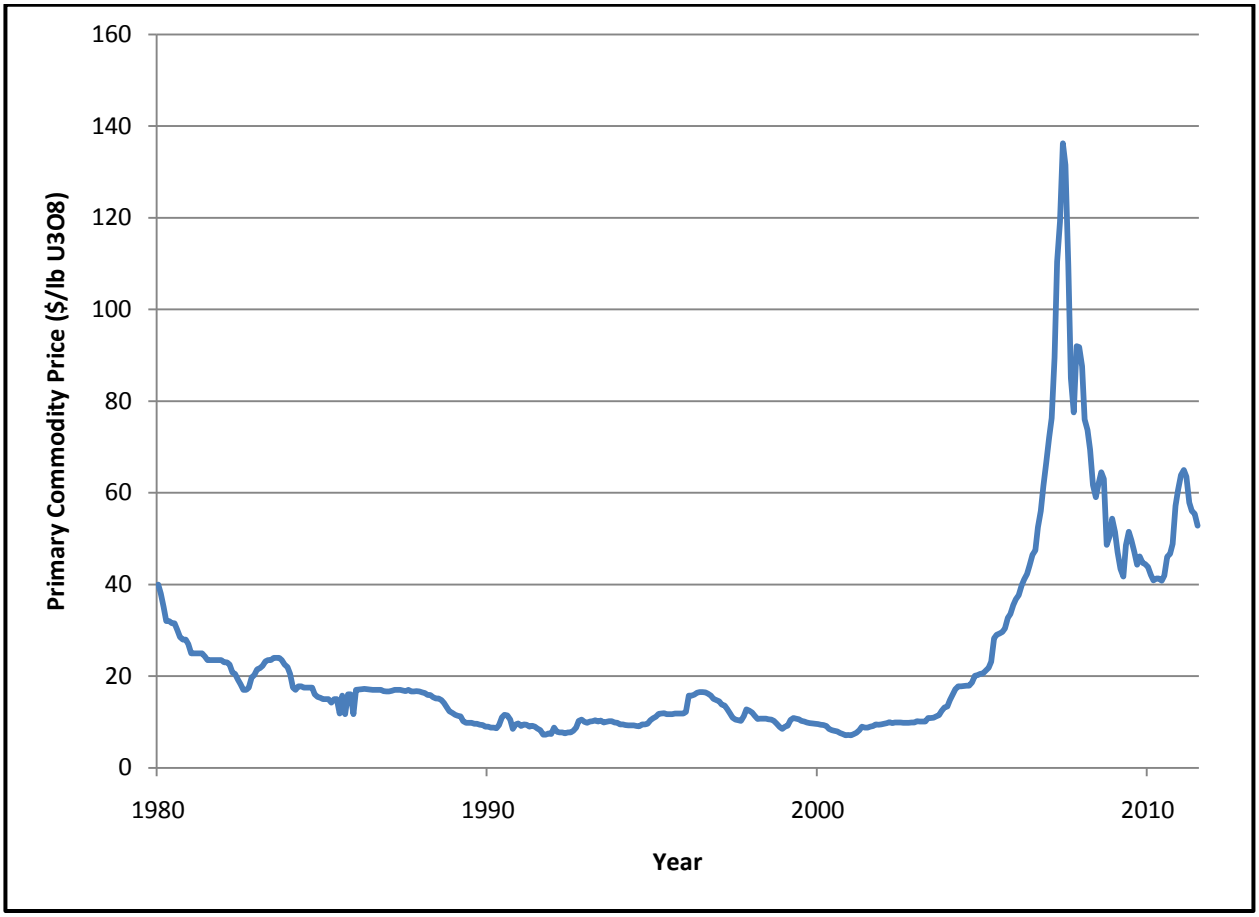

Figure B-4. Historical uranium market prices (U.S. dollars per pound) (Source: International Monetary Fund 2011).

It should be noted that the spot market may not be an accurate indicator of long-term contract prices for uranium, which are what determine the economics of mining specific breccia pipe ore bodies. For the purposes of the RFD scenarios, it is assumed that uranium prices will remain above this level. Historically, price changes have been the primary reason for mining companies to operate under interim management; therefore, based on the assumption that prices will remain above this level, the mines considered in the RFD are not likely to operate under interim management.

The approach of assuming a floor for uranium commodity prices equal to current levels was considered appropriate because this price level is relatively conservative and therefore does not overestimate the economic impacts of mining based on short-term price spikes, and because at this price it is known that mining uranium in breccia pipe deposits is economically viable. While the exact dollar amount for uranium is not expected to remain constant over the next 20 years, the assumption is that prices would generally remain sufficient to support mining operations. Given potential changes in demand, supply, and unforeseen world events, exact price changes simply cannot be predicted with any degree of accuracy.

In the past, uranium prices have been subject to wide fluctuations, as seen during the speculative period that peaked in 2007, when spot prices reached $140/lb and long-term prices approached $100/lb. During the previous 20 years, long-term and spot prices were around $10/lb. The RFD assumes that prices will remain constant at current levels for the next 20 years. Prices play a critical role in the extent to which uranium deposits are developed in the United States and in other parts of the world. Relatively higher prices would be anticipated to stimulate additional mining, from both new and existing mines. Additional

production would be expected to act as a moderating force on additional price increases. Deviations from this assumption could affect several parts of the RFD, such as the total number of mines and the total uranium mined, which would then carry through to the evaluation of impacts. This in turn would drive greater differences in development between alternatives.

One of the drivers of uranium prices is world supply, both from producing uranium mines and secondary stockpiles. The top five uranium producers (Kazakhstan, Canada, Australia, Namibia, and Russia) accounted for 75% of world supply in 2008 and 85% in 2009 (World Nuclear Association 2010a). The United States produces about 3% of world supply. An increase in production by the top producers would be expected to put downward pressure on prices. These changes would affect the other impacts described in the EIS. For example, reduced mining activity may lead to reduced impacts under the No Action Alternative, such as fewer particulate matter emissions, less disturbance of habitat and cultural, historical, or Indian resources, and less displacement of recreation activity. This in turn reduces the differences between the No Action Alternative and any of the action alternatives (B, C, or D).

Total world uranium production met 68% of demand in 2008, and 76% in 2009 (World Nuclear Association 2010a); demand in excess of supply can be expected to bid up prices. Plans for new reactors could also increase demand and bid up prices. As of October 2010, the United States had 104 operable reactors, with one more reactor under construction, and nine planned and 22 proposed over the next 20 years. Worldwide, there were 441 reactors operable in October 2010, with 58 more under construction, and 152 planned and 337 proposed over the next 20 years (World Nuclear Association 2010b). This increase in demand may be met by current supply, or it may outstrip supply and bid up prices.

B.7.3 Technology

In general, advances in technology can improve mineral exploration and development success. With respect to exploration, advances in geophysical and geochemical survey methods, tools, and procedures will continue as more and better equipment is made available. The effect of these advances will be a more accurate and rapid evaluation of regional and local areas, with better discrimination of target areas and a more accurate assessment of a deposit's potential. With respect to mining and mineral processing efficiency, improvements in technology, coupled with experience, can decrease costs, partially offsetting declines in commodity markets or allowing for lower cutoff grades when identifying potential ore deposits.

With respect to breccia pipe uranium deposits, such changes may not be a major factor in identifying new deposits since northern Arizona breccia pipe deposits are not marginal in terms of percent uranium, being already higher in grade than 85% of uranium deposits worldwide. Where uranium mineralized deposits exist, they can be classified as either minable or not, without having to rely on anticipated improvements in technology.

B.7.4 Industry Mining and Milling Capacity

Underground mining of uranium requires a high degree of specialized expertise, a large capital investment in equipment and infrastructure, and available mill capacity for processing of ore. Although multiple companies are actively pursuing exploration associated with breccia pipe uranium deposits in the proposed withdrawal area, only a single company is currently engaged in actual mining activities. Because of the high degree of specialization and overhead, there is unlikely to be a large number of companies actively engaged in mining activities at any one time.

Furthermore, the average life span of a breccia pipe uranium mine is relatively short, generally lasting only about 5 years from development through operations and reclamation. Investing large amounts of

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capital in redundant equipment is not economically viable when existing equipment can be effectively moved from mine to mine after only a few years of operation. The inherent economic limitations in the uranium industry will tend to limit the concurrent development of mines. This limitation is discussed in more detail under Alternative A.

B.7.5 Legislative Changes

There are several areas of legislative change that may affect how the hardrock mineral resources in the proposed withdrawal area are developed. The first is the ongoing effort to amend, repeal, or reform the Mining Law. This could result in anything from simply leaving it as is to a complete restructuring into a leasing royalty system similar to what is now used for coal or oil and gas. The effect of major changes in the Mining Law on mineral activity in the proposed withdrawal area, while uncertain, would likely be a decrease in the amount of exploration activity and hence mine development, at least in the short term, as operators adjust to the new requirements. A perhaps more extensive effect would be a decrease in the ultimate number and size of mines that could be developed if a royalty on mineral production created a corresponding increase in operating costs, raising the cut-off ore grade. For the purposes of this analysis, it is assumed that the Mining Law would not be changed significantly, the right of self-initiation would be maintained, and there would be no federal royalty system imposed. It is also assumed that while the exploration and mine review and approval process would continue to receive greater scrutiny and legal challenge, claimants or operators would still be able to obtain the necessary approvals.

Changes in the way mining property and production are taxed could also have a substantial effect on the viability of individual operations. No changes in state tax schedules are anticipated. In this analysis, it is assumed that there will be no federal royalty.

Changes in state environmental permitting through ADEQ, ADWR, and EPA could also have a substantial effect on the viability of individual operations. No major change to the present state regulatory framework is anticipated.

B.8 FUTURE LOCATABLE MINERAL EXPLORATION AND DEVELOPMENT

Estimates of reasonably foreseeable future locatable mineral exploration and development are presented below for each alternative, starting with the No Action Alternative. These projections include estimates of the following:

- Number of mines,
- Amount of exploration activity,
- Miles of new roads,
- Miles of power lines,
- Number of haul trips,
- Acreage of surface disturbance, and
- Water use.

The time frame used for the projection of future mineral activity is 20 years. This is for several reasons: first, the Proposed Action (Alternative B) is for a 20-year withdrawal (the limit of the Secretary's withdrawal authority), and using this time period allows for a direct comparison between alternatives; and second, the longer the time frame used for analysis purposes, the more speculative and less reliable the

DENISON MINES

CANYON MINE

DENISON MINES (USA) CORP.

AUGUST 22, 2011

DENISON MINES

Discussion Points

- Overview of Facility
- Permitting Status
  - History of Regulatory Approvals
  - Status of State Regulatory Approvals
- Outstanding Matters
- Planned Operations

DENISON MINES

Corporate History

- Claims staked in 1978 by Gulf Mineral Resources
- Canyon Mine claims acquired by Energy Fuels Nuclear Inc. from Gulf in 1982
- Denison Mines (USA) Corp. ("Denison") acquired the Canyon Mine (the "Mine") from Energy Fuels in May 1997
- Prior to December, 2006, Denison was named International Uranium (USA) Corporation

DENISON MINES

Facility Status

- All major surface structures are in place:
  - office, warehouse, head frame, hoist
  - evaporation pond
  - water supply / groundwater monitoring well
  - modified 500 years surface water diversion
- Shaft has been collared and sunk to 50 feet
- All power lines are in place
- No further surface structures or surface work is required except:
  - upgrade evaporation pond liner
  - site security
  - ore and waste rock pads

DENISON MINES

USFS Regulations

- In 1992, active operations were suspended at the Mine due to a severe drop in uranium prices
- Since that time, the Mine has been maintained in a "neat and safe condition" consistent with USFS regulations
- A bond for mine site reclamation has been maintained at all times, consistent with USFS regulations. The bond has been updated twice since originally issued
- Energy Fuels and Denison did so in order to be able to resume operations at the Mine in the future, consistent with the ROD and Plan

Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

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UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MANUAL TRANSMITTAL SHEET	Release 3 - 332 Date SEP 11 2007

Subject: H-3890-1 - HANDBOOK FOR MINERAL EXAMINERS – (Internal)

1. Explanation of Material Transmitted: This release updates and revises the text of the Handbook for Mineral Examiners, H-3890-1. The revised Appendices were previously issued as release 3-322 of 09/01/2004. The Handbook and its components are being issued in both an 8 ½ x 11 desktop edition and in a pocket edition for effective use in the field.

2. Reports Required: None.

3. Material Superseded: The Material superseded by this release is listed under "REMOVE" below. No other directives are superseded.

4. Filing Instructions: The field pocket edition is filed in the "red binder" Manual sets with Manual Section 3890. Use the existing special binders previously provided to house the pocket edition of the Handbook. The 8 ½ x 11 edition is to be filed behind Manual Section 3890.

REMOVE:	INSERT:
Title Page (rel. 3-322)	Title Page
Table of Contents (rel. 3-322)	Table of Contents
Text (All rel. 3-234)	Text (All)
	Appendix VI A
(Total: 37 Sheets)	(Total: 64 Sheets)

Assistant Director
Minerals, Realty, and Resource Protection

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

H – 3890 -1 - HANDBOOK FOR MINERAL EXAMINERS

Policies, Procedures and Standards for Conducting Mineral Examinations of Mining Claims and Sites on Federal Land

and

Appearing as an Expert Witness in an Administrative Hearing before the Department of the Interior

Third Edition (Revised) 2006

by

The Mineral Examiner's Certification Panel [1]

1 Burrett Clay, Chairman; Matthew Shumaker, Executive Secretary; Roger Haskins, Member, BLM; Roy Drew, Member, BLM; Victor Dunn, Member, BLM; Glenwood Kerestes, Member, BLM; John Burghardt, Member, National Park Service.

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Sources and Acknowledgements

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Chapter B – Blackadar, R. G., (1972 rev. ed.): Guide for the Preparation of Geological Maps and Reports; Geological Survey of Canada, Department of Energy, Mines, and Resources, pp. 11-17.

Chapter C – Bureau of Land Management, Handbook for Mineral Examiners (1957–1989).

Chapter D – Palmer, H.S., (1918): New Graphic Method for Determining the Depth and Thickness of Strata and the Projection of Dip; U. S. Geological Survey Professional Paper 120, U. S. Dept. of the Interior, 1918, pp. 123, 128, plates XIV - XVI.

Chapter V – Evaluating a Mineral Deposit

A. General Requirements and Process.

The objective of evaluating a mineral deposit is to determine if the operator has a reasonable prospect of success in developing a valuable mine.[1]

1. Test for Discovery.

a. Prudent person rule. In patent, validity and related examinations, the standard that you must apply is the prudent person rule, established in Castle v. Womble, supra:

". . .where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby 'all valuable mineral deposits in lands belonging to the United States . . . . are . . . . declared to be free and open to exploration and purchase.' For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do."

b. A validity examination is not an appraisal. An appraisal and a validity report may rely on similar data. However, the purposes of and analyses in each document differ. An appraisal is intended to determine the fair market value of a property right for sale, trade, or taxation purposes. A validity examination is intended to determine whether a claimant has discovered a valuable mineral deposit under the Mining Law. Appraisals generally reflect risk assessments and the use of higher rates of return than does a validity examination, among other distinctions.

c. Factors to consider. You must consider a number of factors to estimate a deposit's probable economic viability, including:

- The grade, tonnage, and estimated gross value of the mineral deposit.
- All non-sunk capital costs, such as costs of equipment, buildings or other infrastructure at the mine (sunk costs are described below)
- All costs incidental to operating the mine, processing the ore, and reclaiming the site.
- Marketing costs.

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1 Castle v. Womble, 19 Pub. Lands Dec. 455 (1894).

- All applicable Federal and State taxes, including but not limited to income taxes, depletion allowance, depreciation allowance, property taxes, and severance taxes.

d. Grouping claims into logical mining units[2] is permitted for verifying discovery.

(1) Mining claims may be analyzed as a group for the purpose of ascertaining whether a marketable discovery exists, so long as each mining claim recommended for patent contains mineralization in sufficient quality and quantity that it can be reasonably expected to be developed profitably under an overall mining plan for the entire deposit. Schlosser v. Pierce, 92 IBLA 109, 130 (1986); see also United States v. Cactus Mines Ltd., 79 IBLA 20 (1984), In Re Pac. Coast Molybdenum Co., 75 IBLA 16 (1983).

(2) For a group of mining claims covering the same mineral deposit, you may treat the mining claims as a single unit for purposes of cost estimation and economic analysis, and validity determination.[3] After you verify that the claimant can show a physical exposure of the valuable mineral deposit on each claim in the group, you may treat the claim group as a logical mining unit for the remainder of the mineral examination. Each claim need not stand alone economically, but each claim must contribute to the overall value of the deposit. In general terms, each claim must have sufficient tonnage at or above the cut off grade for the deposit as a whole to justify extraction. This means that when you are analyzing marketability for a group of claims, "the recovery expected from each claim must not only exceed the costs of mining, transporting, milling, and marketing the particular deposit on that claim but each claim must also bear a proportionate share of the development and capital costs attributable to the combined operation." United States v. Collord, 128 IBLA 266, 287 (1994) (citing Schlosser, 92 IBLA at 131-132 (citing Pac. Coast Molybdenum, 75 IBLA at 24, 24 n.7, 24-26, 32)).

e. Limited information available. In many instances, you will have to verify whether a valuable mineral deposit exists based on limited information. Information available for a mining claim validity examination will only rarely be comparable to a major feasibility study in reliability and scope of available data.

2. Test for Whether Lands are Mineral-in-Character.

Beginning from the earliest days of the public land system, Congress created two categories of public lands: mineral land and agricultural land. Mineral lands were sold for $5 per acre. Agricultural lands were sold for $1.25 per acre. The criteria for determining whether lands were either mineral or agricultural was whether the lands were "chiefly valuable" for one or the other. With the enactment of FLPMA, this land classification distinction became less important. However, the question of whether lands are mineral-in-

2 Usage of the term "logical mining unit" in this context is similar to, but not identical to, the logical mining unit terminology used in solid leasable minerals. In Chapter II of this handbook, a logical mining unit is also referred to as a claim block.

3 Schlosser v. Pierce, 92 IBLA 109, 129-34 (1986).

character must still be addressed when determining the validity of placer mining claims and mill sites or when considering certain land transactions.[4]

a. Considerations for determining whether lands are mineral-in-character. The test for determining whether lands are mineral-in-character, like that for discovery, has been established by case law. It may be viewed as discovery minus a physical exposure. It may be determined by geologic inference, but requires more than a simple determination that unexposed minerals probably exist; their quality and quantity are also an issue. Land is mineral-in-character when known conditions engender the belief that the land contains mineral of such quality and quantity as to render its extraction profitable and to justify expenditure to that end.[5]

b. When required. Determining whether lands are mineral-in-character is most commonly necessary when evaluating the character of each ten-acre parcel of a placer mining claim or when evaluating mill sites under the Mining Law. Geologic inference may be used to estimate deposit size or establish mineral-in-character status.[6]

c. Evidence of Mineral-in-Character. A mineral-in-character determination is based upon a combination of physical exposures and geologic inference. When using geologic inference, you are making projections from known or reasonably inferred formations from adjoining lands into the land in question to determine its mineral character.[7] As such, reserves that may be inferred to reside within a geologic formation adjacent to the land in question may be used to establish the mineral character of the land being classified if available evidence shows that the formation likely projects into this land.

B. Classification of Ore Reserves and Resources.

Problems with defining and properly using terms to describe ore, reserves and mineral resources are not new. As early as 1909, Herbert C. Hoover wrote:

"Some general term is required in daily practice to cover the whole field of visible ore, and if the phrase 'ore in sight' be defined, it will be easier to teach the laymen its proper use than to abolish it. In fact, the substitutes are becoming abused as much as the originals ever were. All convincing expressions will be misused by somebody."[8]

1. Resources, Reserves and Ore.

Over the past few decades there has been a trend to shorten the phrase "ore reserves" to just

4 Manual Section 3060 Mineral Reports Preparation and Review.
5 Diamond Coal & Coke Co. v. United States, 233 U.S. 236, 240 (1914); S. Pac. Co., 71 Interior Dec. 224, 223 (1964); United States v. McCall, 7 IBLA 21, 27, 79, Interior Dec. 457, 460 (1972); United States v. Bunkowski, 5 IBLA 102, 127, 79 Interior Dec. 43, 55 (1972).
6 United States v. Feezor, 74 IBLA 56, 78-79 (1983).
7 S. Pac. Co., 71 Interior Dec. 224, 223 (1964)
8 Hoover, H. C., 1909, Principles of Mining, McGraw-Hill, p 17.

"reserves," and to use the terms "ore" and "reserves" interchangeably. When using these terms, you must be mindful of their various economic and legal meanings. In general usage, an "ore"/"reserve" is that portion of a mineral deposit that can be profitably mined under current economic, technological, and legal conditions. It is generally not possible to determine if a mineral deposit is an ore/reserve or a resource until you have completed your economic evaluation.

2. Terminology.

The terms "resources," "reserves" and "ore" are often classified by adding the terms "measured," "indicated," "proven," and "probable," as well as other descriptive adjectives. You will also encounter a wide variety of other terms such as "possible ore," "ore in sight," and "measured ore." It is important that you understand how these terms are used and the system from which they are derived. Many such terms have little to no direct applicability to determining the validity of a mining claim.

3. Ore Reserve Definitions.

For validity and mineral-in-character purposes, it is recommended that you use the definitions from McKinstry[9] for describing ore reserves. They are well established in practice and match the common usage of the past century. Their focus is on the individual mining property in question rather than the mining district or region, and they can be readily established based on the data at hand. Those definitions are:

a. **Positive ore or ore blocked out**. These terms are now referred to as "proven ore," which are not always "proven" in the classical sense. Ore exposed and sampled on four sides, i.e., by levels above and below and by raises or winzes at the ends of the block. This definition applies to veins; for wide ore bodies the workings must be supplemented by crosscuts.

b. **Probable Ore**. Ore exposed and sampled either on two or on three sides.

c. **Possible Ore**. Ore exposed on only one side, its other dimensions being a matter of reasonable projection. Some engineers use an arbitrary extension of 50 to 100 feet. Others assume extension for half the exposed dimension.

4. Mineral Resource Definitions.

"Mineral resources" can be defined as minerals which are uneconomic to mine under present technological or economic conditions, or for which there is insufficient information to place them into an ore/reserve category. With changes in economic or technological conditions, or after further exploration, resources may become ore/reserves. "Resources" will be defined differently, depending on the classification system and its intended use.

9 Mckinstry, H. E., 1948, Mining Geology, Prentice-Hall Inc.

Resources are usually classified as "measured, indicated, or inferred."

a. Measured resource. To be classified as "measured,"[10] the grade and tonnage are computed from dimensions revealed in outcrops, trenches, workings, or drill holes; grade and/or quality are computed from the results of detailed sampling, and measurements are spaced so closely and the geologic character is so well defined that size, shape, depth, and mineral content is well established.

b. Indicated resource. To be classified as "indicated,"[11] the quantity and grade and/or quality are computed from information similar to that used for measured resources, but the sites for inspection, sampling, and measurement are farther apart or otherwise less adequately spaced. The degree of assurance, although lower than that for measured resources, is high enough to assume continuity between points of observation.

c. Inferred resource. An "inferred"[12] resource is estimated by assuming continuity beyond measured and/or indicated resources, for which there is geologic evidence. An inferred resource may or may not be supported by samples or measurements.

d. Grouping of defined classes. The term "demonstrated" is often encountered in the quantification of resources or reserves for a mineral deposit. "Demonstrated" is usually the sum of "measured" plus "indicated" for resources and "positive" plus "probable" for ore/reserves.

5. Using "Reserves" and "Resources" Terminology in Validity Determinations.

a. Reserves. If a claimant establishes positive and/or probable reserves on a mining claim, it is likely that the claimant has discovered a valuable mineral deposit under the Mining Law. This is because, if there are positive and/or probable reserves on a mining claim, it is likely that a prudent person would invest additional labor and means in the expectation of developing a valuable mine involving that claim. "Possible ore," (from McKinstry's classification) may similarly qualify as the basis for a finding of a discovery of a valuable mineral deposit.[13].

b. Resources. If a claimant establishes the existence of resources on a mining claim, resources are normally an insufficient basis, no matter how accurate or certain, for concluding that the claimant has discovered a valuable mineral deposit. Depending on the outcome of your economic evaluation, resources may or may not become reserves.

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10 Definition as given in Principles of a Resource/Reserve Classification for Minerals; USGS Circular 831 (1980). See also Principles of the Mineral Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey; USGS Bulletin 1450-A (1976). The Bureau uses this term to describe the process for obtaining the resource classification, but the Bureau does not adopt the USGS classification system for mineral reserves.

11 Id.

12 Id.

13 United States v. Hooker, 48 IBLA 22, 30 (1980); United States v. Feezor, 74 IBLA 56, 79 (1983).

c. Discovery under the Mining Law. In a validity examination, use extreme caution when using ore/reserves or resources terminology to confirm the discovery of a valuable mineral deposit. There is no direct correlation between these terms and the validity determination standards because they differ in purpose. Consider a hypothetical situation in which a mineral examiner delineates a large mass of ore grade material in an area where mining operations have historically occurred.

- Until professionally-completed feasibility studies with encouraging results have been completed, that mass of ore grade material probably would not meet Society for Mining, Metallurgy, and Exploration (SME) standards for reserves, and would probably be a resource if SME standards alone are applied.

- Under the U.S. Geological Survey (USGS) "McKelvey" diagram, the mass of ore grade material might be a reserve.

- Under the prudent person rule, the mass of ore grade material would probably constitute a discovery of a valuable mineral deposit.

6. Other Commonly Used Classification Systems.

For many years, the industry worldwide has grappled with establishing actual, legal and verifiable classifications for "resources and reserves." Two of the most commonly used of these systems are the USGS classification system (the "McKelvey diagram") and the SME Guidelines. Neither of these systems is an exact fit with the requirements of the prudent person rule.

a. SME Guidelines and the prudent person rule do not correlate. The prudent person rule, as established in Castle v. Womble, supra, is the basic standard for determining whether a mining claim contains a valuable mineral deposit. The SME guidelines were developed by an international working group as a means of consistently defining and stating mineral resources for publicly reporting companies. Consequently, the prudent person rule and the SME guidelines do not correlate to each other. As an example, if a mining claim contains "proven mineral reserves" as defined by SME there is a very high probability of there being a discovery under the Mining Law. However, discovery under the Mining Law may well be achieved without attaining the level of confidence or certainty required by the SME guidelines for "proven mineral reserves."

(1) You are expected to understand the SME definitions of "reserves" and "resources," and to remain informed as to any amendments to them. You must be conversant in how the terms are used by the mining industry, and how the industry's usage may or may not relate to the Bureau's work so that you may understand the relationship between documents provided by the industry using that terminology and the discovery test. The SME Guidelines are not quoted within this Handbook or included as an appendix because they are subject to change by parties that are not affiliated with the U.S. Department of the Interior.

b. The McKelvey diagram differs from SME Guidelines and from the prudent person rule. The mineral resource classifications in the SME guidelines are not the same as the mineral resource categories in the "McKelvey diagram."[14] The USGS developed the basics of the "McKelvey diagram" during World War II. It was officially published in 1972 and has remained as the USGS standard since then.[15]

(1) USGS developed the McKelvey diagram for mineral resource inventories and land use planning and not for classifying resources and reserves on specific mineral properties. The McKelvey diagram lacks the precision necessary to properly classify resources and reserves for economic reporting purposes or determinations of validity using the prudent person rule.

(2) A noted authority on the use and classification of reserves for the evaluation of a mining property, in discussing the utility of the USGS classification system stated in 1948:

> "This classification leaves room for considerable deduction from geological background. It is well suited to its intended purpose, the estimation of the reserves of a district or a nation. It is less satisfactory for valuing a single mine." (McKinstry[16]).

C. Calculation of the Tonnage and Grade of a Mineral Deposit.

1. Tonnage.

In order to calculate the tonnage of an ore reserve and waste rock in a mining operation you first need to calculate the volumes of each and calculate their respective densities.

a. Volume. Calculate the volumes of the valuable mineral deposit and waste rock that must be removed using geometric methods. In most instances, you will have to subdivide the deposit into multiple geometric bodies to accomplish this task.[17]

b. Weight. Determine the weight, in pounds per cubic foot, of each geometric body. Use measured weights and densities, as they will give you more accurate results than if you rely on a reference, such as in Appendix IV-B. The weights and volumes calculated for waste rocks are included in your estimate of total mining costs.

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14 See Hansen, W. R., Suggestions to Authors of the Reports of the United States Geological Survey (7th ed.) (1991), Dept of the Interior, GPO, p. 96, Fig. 21.
15 McKelvey, V. E., 1972: Mineral Resource Estimates and Public Policy: American Scientist, vol. 60, no. 1, pp. 32-40. Hansen, W. R., 1991: Suggestions to Authors of the Reports of the United States Geological Survey, U. S. Dept. of the Interior, pp. 95-97.
16 Id. at.472
17 Popoff, C., 1966; Computing Reserves of Mineral Deposits: Principles and Conventional Methods; U. S. Bureau of Mines Information Circular 8283, U. S. Dept. of the Interior, pp. 113.

c. Total Tonnage. Using the resulting volumes and weights, calculate the tonnage of each geometric body. Determine the total tonnage by calculating a weighted average of the deposit's geometric bodies and adding them together. See Appendix VIII.

2. Grade.

Calculate the weighted average grade of the valuable mineral deposit. See Appendix VIII.

D. Precision of Calculations.

Be sure to avoid the appearance of extreme precision where it does not exist.

1. Making Calculations Involving Measurements of Varying Precision.

The precision of a calculation is limited to its least precise number. For example, assume that a mineral deposit is about 3.5 feet thick by about 150 feet long by about 750 feet wide. In this example, two of the measurements are significant figures that are not as precise as the third measurement. The correct volume, accounting for the imprecise significant figures, will be about 15,000 cubic yards, not 14,583.33 cubic yards. If the original measurements had been made using a precise survey, measuring exactly 3.502 feet, 150.00 feet, and 750.00 feet, then 14,580 cubic yards would be correct.

2. Rounding of Numeric Values.

You must ensure that rounding is within the accuracy of all measurements. Virtually all calculators and spreadsheet programs will carry an extensive number of digits after the decimal point while making calculations. Rounding can take place with each calculation, at the end of a string of calculations, or with the last calculation. Whichever method you decide to use, be certain to consistently apply it and to explain it in the mineral report.

3. Estimating Resource Values.

Methods of estimating resource values are found in Peele (1947), Peters (1987), Parks (1957), Popoff (1966), and McKinstry (1948). See Appendix VIII for brief examples of calculations. Your choice of method should be appropriate to the situation, recognize geologic boundaries, and be thoroughly explained in the mineral report.

E. Establishing a Market Price for a Commodity.

The Department has ruled that it is both proper and necessary to consider historic price and cost fluctuations in the consideration of marketability.[18]

18 In Re Pac. Coast Molybdenum Co., 75 IBLA 16, 90 Interior Dec. 352, (1983).

1. Pricing Mineral Commodities.

a. Commodities traded on public exchanges. With certain commodities, especially precious metals and some base metals, prices can fluctuate considerably. You must take this fluctuation into account when evaluating the viability of an operation. You must take into account both current market trends and historic price fluctuations.

(1) BLM has established a policy for how to estimate a market price for mineral commodities.[19] In brief, the methodology uses a six-year average, which is centered on the critical date for which the economic evaluation is being performed. Some examinations will require that the calculation be made for more than one critical date.

(2) To begin, calculate the average market price for the three year period before the appropriate critical date. Next, calculate the average commodity futures price for the three years after the critical date, based on the published prices for futures contracts. By including the market price for the month of the critical date, this method gives you 73 months of pricing that is averaged to give an expected commodity price for your economic analysis. Please refer to the policy statement given in Appendix VI-A for more detailed information.

b. Commodities not traded on public exchanges. The pricing policy does not work in all cases. For example, many industrial minerals are utilized in vertically integrated markets and there may not be published prices for them. In such cases, you must review all relevant information to develop a thoroughly documented reference price. For additional information regarding industrial minerals, consult BLM Handbook H-3890-5, *Industrial Minerals*.

F. Mine and Mill Modeling.

Before you can estimate the costs or potential returns, you must first determine what mining and processing methods are being used or are expected to be used.

1. Data Supplied by Claimants.

In many cases, the claimant will provide you with a detailed mine and mill plan that includes economic data. In this situation, you should verify whether that plan is operationally viable. You may evaluate the proposal and adjust or modify any component to improve efficiency, recovery of valuable minerals, savings on reclamation, and so forth. A number of other documents may provide useful information, including:

- Documents filed under the surface management regulations, such as notices or plans of operations

19 65 Fed. Reg. 41,724 (July 6, 2000); Appendix VI-A.

- Documents filed with the United States Securities and Exchange Commission (SEC) or foreign equivalents
- Documents filed with State securities agencies.
- Articles of incorporation, as well as periodic reports. These are normally filed with an agency in the state of incorporation.
- Information posted at a company website or an affiliated website on the internet.
- Company press releases.
- Articles in newspapers and trade journals.

2. Data Not Supplied By Claimants.

When the claimant does not provide a mine and/or mill plan, or where the claimant provides an unrealistic or inappropriate plan, you must develop a hypothetical operation suitable for the deposit being examined. Whether verifying mine and mill information provided by the claimant or developing a hypothetical operation, you must ensure that the mine and mill operations are properly sized and otherwise appropriate for the site and deposit being examined.

G. Preparing a Cost Estimate.

1. Sources of Operating Cost Data.

In many cases, you can get operating cost data for a planned or existing mine from the mine operator. However, you must verify any cost information you get from the mine operator. In other instances, you may have to calculate the costs of a proposed mine operation. Multiple sources of operational and cost information are available for this purpose.[20] In addition, several computer programs are available to assist you in estimating costs. However, if you do not fully understand how the computer program handles the data that it manipulates, you could produce an impressive-looking result that may not be defensible.

2. Estimation Methods.

You may choose to use one of several methods of estimating costs. These include cost indexing, comparable costs in the same mining district, cost models, and grass roots estimating. In essence, you will build a mine on paper. Cost estimation is usually an iterative process, which requires information generated in the previous iterations to refine

20 Western Mine Engineering, equipment handbooks, trade journals.

the results as work progresses. Normally, several full iterations of a cost estimate will be required to provide a sufficient level of confidence. In cases where the resource values are very low or very high, only a few iterations are necessary. For example, there is little need to expend a large amount of effort to estimate the cost of a purported mine that actually contains only average crustal abundance concentrations of mineral commodities.[21]

a. Cost estimating. You can use cost indexing to update or backdate the cost of equipment or services from one point in time to another point in time. The U. S. Department of Labor and Commerce publish monthly and annual cost indices for a large range of commodities and services including mining and milling. Indices are regularly compiled by Western Mine Engineering. Cost indexing does not work well as the sole cost estimation method for an overall mining operation. The resulting numbers become less reliable beyond five years.

(1) Sample index calculation. A D-8 Caterpillar bulldozer cost $150,000 in 1979. You need to know its cost in 1982. Its estimated cost would be:

$$1979 \text{ cost} \times \frac{1982 \text{ cost Index}}{1979 \text{ cost Index}}$$

$$\$150{,}000 \times \frac{343.8}{256.2} = \$150{,}000 \times 1.34 = \$201{,}000$$

b. Comparable operations in the same mining district. Neighboring mining operations within a particular mining district often use similar mining methods. The removal cost per ton of rock or cubic yard of gravel will usually vary by only a few percent between properties. If operating cost data is available for two or three properties in the district, you can use that data to estimate the average operating cost for removing a ton of rock or gravel per day for an operation of equivalent size. Comparative cost analyses do not work well if you are evaluating very small operations using site-built equipment, unless the operations are substantially identical. Comparing operations is often useful in spot checking costs provided by the claimant.

c. Grass roots estimating. This method independently estimates the project costs, or costs of parts of a project, based on unit operations and other discrete costs, all of which together represent the cost of a complete operation. The references cited in cost indexing above, especially Western Mine Engineering, contain up-to-date purchase costs of equipment and services. A number of publications advertise new and used equipment for sale. You may be able to get current and past sales prices at the local library, if the library's collections include these types of publications.[22] Other cost information sources include equipment manufacturers, vendors, and service companies. Many equipment manufacturers publish operating or estimating guides, which can assist you in equipment

21 See generally, United States v. Pass Minerals, 168 IBLA 115, 121 (2006).
22 Past and present sale prices for metallic minerals are also found at www.kitco.com, www.cbot.com>, www.lme.co.uk.

sizing and selection, as well as determining cycle times for unit operations.

d. Sunk costs. Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date.[23] Do not include as expenses in the operation's cash flow those capital costs that were sunk **before** the date of marketability.

(1) Excavations, structures, and equipment affixed to the land and that cannot be removed, even for salvage value, may qualify as sunk costs. Examples include pits, underground workings, dumps, tailings ponds, monitor wells and some buildings.

(2) Sunk costs do not include ongoing equipment, improvement or maintenance expenses.[24] Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs.

e. Equipment costs and accounting. The acquisition costs of equipment owned by a claimant before the marketability or withdrawal date need not be considered in calculation of costs.[25] Replacement costs of equipment after the marketability date are to be taken into account.

f. Labor costs. To establish the labor costs for a mining operation, use the local or regional wage rate for the job classification that was prevailing for the time period you are evaluating. The wage cost must normally account for burden, including Workers' Compensation, FICA, Medicare, and other required personnel costs that may be required by a state or local government. Burden is also applicable to persons who are self-employed. When you are evaluating a small "mom and pop" operation, do not calculate the burden as though the "mom and pop" operators are hiring outside employees. Use only the labor overhead costs that might apply to the "mom and pop" operation, e.g., self-employment taxes and insurance. The minimum wage should only be used for unskilled labor when the local job market is actually paying minimum wage for that kind of work, or if there is no other data.[26] When there is evidence that a prudent mine operator would expect to pay a higher wage for a certain type of labor, use the higher wage.

g. Environmental Compliance Costs. Include all costs associated with obtaining federal and State permits, reclamation, and monitoring and maintenance of post mining facilities in your estimate.

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23 United States v. Clouser, 144 IBLA 110, 131 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980).
24 United States v. Garner, 30 IBLA 42, 67 (1977).
25 United States v. Clouser, 144 IBLA 110, 132 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980)
26 United States v. Clouser, 144 IBLA 110, 129-130 (1998).

3. Milling Costs.

a. Information sources. Ask the operator for the costs of processing, but be certain to confirm those costs independently. If the operator cannot or will not give you processing costs, calculate the costs of proposed mill operations independently. Use Western Mine Engineering or a similar reference as a source for many milling costs.

b. Cost of compliance. All mill operations must meet current environmental and safety standards, including applicable regulatory requirements imposed by the surface managing agency and any applicable State regulatory requirements. You must consider all appropriate costs, including costs of acquiring water, water treatment, and disposal of tailings and waste. Report the final cost output in dollars per ton of rated capacity of the mill. Then calculate these costs back to the cost per ton of ore in the same manner as for other milling costs.

4. Smelter and Refining Costs.

A mining operator may plan to produce, process, and sell a finished product from the mineral property under evaluation. In such cases, determine the costs of the processing and refining needed to produce the marketable product. Determine the marketing costs to the first point of sale. In other words, determine whether the commodity will be sold on an FOB mine site basis, from a processing plant, or if transportation to market is normally required.

a. Custom smelters. If a mining operator sells the mine's output through a custom smelter, consider the cost of smelting or ore reduction, as well as the costs of transportation to the smelter, in the economic evaluation. Confirm that the smelter was operational and actually accepting and processing custom concentrates during the critical dates. In addition, confirm that the smelter would accept the form of concentrates proposed for production. Obtain smelter schedules from the mine or smelter operator. Western Mine Engineering has several sample smelter schedules for various commodities in the western United States and Canada. Smelter schedules typically have the following components:

- **Charges:** The basic cost of smelting and handling of the ore.

- **Deductions:** That portion of the received minerals that is not paid for, mainly for losses during smelting.

- **Penalties:** The additional cost to the smelter for treating undesirable constituents in the ore. Arsenic, bismuth, and antimony, for example carry a stiff penalty, as does high moisture content.

- **Premiums:** Credits given for specific constituents contained in the ore that are needed in the smelting process. For example, silica is a premium constituent in the smelting of copper ores because it is a necessary flux.

H. The Marketing of a Mine's Products.

Typical end products may include dore', concentrates, precious and semiprecious gemstones, or chemical feed-stocks. When a mine is proposed, but not in operation, you need to determine whether there is a market and whether market entry is feasible.

1. Metallic Mineral Deposits.

Products for which there is an established market, such as gold, silver, copper, lead, zinc, molybdenum and other metallic minerals, are inherently marketable. That does not mean that all deposits containing these metals are valuable. It only means that there is a market for the metals. Information sources include Engineering and Mining Journal and The Northern Miner. Internet sources include <www.kitco.com> and <www.cbot.com>.

2. Industrial Minerals.

You must determine whether industrial minerals and materials with local, regional or used in vertically integrated industries, are marketable. Mineral deposits may be of a very high grade, but if there is no market for them, they are not valuable.[27]/ There are five factors to consider in determining whether industrial minerals are marketable.[28]/ The five factors, with some additional considerations outlined in the subparagraphs, are as follows:

a. Accessibility.

(1) Is the deposit accessible?

(2) Is a market area accessible?

b. Bona fides in development.

(1) Are there any existing plants and equipment on the claim?

(2) Is there present or past usage evident on the claim?

(3) What is the status of mine (undeveloped, developed, or on standby)?

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27 United States v. Coleman, 390 U.S. 599 (1968); Layman v. Ellis (On Recon.), 54 Interior Dec. 294 (1933); Layman v. Ellis, 52 Pub. Lands Dec. 714 (1929).
28 Foster v. Seaton, 271 F. 2d 836, 838 (D.C. Cir. 1959) (citing Layman v. Ellis, 54 Interior Dec. 294, 296 (1933)); 43 CFR 3830.12(b) (2006).

c. Proximity to market.

(1) What are the transport and haulage costs?

(2) How many users or buyers are available in the market area?

(3) How many competitors are there in the market area?

(4) How much material is being consumed by the available users?

(5) How much of the same type of mineral is being produced by competitors?

(6) Is it possible to enter the market?

d. Existence of present demand.

(1) Are there any sales contracts or verifiable, legitimate letters of intent to purchase?

(2) Is there present, legitimate use of the commodity in the market area?

(3) Does the quality of the product compare favorably with a competitor's product?

e. Other factors.

(1) Are there any other factors not covered above that would have a bearing on the sale of the product?

3. Common Variety Determination.

Not all mineral commodities are locatable. The Surface Resources Act, 30 U.S.C. § 611, provides that:

> No deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders and no deposit of petrified wood shall be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws.
>
> * * ** * * * * * *
>
> Common varieties" as used in sections 601 and 603 of this title does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value and does not include so-called "block pumice" which occurs in nature in pieces having

one dimension of two inches or more.

a. McClarty test. To determine whether an otherwise common variety mineral has distinct and special value, follow the standards set forth in United States v. McClarty:[29]

(1) There must be a comparison of the mineral deposit in question with other deposits of such minerals generally;

(2) The mineral deposit in question must have a unique property;

(3) The unique property must give the deposit a distinct and special value;

(4) If the special value is for uses to which ordinary varieties of the mineral are put, the deposit must have some distinct and special value for such use;

(5) The distinct and special value must be reflected by the higher price which the material commands in the marketplace or by reduced costs or overhead so that the profit to the producer would be substantially more while the retail market price would remain competitive.

b. Some factors not relevant. Differences in the chemical composition or physical properties are immaterial if they do not result in a distinct economic advantage of one material over another.[30]

4. Unmarketable Resources (formerly known as "Excess Reserves").

a. Industrial minerals. If you are determining the validity of a mining claim or a group of mining claims located for industrial minerals, you must determine whether any ten-acre parcel of a placer claim or any mining claim in the group contains unmarketable resources. Unmarketable resources are mineral resources that cannot be presently marketed or marketed in the reasonably foreseeable future. Industrial minerals include, but are not limited, to sand, gravel, perlite, gypsum, limestone, cinders, and building stone. Industrial minerals may be of widespread occurrence and have a low unit value. They may exist on a particular mining claim or mining claim group in far greater abundance than can be reasonably marketed at present or in the reasonably foreseeable future.[31]

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29 17 IBLA 20, 24-26 (1974); 43 CFR 3830.12(c) (2006); see also United States v Multiple Use Inc., 120 IBLA 63 (1991).

30 United States v. Thomas, 1 IBLA 209, 217 (1971) (citing United States v. U. S. Minerals Dev. Corp., 75 Interior Dec. 127 (1968)).

31 McCall v. Andrus, 628 F. 2d 1185 (9th Cir. 1980), cert. denied, 449 U. S. 932 (1981); Solicitor's Opinion M-36984, Excess Reserves Under the Mining Law (1996); United States v. Oneida Perlite Corp., 57 IBLA 167, 204, 88 Interior Dec. 772, 793 (1981); United States v. Williamson, 45 IBLA 264, 293, 87 Interior Dec. 34, 53 n.8 (1980).

b. Market entry. To determine whether there are unmarketable resources, the appropriate test is to determine whether the deposits found in each ten-acre parcel of a placer claim or each mining claim in a claim group can enter the market presently or within the reasonably foreseeable future. Consider the total amount of the mineral resource held by a mining claimant, on private land to the extent possible, as well as the total amount of the mineral resource available in the general market area. The mining claimant's holdings must be treated in the same manner as other competitive sources of the same material.

c. Time line for calculation of unmarketable resources. The Department's policy is to treat any industrial mineral resource that can be marketed within 40 years of the marketability date as presently marketable or marketable within the reasonably foreseeable future. The Department's policy is to treat any industrial mineral resource that cannot be marketed within 40 years as an unmarketable resource.

d. Application. Apply the 40-year policy by first determining a reasonable annual production rate for the mineral. To arrive at a reasonable annual production rate, take into consideration the claimant's past production rates for an operating mine or the claimant's proposed production rate for a proposed mine plan. If there is no operating mine and the claimant has not provided you with a proposed mine plan, you must develop your own mine plan with a logical mining sequence to calculate a production rate. Next, consider the available market for the mineral. You may only consider what reasonably can be marketed, even if the mine could produce at a level that exceeds the available market. Any minerals that cannot be thus produced and marketed within 40 years cannot be marketed in the foreseeable future and may not serve as the basis for validating a mining claim in a claim group or a ten-acre parcel of a placer claim.

I. Economic Analysis of a Mineral Property.

1. Pre-tax Income.

The pre-tax income, in dollars per ton, is determined by deducting necessary capital and operating costs from the gross value of the sales or projected sales. These costs will normally include mining, milling, reclamation, environmental compliance, transportation, marketing, and all costs internal (itemized line items on your cost analysis sheet) to these categories. Compute the costs up to the point of delivery either Free on Board (FOB) at the mine site or at the first point of sale.

a. Results. If the pre-tax value is negative, you can conclude that there is no discovery of a valuable mineral deposit and recommend the mining claim or ten-acre parcel of a placer claim for contest. If the pre-tax value is positive, you can conclude that the claimant has demonstrated a discovery of a valuable mineral deposit.

2. Net Income.

To obtain the net income from the operation, account for taxes, amortization, depletion, depreciation, and other costs generally accounted for in financial reports on mineral properties.

3. Net Present Value Calculations.

Occasionally, it is necessary to estimate the net present value of a property containing proven or probable reserves. For example, a mine may have been developed but not yet placed into production. To do so, the property's future net earnings are converted to present day value by a discount process. The Discounted Cash Flow (DCF) method estimates either the project's net present value (NPV) or the Internal Rate of Return (IRR). The IRR is a projection of the percent payback to the investors in the project. The NPV is a projection of the present value of the property, based on a fixed rate of return, and is not to be confused with an appraisal of the value of the property. An appraisal takes into account other factors not considered in NPV calculations. For example, the rate of return is usually very different and an appraisal will take into account risk analyses.

FOREST SERVICE MANUAL
NATIONAL HEADQUARTERS (WO)
WASHINGTON, DC

FSM 2800 - MINERALS AND GEOLOGY

CHAPTER 2810 - MINING CLAIMS

Amendment No.: 2800-2007-2

Effective Date: April 4, 2007

Duration: This amendment is effective until superseded or removed.

Approved: GLORIA MANNING
Associate Deputy Chief

Date Approved: 03/29/2007

Posting Instructions: Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 2800-2007-1 to 2890.

New Document	2810	42 Pages
Superseded Document(s) by Issuance Number and Effective Date	2810 (Amendment 2800-2006-5, 08/31/2006)	42 Pages

Digest:

2817.23a - Adds new code and caption "Compliance with the Clean Water Act." Provides direction for approving new Plans of Operations and complying with the Clean Water Act.

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2818.2 - Uninhabitable Cabin on Mining Claim

An uninhabitable cabin on National Forest land is an administrative problem, because it may easily be repaired and used for purposes unrelated to mining. The mining claimant may give permission to have the cabin removed when the claimant realizes that is represents a hazard to the administration of the area. Until an unoccupied cabin is removed, it is the District Ranger's responsibility to question any activity involving its repair or use (36 CFR 228.10). If repairs are started on a cabin, the District Ranger shall proceed as stated in FSM 2818.1.

2818.3 - Use of Surface Use Determinations and Validity Determinations

Historically, residential occupancies which appeared to be unauthorized under the mining laws have been resolved through the use of validity determinations by the Department of the Interior. However, the regulations in Title 36 Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A) are believed to be the best tool--ultimately--for preventing unauthorized uses.

As is the case with policies regarding surface management procedures (FSM 2817.03), the use of face to face negotiations is the preferred method of resolving unauthorized occupancies. As part of those negotiations, the authorized officer should request the assistance and advice of a Forest Service mineral specialist or mineral examiner. If negotiations fail, the officer should request that the advice be formalized according to surface use determination procedures of FSH 2809.15, chapter 10.

Generally, the use of validity determinations should be limited to those rare occasions where the certified mineral examiner believes that it would be useful given the specific details of the case. Otherwise, the use of validity determinations should be limited to situations where valid existing rights must be verified where the lands in question have been withdrawn from mineral entry (FSM 2811.5, para. 1) or meeting Forest Service interagency agreement obligations regarding patent applications (FSM 2815).

2819 - MINING CLAIM CONTESTS

The validity test is based on the legal concept that a mining claim is not valid without a discovery of a valuable mineral deposit. Title 43, Code of Federal Regulations, section 3831. (43 CFR 3831.1) states that "Rights to mineral lands, owned by the United States, are initiated by prospecting for minerals thereon, and upon the discovery of minerals, by locating the lands upon which such discovery has been made."

1. The order of action by regulation is:

    a. Prospecting,

b. Discovery, and

c. Location of a claim.

This procedure entitles the claimant to the minerals discovered, the right to mine them, and, under certain circumstances, the right to a patent to the surface of the claim. Prior to obtaining a patent, a claimant's rights on the land are limited to those reasonably necessary in connection with prospecting, mining, or processing operations. Prior to a discovery, a claim cannot be valid. In practice, most claims are staked and located prior to discovery on the basis of a prospect or mere indication of a mineral deposit. This practice protects the claimant's rights from other prospectors, but it does not grant any rights against the United States. Department of the Interior decisions have upheld the right of a claimant to hold and work a claim prior to "discovery," provided the claimant is diligently seeking a discovery on a promising prospect. However, it remains a legal fact that a claim is not, and cannot be, valid prior to the discovery of a valuable mineral deposit.

Accordingly, if a claim is found to lack a discovery of a valuable mineral deposit by the Department of the Interior or in a Federal court, the claim is null and void. The Forest Service then is in a better position in trespass actions against a claimant for unauthorized residences or other uses. While, in fact, a claimant with a valid discovery does not have more surface rights than one without a valid discovery, judges have tended to depend heavily on validity findings because of the implications of good faith of the claimant.

2. The mining laws are comprised of two parts:

a. The statutes themselves, which are general in nature; and

b. The decisions of the courts and of the Department of the Interior, which interpret and apply the statutes to specific cases.

In considering whether to contest the validity of a mining claim or to challenge questionable mining claim occupancy and use, the Forest Service is guided by the pertinent statutes and decisions.

No adjudicative power has been given to the Forest Service. Thus, statements about validity are statements of belief and not formal determinations. The conclusions reached by a Forest Service mineral examiner are based on physical facts interpreted in the light of professional expertise. Consistent with those conclusions and beliefs the Forest Service should attempt to resolve conflicts without resort to legal action. If those attempts are unsuccessful, appropriate legal action is required. The facts should be referred to the Office of the General Counsel before deciding if legal action is appropriate.

2819.1 - Forest Service Role

1. Request for Mineral Examination. When administrative problems of a mineral nature arise or unauthorized use of a mining claim is believed to exist which cannot be satisfactorily resolved, the District Ranger should submit a request to the Regional Office via the Forest Supervisor on Form FS-2800-4, Request for Mineral Examination--Mining Location. A Forest Service mineral examiner, who has been properly authorized, may go on an unpatented mining claim to make a mineral investigation. Every effort should be made for amicable entry and examination of the claims, preferably accompanied by the mining claimant or the claimant's duly appointed representative.

2. Use of Force. If the mining claimant threatens or uses force to prevent the mineral examiner from going on the land, the Forest Supervisor and regional office Mining Geologist should be notified. If the forest is unable to get the claimant to agree to the examination, it may be necessary to work through the U.S. Attorney to secure the participation and protection of a U.S. Marshal.

3. Report of Mineral Examination. The mineral examiner's findings, conclusions, recommendations, together with pictures and maps, will be compiled in a Report of Mineral Examination, and sent to the Regional Office for technical review and approval by the Regional Mineral Examiner. This report will be the basis for a decision on whether or not to contest the claim. In situations where the mineral examiner's conclusions are urgently needed, the examiner will, when possible, inform the District Ranger at the time of examination or soon thereafter.

4. Problem Resolution. Concerted effort should be made to resolve problems, or terminate unauthorized use, through reasoning, persuasion, and agreement. The knowledge that, in the opinion of a Forest Service mineral examiner, a claim is not valid can be of assistance in this respect. When this fails, contest action may be required.

2819.2 - Department of the Interior Role

Although adverse proceedings might be required for a variety of reasons, such as trespass, patent application, land classification, land clearance, and so forth, each case is initiated with a request from the Regional Forester that the land office issue a complaint. (Assuming, of course, that the claim is not supported by a verifiable discovery of a valuable mineral deposit and the action meets with the approval of the Regional Attorney.)

The most common legal action is a contest of claim validity which is conducted by and under the regulations of the Department of the Interior. To that Department, Congress has given adjudicative powers in matters relating to all the land laws, including the mining laws. The decision in a mining claim contest is a formal determination of validity. The authority of the Department of the Interior to rule on claim validity was confirmed by the Supreme Court in Best v. Humboldt Placer Mining Co., 371 US 334 (1963).

2819.3 - Actions Before Magistrates and in Federal Court

1. Initiating Action. Action is initiated by the filing of a Forest Officer's sworn complaint with supporting affidavits (if appropriate), setting forth the nature of the offense. If probable cause appears, the complaint is followed by a summons to appear, or less frequently, a warrant of arrest. On arraignment, a not guilty plea is followed by trial. A guilty plea or decision can result in imprisonment or a fine. Typical mining claim related cases tried by magistrates have involved continuing occupancy after a mining claim is declared invalid, and off-claim road construction without a permit. Another sort of case which potentially could be tried is nonmineral occupancy of a claim, the validity of which has not been determined formally.

2. United States District Court. Numerous cases have been resolved in the Federal courts and should continue to be resolved there. Actions are initiated in the U.S. District Court and can be brought by claimants as well as by the United States.

3. Review. Suits by claimants generally seek review of decisions resulting from contests. Forest Service participation is extremely limited, since the review is to Department of the Interior decisions.

DOCUMENT # 215

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BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL FOREST SERVICE

OFFICE OF THE CHIEF

* * * * * * * *

RE: CANYON MINE - APPEALS OF THE HAVASUPAI TRIBE, HOPI TRIBE, ARIZONA WILD-LIFE FEDERATION, SIERRA CLUB AND REV. GARRISON LEE, IAN ROOT, PHYLLIS HOGAN AND JAMES MAHONEY AND FRIENDS OF THE RIVER Case No. _____	)	INTERVENOR'S REPLY TO APPELLANTS' STATEMENTS OF REASONS

* * * * * * * *

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BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL FOREST SERVICE

OFFICE OF THE CHIEF

* * * * * * * * *

RE: CANYON MINE - APPEALS OF THE HAVASUPAI TRIBE, HOPI TRIBE, ARIZONA WILD-LIFE FEDERATION, SIERRA CLUB AND REV. GARRISON LEE, IAN ROOT, PHYLLIS HOGAN AND JAMES MAHONEY AND FRIENDS OF THE RIVER	)	INTERVENOR'S REPLY TO APPELLANTS' STATEMENTS OF REASONS
Case No. _____	)	

* * * * * * * * *

EXHIBITS VOL. 2

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CANYON MINE APPEAL TO THE OFFICE OF THE CHIEF

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L. Letter from Charles F. Leaf to Chief of the Forest Service, November 2, 1987.

M. Affidavit of Harold R. Roberts, November 9, 1987.

N. Letter from Garrison Lee to Forest Supervisor Leonard Lindquist, June 13, 1985.

O. Fourth Affidavit of Muril D. Vincelette, October 12, 1987.

P. Affidavit of Wayne A. Seick, May 26, 1987.

Q. Affidavit of Robert C. Euler, October 30, 1986.

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Exhibit O

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BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL FOREST SERVICE

OFFICE OF THE CHIEF

* * * * * * * * *

RE: CANYON MINE -- STAY REQUESTS OF THE HAVASUPAI TRIBE AND OTHER APPELLANTS.	)))))	FOURTH AFFIDAVIT OF MURIL D. VINCELETTE

* * * * * * * * *

I, Muril D. Vincelette, being duly sworn, do hereby depose and say:

1. I am a resident of Denver, Colorado. I am Vice President of the Uranium Operations at Energy Fuels Nuclear, Inc. ("EFN"). I have personal knowledge of the facts stated in this Affidavit. I have been asked to prepare this Affidavit for the purpose of describing the various phases of development at the Canyon Mine and to describe the significant adverse impacts that will result in the event that the requested partial stay of EFN's development activities at the Canyon Mine is granted.

2. Preproduction Phases at the Canyon Mine. To understand the practical effect of a stay, one must understand specifically which activities of EFN and others will be affected by the proposed stay. The preproduction phases of development carried out or planned for at the Canyon Mine, which phases overlap one another to some extent, are: (a) Exploration; (b)

Permitting; (c) Site preparation; (d) Shaft sinking; and (e) Underground development.

3. Exploration. The exploration phase at the Canyon Mine occurred between 1978 and 1985. Thirty-eight exploration holes were drilled at various locations throughout a 25 acre area at the mine site. Twenty-four of these exploration holes are over 1500 feet deep; the deepest is over 2300 feet. See Exhibit A attached hereto. There were some surface impacts on soils and vegetation associated with the exploratory drilling activities. Some grading and removal of top soil occurred at each drill site location, along with minor road upgrading. Approximately $4,000,000 was expended on exploration activities relating to the Canyon Mine project.

4. Permitting. The exploration phase of the project was conducted pursuant to Forest Service authorization. The permitting phase for more complete development of the Canyon Mine began in October of 1984 with the submission to the Forest Service of an amendment to the existing Plan of Operations. Minor surface impacts to cultural resources occurred during this phase, in association with an archaeological investigation and recovery project conducted for the Forest Service by Abajo Archaeology. Approximately $600,000 has been expended on permitting activities through September, 1987.

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5. Site Preparation. The site preparation phase at the Canyon Mine commenced on November 10, 1986. Site preparation consists of numerous distinct activities, including grading of the mine yard, construction of surface water diversion structures and evaporation ponds, power line installation, erection of temporary mine buildings, erection of a head frame, excavation and installation of a shaft collar (to a depth of 75 feet), erection of a hoist, installation of a septic system, construction of a cased monitoring/water well (to a depth of approximately 3,000 feet), and upgrading and some realignment of the existing access road. Environmental impacts of site preparation are largely limited to surface resources at the site and along the road right-of-way, such as disturbance of soils and vegetation. Site preparation work will be largely completed by the end of 1987. Approximately $3,500,000 will be spent in connection with site preparation activities in 1987. Currently, EFN has 11 employees at the site.

6. Shaft Sinking. Shaft sinking begins once the shaft collar and head frame have been installed. Shaft sinking consists of excavating a vertical production shaft to a depth of about 1,400 feet, to provide access to the ore body which is located in a vertical section between approximately 900 to 1,400 feet below the surface. The production shaft is not directed into the ore body, but is located some distance from the boundary

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of the ore deposit. During the shaft sinking phase, short horizontal drifts and drill stations, and related drill holes, will be constructed. Drill stations will be located at the ends of the drifts, but outside the ore body. See Exhibit B attached hereto. The relationship between the shaft and prior exploration holes shown by Exhibit C attached hereto. The shaft sinking phase is expected to last until sometime during the first quarter of 1989. The principal environmental effect of shaft sinking consists of the storage and disposal of barren waste rock excavated from the shaft. This material, once excavated, will be stored or used within the existing mine yard to, inter alia, reinforce the surface water diversion and retention facilities, and for leveling the mine yard where necessary. The shaft sinking phase is expected to cost approximately $3,000,000. Approximately 25 employees will be required for this phase of operations.

7. Underground Development. Underground development begins once the shaft sinking phase has been substantially completed. It involves the excavation and construction of subsurface structures necessary to mine the ore body, including, inter alia, haulage ways and vertical raises. Although ore production does not occur during this stage, a small amount of ore material is generated incidental to underground development. This material will be excavated and then removed from the surface

by truck. Additionally, a ventilation and escape shaft will also be constructed during this phase, extending from the bottom of the mine to the surface. This phase will take approximately 18 months, will require up to 35 employees, and will cost approximately $4,500,000.

8. Production. Following the completion of underground development work, production will begin. Ore production is presently scheduled to begin in late 1990 or early 1991. This is also the first time at which substantial quantities of ore are brought to the surface. At this stage, EFN may begin to recoup the substantial investment ($15,700,000) in the exploration and development of the mine. Approximately 35 miners will be employed during the production phase. An additional 20 individuals will be involved in hauling the ore to the processing mill in Utah. Production will last an estimated 3 to 5 years.

9. Investment. The total investment in the Canyon Mine will be approximately $15,700,000 by the time ore production can begin. $8,200,000 will be expended in exploration and site preparation activities through December, 1987; $3,500,000 will be expended in site preparation activities through 1987; $3,000,000 will be expended in shaft sinking activities through the first quarter of 1989; $4,500,000 will be expended in subsequent underground development work. Much of the expenditure for site

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preparation, shaft sinking, and underground development work is for goods and services acquired in the local communities.

10. Employment and Employees. EFN currently employs 11 persons at the Canyon Mine. Seven of these employees are from local communities. If the proposed partial stay is imposed, at least six of the current employees will be laid off essentially immediately. EFN anticipates employing 25 persons at the Canyon Mine during the shaft sinking phase. Approximately one-third to one-half of these employees will be locally hired. Of the 35 employees EFN expects to employ at the Canyon Mine site during the production phase, approximately one-half are expected to be locally hired. A substantial number of the employees who will not be locally hired will come from other EFN mine projects which are scheduled to be completed soon. Accordingly, these persons will face unemployment if the Canyon Mine project is halted by the proposed stay, when their current projects are completed.

11. Costs of Delay -- Additional Carrying Costs. Assuming that money currently costs 10% per year, carrying costs, i.e., the cost of putting the Canyon Mine project on hold after permitted site preparation activities are completed, is approximately $2,300 per day for each day of delay or $820,000 per year. These figures are based on a total investment in the Canyon Mine project of $8,200,000 through the site preparation phase.

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12. Costs of Delay -- Return on Investment. Deferring the projected return on investment to be realized from the Canyon Mine will also result in significant costs to EFN and its associates. Assuming an annual ore production of approximately 600,000 pounds of U_3O_8, and an annual profit of $7,000,000 to $10,000,000, EFN anticipates that each day that production is deferred costs approximately $2,000 to $2,700 per day, or $730,000 to $985,000 per year.

13. Economic Impact on Local Communities. The adverse impact of a delay in the development of the Canyon Mine, due to the imposition of the requested partial stay, would be significant and immediate on the local communities. Specifically, the 1988 budget calls for the expenditure of an amount in excess of $1,000,000 for wages and benefits, and over $1,800,000 for contract services, parts, supplies, and capital expenditures. Much of these expenditures would flow directly and indirectly into the local communities of Tusayan, Williams and Flagstaff. Because of the nature of these expenditures, they will generate substantial additional jobs and expenditures in the local communities. Applying a multiplier of 5 to determine the probable economic impact of EFN's expenditures on the local economies, the actual cost to the local communities will be approximately $1,125,000 per month or $13,500,000 per year.

Further affiant sayeth not.

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DATED this 12 day of October, 1987.

Muril D. Vincelette
MURIL D. VINCELETTE

STATE OF COLORADO)
: ss
CITY AND COUNTY OF DENVER)

SUBSCRIBED AND SWORN TO before me this 12th day of October, 1987 by MURIL D. VINCELETTE, Vice President of Operations of Energy Fuels Nuclear, Inc.

Susan M. Meinike
NOTARY PUBLIC
Residing at: 7854 Webster Way
Arvada, Co 80003

My Commission Expires:
6/19/88

216:100787A

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EXHIBIT A

CANYON
DRILL HOLE LOCATION MAP

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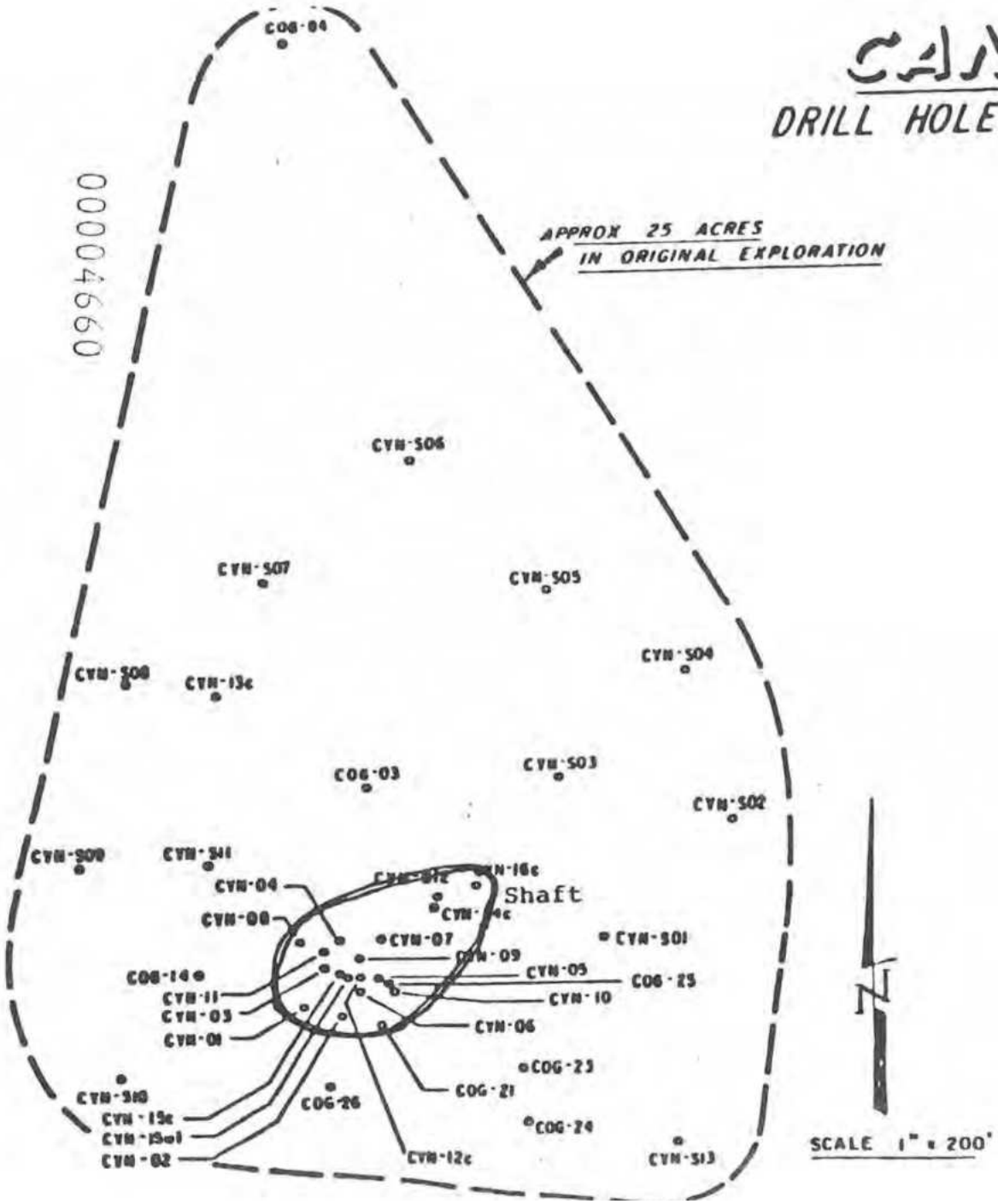

HOLE NUMBER	YEAR OF COMPLETION	CONTRACTOR	TOTAL DEPTH
COG-03	1978	Unknown	1,660
COG-04	1978	Unknown	1,640
COG-14	1980	Stewart Bros.	1,586
COG-21	1981	Stewart Bros.	1,570
COG-23	1981	Stewart Bros.	1,762
COG-24	1981	Stewart Bros.	1,700
COG-25	1982	Stevens & Harris	1,550
COG-26	1982	Stevens & Harris	1,593
CYN-01	1983	Ormsbee & Quality	2,100
CYN-02	1983	Quality	2,030
CYN-03	1983	Quality	1,943
CYN-04	1983	Quality	1,950
CYN-05	1983	Quality	2,310
CYN-06	1984	Quality	2,300
CYN-07	1984	Quality	1,752
CYN-08	1984	Quality	1,570
CYN-09	1984	Quality	1,655
CYN-10	1984	Quality	1,700
CYN-S01	1984	Quality	120
CYN-S02	1984	Quality	120
CYN-S03	1984	Quality	100
CYN-S04	1984	Quality	80
CYN-S05	1984	Quality	90
CYN-S06	1984	Quality	100
CYN-S07	1984	Quality	80
CYN-S08	1984	Quality	80
CYN-S09	1984	Quality	100
CYN-S10	1984	Quality	100
CYN-S11	1984	Quality	120
CYN-S12	1984	Quality	160
CYN-S13	1984	Quality	100
CYN-11	1984	Quality	1,040
CYN-13c	1984	Boyles Bros.	2,022
CYN-13c	1984	Boyles Bros.	1,966
CYN-14c	1984	Boyles Bros.	1,436
CYN-16c	1984	Boyles Bros.	2,190
CYN-15c	1985	Boyles Bros.	2,134
CYN-15d1	1985	Boyles Bros.	495

EXHIBIT "B"

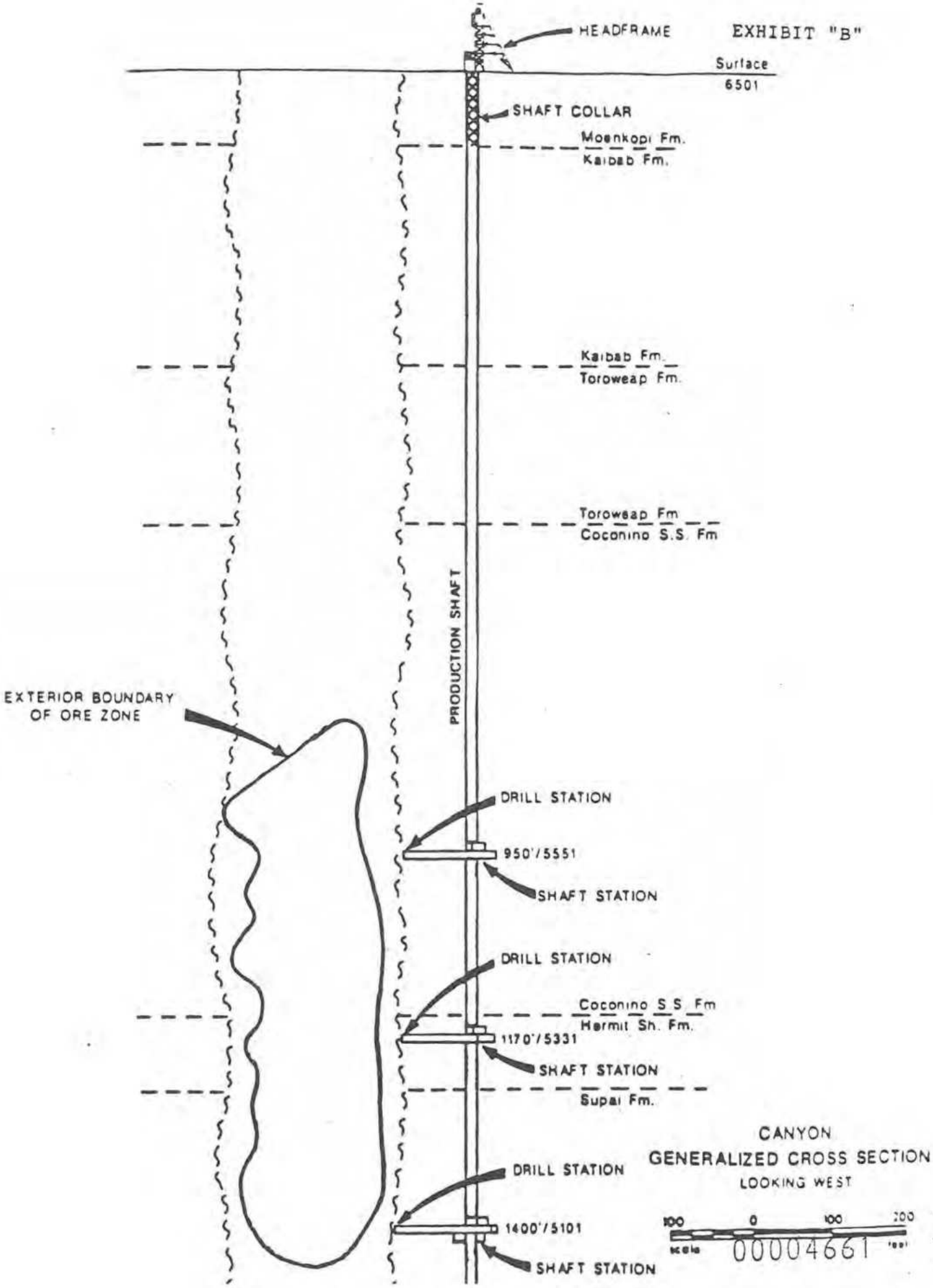
HEADFRAME
Surface
6501
SHAFT COLLAR
Moenkopi Fm.
Kaibab Fm.
Kaibab Fm.
Toroweap Fm.
Toroweap Fm
Coconino S.S. Fm
PRODUCTION SHAFT
EXTERIOR BOUNDARY
OF ORE ZONE
DRILL STATION
950'/5551
SHAFT STATION
DRILL STATION
Coconino S.S. Fm
Hermit Sh. Fm.
1170'/5331
SHAFT STATION
Supai Fm.
DRILL STATION
1400'/5101
SHAFT STATION
CANYON
GENERALIZED CROSS SECTION
LOOKING WEST
100
0
100
200
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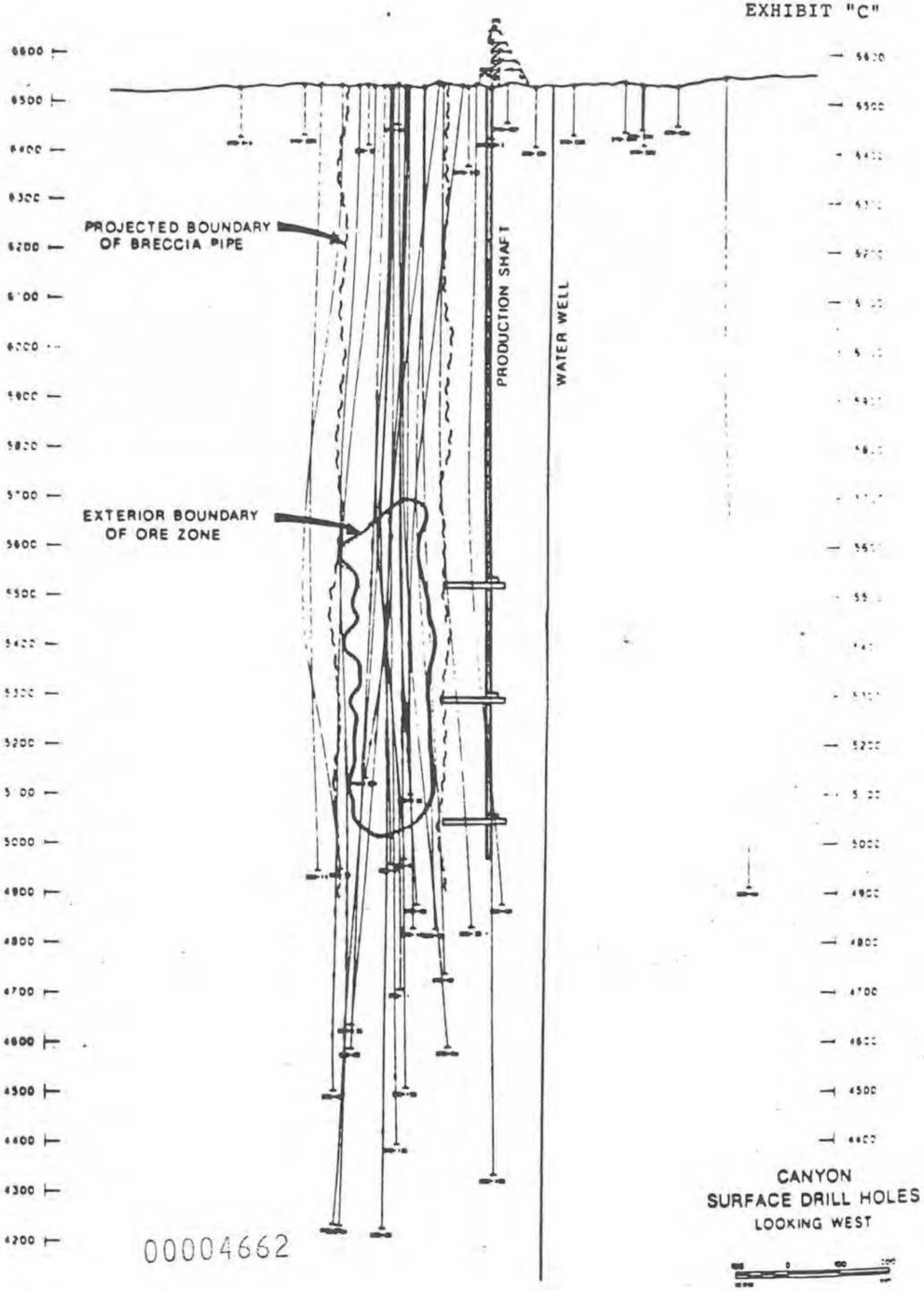
EXHIBIT "C"



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DOCUMENT #6

RECORD OF DECISION

USDA Forest Service
Kaibab National Forest

CANYON MINE PROPOSAL

Final Environmental Impact Statement

Coconino County, Arizona

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RECORD OF DECISION

USDA Forest Service
Kaibab National Forest

CANYON MINE PROPOSAL
Final Environmental Impact Statement

Coconino County, Arizona

I. Introduction

This Record of Decision documents my approval of a modified Plan of Operations for the Canyon Uranium Mine on the Kaibab National Forest. The alternatives considered and my rationale for selecting the preferred alternative are described in this Record of Decision. The environmentally preferred alternative is also identified.

In October, 1984, Energy Fuels Nuclear, Inc. (EFN), submitted to the USDA Forest Service, Kaibab National Forest, a proposed Plan of Operations to mine uranium on unpatented mining claims on the Tusayan Ranger District. The proposed mine is located in Coconino County, Arizona, approximately six miles south of the community of Tusayan.

A detailed description of the proposed mine operations can be found in the Environmental Impact Statement (EIS). In brief, the proposed Canyon Mine would involve underground mining of a breccia pipe uranium deposit and would require disturbance of approximately 17 acres for the mine shaft and surface facilities. Ore from the mine will be trucked to the licensed mill near Blanding, Utah.

When the Plan of Operations was submitted, the Forest Service sought public review and comment on the proposal to assist in determining the appropriate level of analysis and documentation required under the National Environmental Policy Act (NEPA). The Forest Service decided the preparation of an EIS was warranted and a notice to prepare an EIS was published in the Federal Register on April 30, 1985.

A Draft EIS was prepared and released to the public on February 28, 1986. A Final EIS, including public comments on the Draft EIS and Forest Service responses, was completed and released on September 29, 1986. The purpose of the EIS was to present information to allow for an informed decision on whether to reject, accept, or accept with modifications the proposed Plan of Operations. The EIS analyzed potential environmental, social and economic impacts of the proposed mine and developed and evaluated mitigation measures designed to minimize potential impacts from mining and ore transportation.

II. Decision

My decision is to select Alternative 5, the alternative preferred by the interdisciplinary team in the EIS.

The Selected Alternative includes approval of a modified Plan of Operations for an underground uranium mine and allows EFN to choose between two ore transportation options: Haul Route #6, an all-highway route along Highway 64, Interstate 40 and Highway 89, from the mine site to Blanding; and Haul Route #7, another southern route which crosses State and private lands on gravel roads near SP Crater. A detailed description and analysis of the haul route options considered and selected is provided in the EIS. If EFN chooses to use Haul Route #7, it must negotiate the necessary rights-of-way with the State of Arizona and private landowners.

Other important operational features of the Selected Alternative include:

1. Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary;

2. Construction of an overhead powerline from Highway 64 following the access road to the mine site;

3. Transportation of mine workers by company van or bus;

4. Modified surface water diversion structure to provide increased protection from storm runoff;

5. Mitigation measures for the replacement of disturbed wildlife habitat and key wildlife waters; and

6. Expanded mine reclamation plan.

The operational components of the Selected Alternative are analyzed in detail in the EIS. The mitigation measures which have been adopted as part of my decision are described in Section VII of this Record of Decision. All practicable means to avoid, minimize and monitor environmental impacts have been adopted.

III. Alternatives Considered

Based on available data, all reasonable alternatives to the proposed Plan of Operations were developed and analyzed in the EIS. The following alternatives were considered in detail:

Alternative 1 — No Action, Disapproval of the Plan of Operations.

No mine would be developed at the Canyon Mine site. While the Forest Service can impose reasonable environmental controls on a mining operation, we do not have the authority to disapprove a reasonable operating plan for a mining operation which will be conducted in an environmentally responsible manner. The use of this alternative,

however, is consistent with previous Forest Service administrative decisions to treat the no action mining alternative as the no project option.

Alternative 2 — Proposed Plan of Operations.

This alternative is the Plan of Operations as proposed by EFN, in October, 1984.

Alternative 3 — Modified Plan of Operations with Additional Monitoring, Mitigation and Haul Routes #1 and 2.

This alternative includes an expanded monitoring program for soil, air and water, an alternative haul route and additional mitigating measures, including the replacement of disturbed wildlife habitat and key wildlife waters.

Alternative 4 -- Modified Plan of Operations with Additional Monitoring, Mitigation and Haul Route #5.

This alternative includes the monitoring and mitigation measures of Alternative 3, but considered different haul routes. Alternative 4 also includes company provided transportation for mine workers.

Alternative 5 — Preferred Alternative.

The Preferred Alternative includes the monitoring program and mitigation measures considered in Alternatives 3 and 4, haul route options #6 and 7, company transportation for mine workers and a surface powerline along the access road to the mine site.

The project alternatives differ primarily in the level of monitoring and mitigation required, and the haul routes evaluated. The alternatives also consider different operational features of the mine, including power supply, worker transportation and surface water diversion.

In addition to the alternatives described above, several other alternatives were considered but eliminated from detailed study in the EIS. Two alternatives that were initially considered as possible agency actions, but dropped from further consideration, were withdrawal of the land from mineral entry and patenting (fee title ownership of the mine site) of the lands in the area of the proposed Canyon Mine by EFN. Patenting remains a discretionary option still available to EFN, and the authority of the Forest Service to influence project mitigation and monitoring under this alternative would be much less. Other non-project alternatives considered but eliminated from detailed analysis as remote, speculative and conjectural, providing no additional information which could aid the public or the Forest Service in considering the impacts of the proposed Canyon Mine include energy conservation, alternative energy development and obtaining uranium from other sources. The reasons for eliminating these alternatives from detailed study are discussed in Chapter 2 of the EIS.

IV. Response to Public Comments

Two hundred and thirty-eight letters were received in response to the Draft EIS. The major concerns expressed in these letters fell mainly into the following broad categories: Proximity of the proposed mine to the Grand Canyon National Park, including the perception that the mine was located within the boundaries of the Park; cumulative impacts of several uranium mines; potential for groundwater contamination; the "valuable mineral" test under the 1872 mining law; radioactive dust exposure along haul routes; potential human health effects; effects on wildlife and wildlife habitat; heavy truck traffic; and, opposition to the proposed mine because of social issues and controversy associated with the use of uranium.

The EIS was revised to reflect the comments received on the Draft EIS. Important changes include:

1. **Addition of Indian religious concerns as an issue and concern.** The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the Draft EIS in conjunction with a general analysis of impacts on American Indians. Comments on the Draft EIS by the Hopi and Havasupai Tribes alleged that religious sites and practices would be adversely affected by the Canyon Mine, a concern which was not raised by the Tribes during scoping or earlier consultation with the Tribes. Based on those comments and continuing consultation with the affected Tribes, Indian religious concerns was added to the list of issues evaluated in detail by the EIS. The text of the EIS includes an expanded discussion of Indian religious sites and practices, and beliefs about the affected area. Following the printing of the EIS, Havasupai and Hopi representatives met with Forest Service representatives and provided additional comments and information with respect to these issues. Consultation with the Tribes regarding religious concerns will continue during the review, construction and operation of the mine.

2. **Expanded discussion of potential groundwater impacts.** Several comments expressed concern about potential depletion or contamination of groundwater resources in the area, including potential impacts on seeps and springs which flow from underground aquifers. The Draft EIS evaluated the impacts on surface and subsurface water as a major issue and concern. The Draft EIS concluded that adverse impacts either during or after mining operations were extremely unlikely. In response to public comments, the EIS was revised to include an expanded discussion and analysis of groundwater conditions and potential impacts. The additional analysis confirms the conclusion of the Draft EIS that no adverse groundwater impacts are expected.

Many letters responding to the Draft EIS expressed concerns related to the milling process in Blanding, Utah, rather than the extraction of uranium ore at the mine site. There seems to be some confusion over the two separate processes. The proper handling and disposal of tailings at the Blanding mill site and the safe transport of "yellowcake" surfaced frequently in letters. Both of these concerns are associated with the concentration process of the uranium ore at the mill in Blanding, Utah. No uranium ore will be processed at the Canyon Mine site. Therefore, comments related to the potential

impacts of uranium milling are not appropriate and are beyond the scope of the Canyon Mine EIS.

In addition to comments made about specific elements of the Draft EIS, many letters expressed a preference for one or more of the alternatives evaluated in the Draft EIS. One hundred and fifty responses were supportive of the mining development. Seventy four letters, including some with multiple signatures, expressed opposition to all mining alternatives, preferring the No Action Alternative. Section 1.1.1 of the EIS discusses the statutory and regulatory authorities of the Forest Service to administer mining activities. The general mining laws provide a statutory right to explore and extract certain minerals from the National Forests. The Forest Service does not have the discretionary authority to categorically deny access for the purpose of prospecting for and extracting minerals on those National Forest System lands that are open to mineral entry. It is the responsibility of the Forest Service to review and where necessary, modify proposed plans of operation for the development of a mine. Review and modification of plans is to ensure that the mining operations will be conducted in a manner which minimizes, prevents, mitigates or repairs adverse environmental impacts. The Forest Service does not have the authority to categorically deny reasonable operations proposed under the mining laws.

Many comments also expressed the need for a "regional programmatic planning document" for uranium mining operations on the entire Coconino Plateau and Arizona Strip. The option of preparing a broader, regional analysis of uranium mining was considered and rejected in the decision to prepare the EIS for the Canyon Mine proposal. NEPA requires such an analysis in two instances; when there is a comprehensive federal plan for the development of a region and where various federal actions have significant cumulative or synergistic environmental impacts in a well defined region. The first requirement is clearly inapplicable. The second was analyzed in detail but rejected for several reasons. First, only one mining plan was pending before the Forest Service. While other mine plans are possible, and perhaps even likely, only one federal decision in the region south of the Grand Canyon required NEPA analysis, the review of the Canyon Mine Plan of Operations. Second, evidence from similar mines operating north of the Grand Canyon indicated that impacts were localized and that major interactive impacts were unlikely. The distance between the two areas and the unique geology which separates them creates two distinct regions.

We were also influenced by the practical problems of such a regional analysis. Since no other mine sites had been proposed, a regional analysis would have required us to hypothesize sites and development schedules for an unspecified number of future mines. Since the location and timing of the mines would determine whether cumulative or interactive impacts existed, the outcome of the study would have been determined by the selection of mine sites. Such an artificial study did not appear to be valuable in the review of the Canyon Mine Plan of Operations.

While there was no basis for a regional environmental impact statement, the EIS does recognize the possibility of cumulative impacts from the development of additional mines in the area. Potential cumulative impacts on the region were analyzed by considering two scenarios; one additional mine in the Tusayan area near the Canyon Mine and three additional mines in Coconino County south of the Grand Canyon. The conclusion of the EIS was that, apart from transportation and social and economic impacts, the impacts of

development of mines such as the Canyon Mine are limited to a relatively small area near the mine site. While several commentors asked for more detailed analysis of cumulative impacts, no comment challenged the conclusion of the Draft EIS or provided any evidence to the contrary.

Finally, the Forest Service land management planning process is the agency's primary broad environmental analysis effort. Special resource values and uses that could be affected by exploration and mining have been identified in the proposed Forest Land Management Plan. Standards and guidelines in the proposed Plan specify restrictions and mineral withdrawals to protect these special resources. Thus, while it does not specifically focus on uranium mining, the proposed Plan is, to some extent, comparable to an "area wide" EIS for the entire Kaibab National Forest, which includes Forest lands both north and south of the Grand Canyon. The lands in the Grand Canyon region are managed under a myriad of federal, state, private and tribal jurisdictions and, taken collectively, both the Canyon Mine EIS and the proposed Forest Land Management Plan reflect an appropriate level of analysis at this time in light of the past, present and reasonably foreseeable proposals.

V. Issue Resolution

Although none of the project alternatives fully resolves all of the identified issues and concerns, the modified project alternatives with specified mitigation measures are all considered environmentally acceptable. A brief discussion of how each alternative analyzed in the EIS addresses each issue is provided below:

1. **Social and Economic Impacts.** Social and economic impacts on the community of Williams and Coconino County as a whole are considered to be beneficial and virtually the same for Alternatives 2-5. If the No Action Alternative were implemented, there would be no change in current levels of employment, income, tax revenue or output as a result of the Canyon Mine.

2. **Reclamation Measures.** Reclamation measures required at the mine site are satisfactory in Alternatives 2-5, although additional measures called for in the modified project alternatives (Alternatives 3-5) are more comprehensive and oriented toward improving wildlife habitat at the mine site upon its closing. No reclamation would be required at the mine site under the No Action Alternative.

3. **Project Costs.** The least cost alternative is Alternative 2. Alternatives 3-5 all result in increased expenditures depending on the haul route used and mitigation measures required. Increased expenditures are generally associated with mitigation requirements. The costs of exploration and environmental review already incurred by EFN could not be recovered under the No Action Alternative.

4. **Wildlife Impacts.** Wildlife habitat will be affected to varying degrees in all alternatives depending on the ore transportation route used. Alternative 5 has the least impact on wildlife. Alternative 2 would have the greatest impact because of a lack of

mitigation requirements. Mitigation measures in Alternatives 3 and 4 should be effective in reducing the adverse impacts on wildlife resulting from increased road traffic.

Alternatives 3-5 all call for equivalent habitat replacement to offset impacts to wildlife habitat caused by the mine and expanded transportation system. Alternative 3 also includes a proponent choice of road closure during May and June in lieu of habitat replacement.

The No Action Alternative would have no impact from mining or ore transport on wildlife or wildlife habitat and would, therefore, require no mitigation.

5. **Impacts on Vegetation.** Alternatives 2-5 will have a negligible and insignificant effect on the make-up of vegetative types now present on the Tusayan Ranger District. The No Action Alternative would have no impact on vegetation at the Canyon Mine site.

6. **Visual Quality Impacts.** Visual quality associated with the Grand Canyon will not be affected by the development of the Canyon Mine regardless of the alternative selected for implementation. Alternatives 2-5 will alter the short term visual quality at the mine site. Alternative 4 requires constructing a road off the Coconino Rim in a location that would be visible to travelers going to and from the Grand Canyon using the east Highway 64 entrance. The No Action Alternative would have no impact on the visual quality of the area.

7. **Impacts on Air Quality.** Implementation of Alternative 2-5 will have no appreciable effect on the air quality, which includes particulates, radon gas, or radioactive dust, at either the Grand Canyon or the community of Tusayan. Increases in particulate matter will be site specific along haul routes and at the mine site itself and are expected to be well within air quality standards. Current levels of air quality in the vicinity of the Canyon Mine site and haul routes would be unchanged by the No Action Alternative.

8. **Impacts from Ore Transportation System.** Implementation of Alternative 5 and use of either the SP Crater haul route or the Federal and State Highway system would minimize impacts on National Forest resources and general forest environmental setting. The haul route identified in Alternative 4 would be most cost effective in providing a road that would meet long term management needs in the event other mines are developed in the eastern quadrant of the Tusayan Ranger District. Haul routes analyzed in Alternatives 2 and 3 are the most cost effective routes for hauling ore from the Canyon Mine to the mill in Blanding, Utah. No ore would be transported under the No Action Alternative.

9. **Impacts on Soil, and Surface and Ground Water.** Mitigation measures, operational procedures and monitoring requirements included in Alternatives 3-5 will reduce the possibility of radionuclide contamination to soil, and surface and subsurface water sources, and identify any contamination at the earliest

possible time. Alternative 2 does not include air, water and soil monitoring requirements to ensure the operational designs of the mine are functioning properly. Current parameters for water quantity and water quality would remain unchanged at the mine site under the No Action Alternative.

Neither the water quality on the Havasupai Indian Reservation nor the Grand Canyon National Park should be environmentally affected by the development of the Canyon Mine under Alternatives 2-5.

10. **Impacts on Indian Religious Sites and Practices.** Development of the mine site under Alternatives 2-5 and haul route options requiring the new road construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices consisting of plant gathering and ceremonial activities. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any known religious sites or areas be restricted. Although there is no physical evidence of Indian religious activity at the mine site itself, the Havasupai have recently stated that sacred camping and burial sites are present in the general area north of Red Butte, and perhaps at the mine site itself. However, the Havasupai Tribe refuses to disclose the location of the sites. The Havasupai Tribe has also recently stated that the general area around the mine is important to the Tribe's religious well being because it lies within a sphere of existence or continuum of life extending generally from the Grand Canyon to Red Butte. They explain that any uranium mining or similar activity within the sphere or continuum will violate unidentified Havasupai religious values and, may pose a threat to their very existence. The Havasupai have steadfastly declined to provide any additional information concerning the nature or importance of this sphere of existence, because, they stated, to discuss it further would be sacrilege.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated beliefs.

Further consultation with the Havasupai and Hopi people will continue during project review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.

The No Action Alternative would have no impact on Indian religious sites or practices. The Hopi and Havasupai Tribes have expressed a preference for the No Action Alternative, stating that no degree of project mitigation is acceptable.

Environmentally Preferred Alternative

Alternative 1, the No Action Alternative, represents the no project option. Under Alternative 1, no impacts from mine development and ore transport would occur. Therefore, Alternative 1 is the environmentally preferrable alternative.

VI. Reasons for Decision

While the Forest Service acknowledges the controversy surrounding the eventual uses of processed uranium and the heated debate over potential health hazards from radiological contaminants, the EIS disclosed no potential significant environmental impacts of the proposed Canyon Mine which could not be substantially mitigated or avoided entirely. These controversial issues of national debate are clearly outside the scope of the Canyon Mine analysis in light of anticipated impacts of the proposed mine and the well-defined legislative mandates and authorities of the Forest Service. Although none of the modified project alternatives were considered environmentally unacceptable, the Selected Alternative represents the combination of operational components, mitigation measures and haul routes which minimize potential impacts and best responds to the issues and concerns identified in the EIS.

Based on the EIS, no significant environmental impacts are expected from mining operations or ore transportation. Impacts are expected to be small and localized near the mine site. The mitigation measures adopted as part of this decision further reduce the potential impacts to acceptable levels. Accordingly, I feel that the Canyon Mine can be permitted consistent with my responsibilities to minimize degradation of Forest resources.

Specific reasons and factors which I gave particular attention to in selecting Alternative 5 are listed below. No single factor determined the decision. Based on consideration of these factors, I feel the Selected Alternative provides the highest level of issue resolution and best meets the intent of the laws and regulations governing Forest Service operations.

1. Expanded Monitoring -- The air, soil and water monitoring program responds to issues and concerns raised during scoping and evaluated in the Draft EIS, and to comments made on the Draft EIS. The groundwater monitoring well, while expensive, is an important element of the monitoring and mitigation strategy as it responds to the unique concerns raised by the proposed Canyon Mine. The groundwater monitoring will confirm or invalidate assumptions about groundwater hydrology used in the Canyon Mine analysis. It helps assure that important water sources, including springs which are sacred to the Hopi and Havasupai Tribes, will not be adversely affected by the Canyon Mine. The monitoring program also responds to the fear of radioactive contamination of air, water and soil expressed by some members of the public. It will help determine the need to further modify the Plan of Operations to provide additional mitigation measures, including the construction of other groundwater monitoring wells, should any unforeseen impacts occur. Finally, the results of the monitoring program will provide important data needed for the evaluation of future mining proposals in the area, if any should occur.

2. Modified Surface Water Diversion -- The alternative flood diversion plan is clearly superior to that proposed in the Plan of Operations. It provides for increased flood control capacity (a 500-year event) with less surface disturbance at the mine site.

3. Haul Routes -- The Selected Alternative offers EFN the choice of two haul routes. Either haul route option minimizes potential impacts on wildlife, cultural resources and the Grand Canyon National Park. These benefits, however, create substantial increased costs for the proponent, EFN. Haul route #6 is the longest route, resulting in the highest hauling costs. Haul route #7 is the next most expensive option and will also require that EFN acquire State and private rights-of-way at additional costs.

   These haul route options we e selected despite the increased costs for several reasons. These routes are most responsive to public comments. While the EIS states that the impacts of any haul route option can be successfully mitigated, routes #6 and #7 have the least potential for adverse impacts. Finally, and most importantly, they provide the most flexibility for future transportation decisions and preclude an irrevocable commitment of resources to road construction or improvements which might forclose future transportation options. As the EIS notes, future uranium mines in this region are possible, however, it is impossible to predict the specific sites or timing of any future mine proposals. This decision which uses existing roads and minimizes new construction, will allow reconsideration of ore transportation routes when future mines, if any, are proposed. This decision also allows future decisionmakers to consider the option of consolidating or dispersing ore truck traffic to minimize transportation costs and environmental impacts.

4. Overhead Powerline -- The EIS evaluated a buried powerline and two surface powerline routes, one following the shortest route from the existing powerline to the mine site and one following the mine site access road. The surface powerline along the access road has been selected because it disturbs no new area. The buried line was rejected because it substantially increases project costs without any significant corresponding environmental benefit.

5. Transportation of Mine Workers -- Company transportation of mine workers is preferrable to private transportation because it reduces surface disturbance (no large employee parking lot is required) and traffic to and from the mine.

6. Wildlife Mitigation -- While the potential wildlife impacts of the Selected Alternative are less than those of the other project alternatives considered in the EIS, any loss of key wildlife habitat should be mitigated. Implementation of this decision will require that EFN replace the 32 acres of big game foraging habitat lost at the mine site and replace one key watering source impacted by the mine access and ore transportation route. In addition, operating restrictions may be imposed on the use of haul route #7 to avoid potential impacts on elk migration.

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2. Modified Surface Water Diversion -- The alternative flood diversion plan is clearly superior to that proposed in the Plan of Operations. It provides for increased flood control capacity (a 500-year event) with less surface disturbance at the mine site.

3. Haul Routes -- The Selected Alternative offers EFN the choice of two haul routes. Either haul route option minimizes potential impacts on wildlife, cultural resources and the Grand Canyon National Park. These benefits, however, create substantial increased costs for the proponent, EFN. Haul route #6 is the longest route, resulting in the highest hauling costs. Haul route #7 is the next most expensive option and will also require that EFN acquire State and private rights-of-way at additional costs.

   These haul route options were selected despite the increased costs for several reasons. These routes are most responsive to public comments. While the EIS states that the impacts of any haul route option can be successfully mitigated, routes #6 and #7 have the least potential for adverse impacts. Finally, and most importantly, they provide the most flexibility for future transportation decisions and preclude an irrevocable commitment of resources to road construction or improvements which might forclose future transportation options. As the EIS notes, future uranium mines in this region are possible, however, it is impossible to predict the specific sites or timing of any future mine proposals. This decision which uses existing roads and minimizes new construction, will allow reconsideration of ore transportation routes when future mines, if any, are proposed. This decision also allows future decisionmakers to consider the option of consolidating or dispersing ore truck traffic to minimize transportation costs and environmental impacts.

4. Overhead Powerline -- The EIS evaluated a buried powerline and two surface powerline routes, one following the shortest route from the existing powerline to the mine site and one following the mine site access road. The surface powerline along the access road has been selected because it disturbs no new area. The buried line was rejected because it substantially increases project costs without any significant corresponding environmental benefit.

5. Transportation of Mine Workers -- Company transportation of mine workers is preferrable to private transportation because it reduces surface disturbance (no large employee parking lot is required) and traffic to and from the mine.

6. Wildlife Mitigation -- While the potential wildlife impacts of the Selected Alternative are less than those of the other project alternatives considered in the EIS, any loss of key wildlife habitat should be mitigated. Implementation of this decision will require that EFN replace the 32 acres of big game foraging habitat lost at the mine site and replace one key watering source impacted by the mine access and ore transportation route. In addition, operating restrictions may be imposed on the use of haul route #7 to avoid potential impacts on elk migration.

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7. Other Mitigation -- This decision also adopts an extensive list of additional mitigation measures designed to minimize potential environmental impacts. These measures are listed and discussed in the following section.

VII. Mitigation Measures

The mitigation measures and operational components described in Sections 2.2.1.2 and 2.5 of the EIS are all adopted as part of my decision. Important measures include:

1. **Regulatory Requirements with Associated Monitoring.** Compliance with all applicable federal, state and local statutory and regulatory requirements will be assured by monitoring of EFN activities during construction, operation and reclamation of the mine and through appropriate language in permitting documents.

2. **Reclamation Plan.** The reclamation plan in the Plan of Operations (Appendix A) and those Forest Service modifications contained in Appendix B of the EIS are adopted as part of this decision. EFN will be required to post a performance and reclamation bond in the amount of $100,000 before mining activities begin.

3. **Visual Impacts.** The mine head frame and support facilities will be painted with earth tone colors.

4. **Public Safety.** The mine site will be fenced, posted and secured.

5. **Ore Haulage.** Ore trucks will be tightly covered with a tarpaulin. Any ore spilled will be cleaned up immediately and the spill reported to appropriate federal, state and tribal authorities.

6. **Air Quality.** Ore stockpiles will be managed to minimize wind dispersal of dust. This may require management of the stockpiled ore by wetting or chemical treatment.

7. **Ore Stockpiles.** Prior to stockpiling ore, ore pads a minimum of one foot thick will be constructed to prevent leaching of mineral values from the ore into the soil. Uranium ore will be removed and trucked to a distant processing plant. During post-mining reclamation operations, only barren or slightly mineralized waste rock may be replaced into the mined-out workings.

8. **Holding Ponds.** Holding ponds will be constructed with a minimum capacity of six acre feet, with no more than three acre feet of storage used at any time. Total holding pond storage capacity is sufficient to accomodate runoff from a 100 year storm event, plus normal annual runoff and water that may be pumped from the mine. The ponds must be lined with plastic or impervious material to prevent percolation into the substrate.

9. **Noise.** The mine will be designed and operated in a manner to reduce noise to the lowest practical levels. All equipment will be carefully maintained.

10. **Erosion Control.** Erosion will be controlled by revegetating disturbed areas. Stabilization of stockpiled topsoil will be accomplished by revegetation. The outside slopes of the diversion dikes that surround the mine yard will be riprapped.

11. **Fire Protection.** The riprapped dike slopes surrounding the mine yard will serve as a fire break and a water tank and fire extinguishers will be maintained on site for fire suppression.

12. **Radiological Monitoring.** Baseline measurements of radiation values in soil, air and water have been taken. Monitoring will continue after the mine becomes operational. The monitoring program may be extended, expanded, suspended or curtailed by the Forest Service based on the results obtained. Monitoring will continue until sufficient data is available to assure that there are no significant off-site radiological impacts. A final radiological survey will be conducted at the time the mine is closed to assess the impact of the mine, and the need for additional reclamation measures and monitoring, of the project area. Radiological surveys and appropriate cleanup measures will be required for all unplanned events, including ore haulage accidents and failure of the surface water control stuctures. All monitoring will be by independent contractors and all costs will be borne by the applicant, EFN.

13. **Groundwater Monitoring.** A water well to the Redwall-Muav aquifer will be constructed and tested prior to the intersection of ore by mining operations. If groundwater is present, it will be sampled at regular intervals and analyzed. If groundwater becomes contaminated during mining operations, continuous pumping will be maintained until concentrations of the critical constituents are reduced to recommended primary drinking water standards or to within ten percent of ambient concentrations, or to some comparable level approved by the Forest Service. If new information surfaces which suggests the need for an expanded groundwater monitoring program, the Forest Service reserves the right to impose additional monitoring and mitigation measures it deems necessary, including the construction of other groundwater monitoring wells.

    If groundwater is not yielded from the Redwall-Muav aquifer at the mine site, the test borehole will be plugged and abandoned in accordance with requirements of the Arizona Department of Water Resources.

14. **Floodwater Control.** This decision adopts the modified surface water diversion system described in detail in the EIS in Section 2.5.12 and Appendix D. The modified design increases the flood carrying capacity of the channels to handle a 500 year event and precludes the possibility of runoff from local intense storms from either entering or leaving the operating site, thereby eliminating the potential of downstream radionuclide contamination from ore stock piles.

15. **Traffic Control.** Signing, and other measures if deemed necessary, will be used to control traffic at the intersection of Highway 64 and Forest Road 305.

16. **Wildlife Mitigation.** The acreage temporarily lost to development of the mine site will be mitigated by the creation of a foraging area in a different location. Important wildlife waters disturbed by mine development or ore transportation will be replaced. The location and design of these replacement habitats will be coordinated with the Arizona Game and Fish Department.

17. **Raptor Protection.** The overhead powerline will have a 60 inch minimum separation.

18. **Worker Transportation.** EFN will provide transportation for mine workers by van or bus and will discourage use of private vehicles.

VIII. Right to Administrative Review

This decision is subject to administrative review in accordance with the provisions of 36 CFR 211.18. The operator also has appeal rights under 36 CFR 228.14. Notice of appeal must be made in writing and submitted to:

Leonard A. Lindquist, Forest Supervisor
Kaibab National Forest
800 South 6th Street
Williams, Arizona 86046

Appeal notices must be submitted within 45 days from the date of this decision. A statement of reasons to support the appeal and any request for oral presentation must be filed within the 45 days allowed for filing a notice of appeal.

Implementation of this decision will not take place sooner than 30 days after publication by the Environmental Protection Agency of the Notice of Availability for the Final EIS.

LEONARD A. LINDQUIST
Forest Supervisor

September 26, 1986
Date

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DOCUMENT # 4

APPENDIX G

PUBLIC COMMENT AND FOREST SERVICE RESPONSE

The Forest Service received 238 letters in response to the Draft Environmental Impact Statement (DEIS) on the proposed Canyon Uranium Mine (a complete list of respondents follows this discussion). These came from a cross-section of local and out-of-state residents, city and county government, public officials, state and federal agencies, private organizations and other groups and institutions. One hundred and fifty of these responses were supportive of the mining development, with an additional 15 asking for further clarification with a more or less neutral comment. Seventy-four letters, including some with multiple signatures, were opposed to all of the mining alternatives, preferring the No Action Alternative.

All unique letters are printed here, together with the Forest Service response. Similarly, examples of all identical letters are reprinted together with the Forest Service response. Many responses are identical and are therefore not repeated. Instead, the reader is referred to the appropriate Forest Service response for comments that received that response.

The major concerns expressed in these letters fell mainly into the following broad categories:

1. Proximity of the proposed mine to Grand Canyon National Park, including the perception that the mine was located within the boundaries of the Park.

2. Cumulative impacts of several uranium mines.

3. Potential for groundwater contamination.

4. The "valuable mineral" test under the 1872 mining law.

5. Radioactive dust exposure along haul routes.

6. Potential human health effects.

7. Effects on wildlife and wildlife habitat.

8. Heavy truck traffic (disrupting Park visitors, hazard to road-side residents, spill clean-up, etc).

9. Opposition to the proposed mine because of social issues and controversy associated with the use of uranium.

The EIS has been revised to reflect the comments received on the DEIS. Important changes include:

1. Addition of Indian religious concerns as an issue and concern.

The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the DEIS in conjunction with a general analysis of impacts on American Indians. Comments on the DEIS by the Hopi and Havasupai Tribes alleged that religious sites and practices would be adversely affected by the Canyon Mine, a concern which was not raised by the Tribes during scoping or earlier consultation with the Tribes. Based on those comments and continuing consultation with the affected Tribes, the Forest Service has added Indian religious concerns to the list of issues evaluated in detail by the EIS. The text of the FEIS includes an expanded discussion of Indian religious sites and practices in the affected area. The Forest Service has also requested a meeting with tribal representatives at the proposed mine site to identify any specific sacred sites that might be disturbed by mining activity. To date, neither Tribe has committed to a visit to the mine site. Consultation with the Tribes regarding religious concerns will continue beyond completion of the NEPA process.

2. Expanded discussion of potential groundwater impacts.

Several comments expressed concern about potential depletion or contamination of groundwater resources in the area, including potential impacts on seeps and springs which flow from underground aquifers. The DEIS evaluated the impacts on surface and subsurface water as a major issue and concern. The DEIS concluded that adverse impacts either during or after mining operations were extremely unlikely. In response to public comments, the FEIS includes an expanded discussion and analysis of groundwater conditions and potential impacts. The additional analysis confirms the conclusion of the DEIS that no adverse impacts are expected. The Preferred Alternative includes a monitoring well at the mine site. If groundwater is present at the site, the well will disclose any unanticipated changes in water quality resulting from mine operations.

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* These letters were not printed. They are identical to letters which were printed with responses.

SIERRA CLUB
Grand Canyon Chapter · Arizona
Route 4 Box 886
Flagstaff, Arizona 86001

KAIBAB N.F.
JUN 3 1986

June 2, 1986

Supervisor Kaibab National Forest
800 S. 6th Street
Williams, Arizona 86046

Dear Mr. Lindquist:

The Grand Canyon Chapter of the Sierra Club would like to submit these comments to the Canyon Mine DEIS.

Cumulative Effects

1-1 The DEIS fails to fully consider the cumulative impacts of the proposed Canyon Uranium Mine and foreseeable future mining operations. Although no uranium mines currently exist in the area, extensive exploration is underway and as the DEIS readily admits, it is "reasonably foreseeable" that additional mines will be located in the area. The Council on Environmental Quality (CEQ) regulations require that actions having cumulatively significant impacts shall be discussed in the same impact statement. 40 C.F.R. 1508.25(a)(2). Cumulative impacts are defined as incremental impacts of "past, present, and reasonably foreseeable" actions. 40 C.F.R. 1508.7. To comply with these regulations, the EIS must fully consider the cumulative impact of the proposed and other contemplated actions on the environmental and economic resources of the area.

1-2 The cumulative analysis of the DEIS should more fully develop potential impacts on a wide range of environmental values. The Kaibab National Forest and Grand Canyon National Park are major recreational attractions and numerous mines in the area could have enormous impact on their recreational character. These effects include reduced opportunity for solitude, disruption of the visual environment, and increased accessibility and traffic to previously remote areas. The DEIS fails to adequately consider these and other cumulative impacts, and the effect on recreation and other resource values.

1-3 The DEIS further fails to examine the cumulative impact of high level use along the haul corridors. The proposed hypothetical of three additional mines in the area could result in traffic of up to 80 ore trucks per day. Cumulatively, this traffic is highly significant and must be explored in the EIS. The DEIS

1-4 also fails to adequately discuss the potentially significant effects of foreseeable operations on subsurface aquifers and the subsequent contamination of Havasu Springs and Blue Spring. We are not familiar enough with the mining procedures and local geology to articulate specific arguments, but it seems the cumulative risks would be substantial. The DEIS gives no detailed analysis of these risks.

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Mining Operations May Be More Appropriately Considered in a Regional Programmatic Planning Document.

1-5 The Forest Service should consider incorporating the Canyon Mine DEIS into a planning document for uranium mining operations on the entire Coconino Plateau and Arizona Strip. Typically, when various proposed federal actions will have cumulative or synergistic environmental impacts within a region, these consequences must be considered together in a regional environmental impact statement. No comprehensive federal plan for uranium development exists in this region. However, numerous mines are currently operating and others will likely be developed. Existing sites are at Kanab North, Pigeon, and Hacks Canyon on the Arizona Strip. Other proposed sites are Pinenut and the Canyon Mine, as well as thousands of mining claims filed in the Tusayan area. The inadequacy of individual planning documents for each of these sites is further complicated by the fact that the affected lands are administered by different agencies. Forest Service, BLM, and National Park Service lands are all significantly affected by uranium development in the region.

Range of Alternatives Considered

NEPA requires the federal agency to consider alternatives to the proposed action which would either reduce the environmental damage, or make the action unnecessary. The CEQ regulations further provide that "[t]he primary purpose of an environmental impact statement is to . . . inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the environment." 40 C.F.R. 1502.1 (emphasis added). The DEIS fails to fulfill these requirements. Not only is the range of alternatives inadequate but the no-action alternative is insufficiently analyzed.

1-6 To properly evaluate the environmental impact of the proposed Canyon Mine, a wide range of alternatives must be considered. Although the DEIS offers numerous alternatives in haul routes and mitigating factors, it fails to consider the obvious alternative of selecting a different mine site. Failure to discuss such critical alternatives is not in compliance with the "full disclosure" impact statement required by NEPA. California v. Block, 690 F.2d 753 (9th Cir. 1982); Natural Resources Defense Council, Inc. v. Grant, 355 F.Supp. 280 (E.D.N.C. 1973). Undoubtedly, other potential mine sites exist which would result in significantly lower impact on resource values of the Grand Canyon area. Reasons for not selecting these alternatives must be clearly identified.

1-7 The DEIS also fails to adequately consider the no-action alternative. Instead, the DEIS recognizes that the proposed plan of operations could be denied, but summarily rejects this alternative. The statement should more fully explore

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Supervisor Kaibab National Forest
Page 3

1-8 this possibility. The statement asserts that general mining law precludes the Forest Service from approving a "reasonable operating plan." However, it fails to support or analyze this statement. The right to enter upon the lands proposed in the Canyon Mine project depends upon the authority of the 1872 Mining Act. The Act opens to exploration and occupation only those lands on which "valuable mineral deposits" exist. For a mineral deposit to be considered valuable it must meet the marketability test of United States v. Coleman, 390 U.S. 599, 20 L.Ed.2d 170 (1968). This test requires the mineral deposit be capable of extraction, removal, and marketing at a profit. United States v. Winegar, 4 ELR 20005 (1974). Additional costs of mitigation and reclamation measures necessary to protect the resource values must also be considered. In the unstable uranium market it is not clear that the Canyon Mine site is a "valuable mineral deposit." Thus, the DEIS must more fully explore this opportunity to accept the no-action alternative.

Greater Detail is Required in the Discussion of Alternatives.

1-9 Although the DEIS examines various alternatives, it fails to adequately address potential environmental consequences of all these acitons. Certainly there exists very real hazards of ground and surface water contamination, radon gas emissions, and radiation from ore, both on site and during transportation. The statement cites a few studies and concludes the risks are insignificant.

Consideration of "Worse-Case" Scenario.

1-10 For several years, NEPA regs have required the agency to prepare a worse case analysis when data is missing or unknown and there is a chance of a significant adverse effect. New, revised regs require an agency to disclose the fact that information is missing or incomplete when there is a reasonably foreseeable significant adverse impact, and to obtain that info if the cost is not high. If the cost is high or the means to obtain missing info are not known, the agency must (1) disclose that the info is missing, (2) explain its relevance, (3) summarize the existing relevant evidence, and (4) evaluate the impacts based on what is known. There is no more worst-case analysis requirement.

Thank you for this opportunity to comment on the Canyon Mine DEIS.

Sincerely,

Sharon Galbreath

Sharon Galbreath
Chairperson
Grand Canyon Chapter
Rt. 4 Box 886
Flagstaff, Az. 86001

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0703

Forest Service Response

1-1

Although no other mines have been proposed in Coconino County south of the Grand Canyon, the EIS assumes that additional mines are possible and considers potential cumulative impacts of two mine development scenarios: one additional mine in the Tusayan area and three additional mines in Coconino County south of the Grand Canyon. Projected cumulative impacts of these scenarios may be found throughout Chapter 4. Minor changes in the text have been made to reflect comments and refinements in data or analysis. (See also response 78-2.)

1-2

The scoping process did not identify recreation (outside of Grand Canyon National Park) as a major issue or concern, thus impacts on recreational uses of the Forest were not analyzed in detail. The area of the Forest near the mine site and haul route alternatives is not heavily used for recreational purposes. However, the text has been revised to reflect the impacts suggested by this comment.

1-3

The cumulative impact of several mines on issues and concerns related to haul routes is discussed in the EIS. (See e.g., Section 4.2.5, Air Quality and Section 4.2.3, Wildlife.) In the absence of specific locations for subsequent mines, it is not possible to determine which portions of which haul route alternatives might see increased use. We believe that no further analysis is required. We acknowledge that 80 trucks per day over a route not presently traveled would have proportionately greater impacts than those noted in the EIS. However, the preferred haul route alternative utilizes existing roads largely outside the Forest. This alternative allows reconsideration of cumulative impacts at a later date when another mine proposal, if any, is made. Subsequent environmental analyses of proposed ore transportation can consider consolidating ore haul routes to minimize environmental impacts and transport costs.

1-4

Cumulative impacts on subsurface water resources are not expected for two reasons. First, the mitigation measures discussed in Section 2.5.11 are designed to identify and mitigate any subsurface contamination. It is assumed that similar, equally effective mitigation measures would apply to any additional mines. Second, the area of discernible

subsurface impacts is very localized. Only those perched aquifers present at the mine site, if any, may potentially be adversely impacted. Movement of subsurface water to and in the Redwall-Muav aquifer between mine sites (or toward springs) is extremely slow due to geologic conditions and significant dilution over time and distances is anticipated. Therefore, reasonably foreseeable cumulative impacts of up to three mines on subsurface water resources, if any, are expected to be negligible. That conclusion is stated in the EIS. (See also responses 61-5 to 61-9.)

1-5

The option of preparing a regional EIS for uranium mining was considered and rejected in the decision to prepare this EIS. The number of firm mining proposals and the interrelationship of impacts between mines does not presently support such an elaborate analysis. (See responses 2-3 and 78-2.)

The Canyon Mine EIS provides a basis for addressing the impacts, both site specific and cumulative, of future mining proposals and the preferred alternative allows for maximum flexibility in regional transportation planning.

1-6

The alternative of a different mine site was considered and rejected. No reasonable alternative mine site was identified in scoping or in consultation with the applicant. (See responses 61-12 and 78-2 and Section 2.3.)

The U.S. mining laws allow for the exploration and development of mineral resources. The Forest Service cannot prohibit the development of a confirmed mineral deposit that meets the requirements of these laws. Samples taken from the Canyon deposit during exploration support a reasonable belief on the part of EFN that the mine can be profitably developed. Thus, even though the alternative of a different mine site was considered, implementing such a decision is not presently within the legal authority of the Forest Service.

The primary responsibility of the Forest Service is to review, and where necessary, modify proposed plans of operations for the development of a mine. Review and modification of plans ensures that the mining operations will be conducted in a manner which minimizes or prevents, mitigates and repairs adverse environmental impacts. The EIS concludes that impacts from the Canyon Mine can be mitigated to avoid significant impacts.

1-7

The discussion in the EIS has been expanded to reflect this comment. The EIS also recognizes the rights of a mining claimant and some limitations on Forest Service discretion when reviewing a Plan of Operations.

1-8

The Forest Service does not generally conduct mineral examinations in conjunction with NEPA review for an approval of a plan of operations on Forest lands. The Forest Service is satisfied, based upon drilling data presented to it and EFN's success with comparable deposits north of the Grand Canyon, that EFN is proceeding in good faith to continue to explore and develop its claims and that it reasonably believes that it can develop a successful mine.

The No Action Alternative is considered in the EIS. Further efforts to investigate the economics of the mine would not result in a different analysis of the comparative environmental impacts of implementing that alternative.

1-9

This comment fails to specify any areas where the discussion of potential impacts is inadequate. The Forest Service believes that the EIS thoroughly analyzes potential impacts in detail relative to their significance and that the analysis and studies cited by the EIS, including those published in the Appendices, are valid and thoroughly documented.

1-10

This comment does not suggest any area of the EIS where either version of the CEQ regulation is applicable. (See response 61-12.)

DOCUMENT #3

United States
Department of
Agriculture

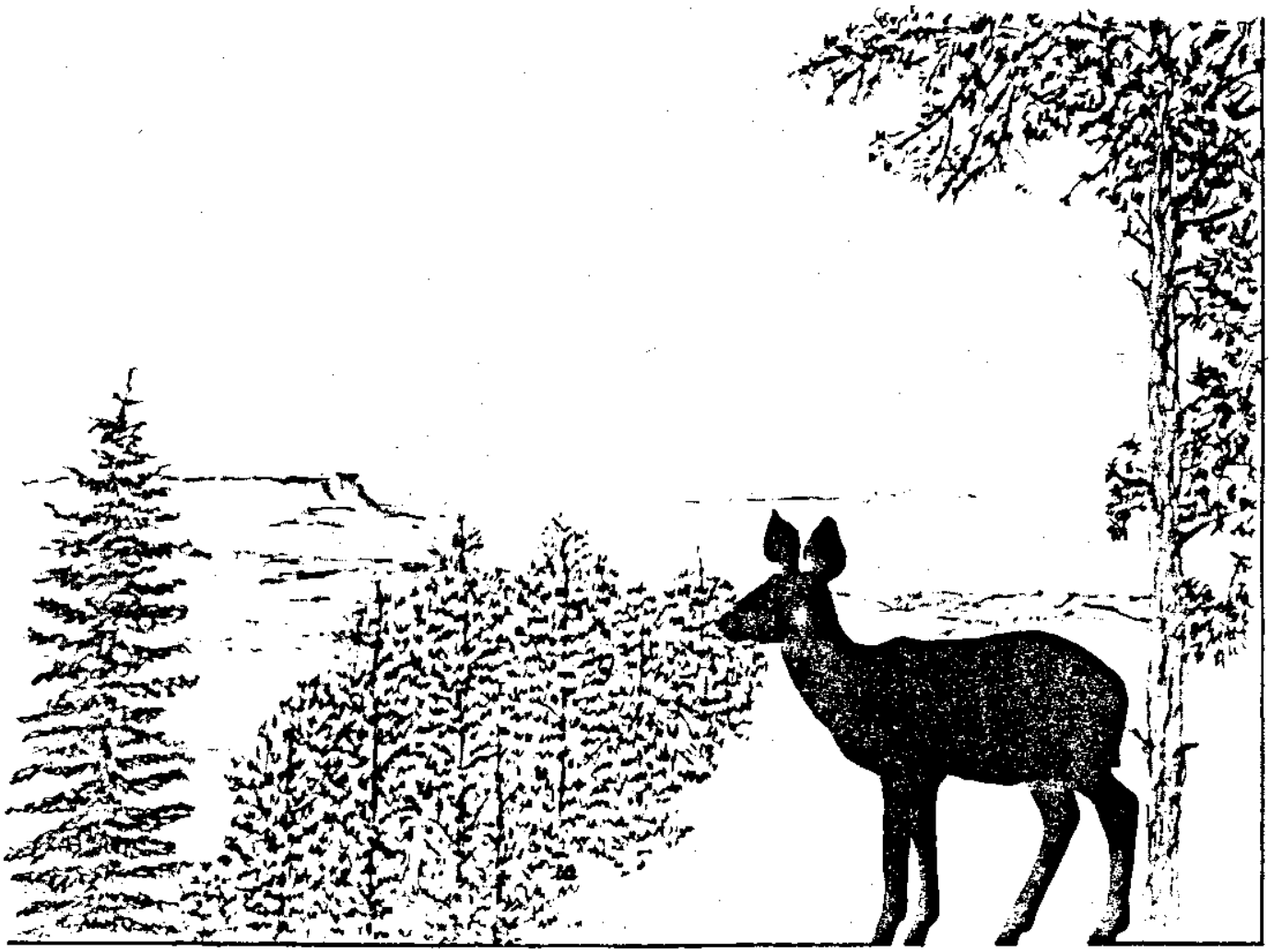
Forest Service

Southwestern
Region

Kaibab National
Forest

August 1986

Final Environmental Impact Statement Canyon Uranium Mine



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ENVIRONMENTAL IMPACT STATEMENT
CANYON URANIUM MINING PROPOSAL
COCONINO COUNTY, ARIZONA

Transmitted to EPA and Public: DRAFT Feb. 28, 1986 FINAL SEP. 29 1986

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ABSTRACT

This EIS is in response to an initial application in October 1984 by Energy Fuels Nuclear, Inc. to develop a uranium mine south of the Grand Canyon on the Tusayan Ranger District of the Kaibab National Forest. Three alternatives to the proposed development are presented and analyzed along with a No Action Alternative to continue the current management activities in the area. This EIS meets the requirements of the National Environmental Policy Act (NEPA).

Appendices A through F to the Draft EIS were printed separately and are available for loan at public libraries or local Forest Service offices.

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SUMMARY

1. PURPOSE OF AND NEED FOR ACTION

In October 1984, Energy Fuels Nuclear, Inc. (EFN) submitted to the U.S.D.A. Forest Service, Kaibab National Forest, a Plan of Operations to mine uranium on unpatented mining claims on the Tusayan Ranger District. The proposed mine is located in Coconino County Arizona, approximately 6 miles south of Tusayan. The discovery of this ore body was made during an earlier exploratory drilling program approved by the Forest.

The proposed Canyon Mine would involve disturbance of approximately 17 acres for the mine shaft and surface facilities, plus some new or improved roads within the Forest, depending on which ore transportation route is ultimately selected. The ore would be hauled to the licensed mill at Blanding, Utah.

The federal action considered in this document is the approval by the Forest Supervisor, Kaibab National Forest, of a Plan of Operations for the Canyon Mine (Appendix A) with reasonable mitigation measures that are in addition to those proposed by EFN. The Supervisor's decision may be to approve the Company's plan as proposed or to require modification of the plan.

2. SCOPING AND EIS PROCESS

A primary objective of this Environmental Impact Statement (EIS) is to disclose for both Forest Service officials and the public, information sufficient to permit a reasoned evaluation of the environmental aspects and implications of implementing a range of project alternatives.

An evaluation of the extensive public review of the Canyon Mine proposal indicated significant public concern about uranium mining in Northern Arizona. Although much of this concern is based on opposition to the eventual uses of uranium, there are also many concerns related to the effects of uranium mining on the human, physical, and biological environment.

After intensive screening and evaluation, ten issues and concerns were identified for analysis in the EIS. These issues and concerns were used in the formulation and evaluation of alternatives and assessment of impacts. To varying degrees,

these issues and concerns are the focus of this EIS. However, other issues and impacts are identified and discussed as appropriate.

1. What social and economic impacts will the uranium mine have on the local communities and Coconino County?

2. What reclamation measures will be required for site restoration?

3. Can proponent-incurred project costs be held to a reasonable level?

4. What impacts will the mining operation have on important wildlife habitats?

5. What effect will the mining activities have on forest vegetation?

6. What effect will the mining activities have on visual quality of the Kaibab Forest, State Highway 64, and the Grand Canyon?

7. What effects will the mining activities have on the air quality of the surrounding area?

8. What impacts will the mining transportation system have on the local environment and the management of National Forest System Lands?

9. What impacts will the mining activities have on the soil, and surface and subsurface water quantity and quality?

10. What impacts will mining and ore transportation have on Indian religious sites and practices?

Following scoping, the Draft Environmental Impact Statement (DEIS) was prepared for the Canyon Mine. The DEIS was transmitted to EPA and the public on February 28, 1986. The public comment deadline was May 1, 1986 though substantive comments received after that date were also considered and are included in the EIS to the maximum extent possible. The DEIS considered five alternatives in detail, including the No Action Alternative and four operational alternatives. Those alternatives are described in detail in Chapter 2.

The EIS has been revised to reflect the comments received on the DEIS. Important changes include:

1. Addition of Indian religious concerns as an issue and concern.

The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the DEIS in conjunction with a general analysis of impacts on American Indians. Comments on the DEIS by the Hopi and Havasupai Tribes alleged that religious sites and practices would be adversely affected by the Canyon Mine, a concern which was not raised by the Tribes during scoping or earlier consultation with the Tribes. Based on those comments and continuing consultation with the affected Tribes, the Forest Service has added Indian religious concerns to the list of issues evaluated in detail by the EIS. The text of the FEIS includes an expanded discussion of Indian religious sites and practices in the affected area. The Forest Service has also requested a meeting with tribal representatives at the proposed mine site to identify any specific sacred sites that might be disturbed by mining activity. To date, neither Tribe has committed to a visit to the mine site. Consultation with the Tribes regarding religious concerns will continue beyond completion of the NEPA process.

2. Expanded discussion of potential groundwater impacts.

Several comments expressed concern about potential depletion or contamination of groundwater resources in the area, including potential impacts on seeps and springs which flow from underground aquifers. The DEIS evaluated the impacts on surface and subsurface water as a major issue and concern. The DEIS concluded that adverse impacts either during or after mining operations were extremely unlikely. In response to public comments, the FEIS includes an expanded discussion and analysis of groundwater conditions and potential impacts. The additional analysis confirms the conclusion of the DEIS that no adverse impacts are expected. The Preferred Alternative includes a monitoring well at the mine site. If groundwater is present at the site, the well will disclose any unanticipated changes in water quality resulting from mine operations.

3. ALTERNATIVES CONSIDERED INCLUDING THE PROPOSED ACTION

The major issues and concerns identified through the scoping process, management concerns of affected State and Federal agencies and pertinent legal and regulatory requirements were used in developing suitable alternatives for analysis. The

alternatives to be considered in detail represent a reasonable range of opportunities that address the significant issues and concerns. Briefly the five alternatives developed are:

1. No action, or disapproval of the Plan of Operations.. This alternative provides baseline data against which the impacts of the following alternatives can be compared.

2. Plan of Operations as proposed by EFN which includes using Haul Route #1 along the north boundary of Tusayan Ranger District and south of the Grand Canyon National Park; shortest distance overhead powerline; pooled worker transportation; ten 20-ton ore trucks per day to the Blanding, Utah mill; 5 to 10 year mining period; holding ponds for mine-yard runoff; 6-foot chainlink security fence; runoff channels around mine yard; and potable water from ground water or trucked from Williams.

3. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; equivalent wildlife habitat replacement; use either haul route #1 or #2 along the northern boundary of the Tusayan Ranger District; modified diversion channels with dikes; and construction of a 35-car parking lot.

4. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; equivalent wildlife habitat replacement; construction of haul route #5 off the east end of the Coconino Rim escarpment; and an overhead powerline along access road.

5. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; buried powerline along access road; minimize road construction by use of haul route #7 near SP Crater (pending right-of-way acquisition across 20 miles of State and private land), or haul route #6 which utilizes State Highway 64 south to I-40, east to US 89, north on US 160 and 191 to Blanding, Utah.

The intent of the general constraints, guidelines and mitigation measures contained in each alternative is to ensure that adverse environmental impacts are avoided or minimized during construction and operation of the project, and during reclamation after mine closure. These requirements also aid in the process of identifying the Preferred Alternative.

4. PREFERRED ALTERNATIVE

No Preferred Alternative was identified in the DEIS. Based on the analysis in the DEIS and public comments received in response to the DEIS, Alternative 5 has been selected as the Preferred Alternative with one minor modification. Alternative 5 included a buried powerline along the access road to the mine site; the Interdisciplinary Team concluded that, given the relative temporary nature of the project, burying the powerline would increase costs significantly with no corresponding environmental benefits and the Interdisciplinary Team has therefore, substituted an above ground powerline.

The operational elements of the Preferred Alternative are:

1. Expanded monitoring of soil, air and water (described in Sections 2.5.10 and 2.5.11);
2. Modified surface water diversion structure (Section 2.5.12);
3. Use of haul route #6 (the all highway route described in Section 2.2.1.1) or haul route #7 (the SP Crater road described in Section 2.2.1.1);
4. An overhead powerline from Highway 64 following the access road to the mine site (Section 2.2.1.1);
5. Transportation of mine workers by the company (Section 2.2.1.1); and
6. The mitigation measures applicable to all alternatives (described in Section 2.5) including equivalent acre replacement of disturbed wildlife habitat and relocation of key wildlife waters.

The DEIS noted that "Generally, no environmental impacts have been identified in any alternative which cannot be mitigated to a substantial extent." This conclusion is still valid. However, the Preferred Alternative represents the combination of operational components, mitigation measures and haul routes which minimize potential impacts and best responds to the issues and concerns identified in the EIS.

5. CONCLUSION

Adverse environmental impacts identified with past uranium mine activities in Northeastern Arizona and Northwestern New Mexico, such as radionuclide contamination of surface and ground water, radon gas emissions affecting the health of mine workers and a general degradation of the environment, can be minimized by

implementation of the monitoring, mitigation measures and operating procedures required in Alternatives 2, 3, 4 and 5. The Preferred Alternative includes all of the monitoring and mitigation measures evaluated in the EIS.

Throughout most of the analyses, potential impacts were analyzed by assuming extreme conditions in order to assure maximum confidence in the results of the analysis.

There do not appear to be any significant adverse radiological impacts on the environment from the Canyon Mine Project. This conclusion is based on evaluation of existing and projected radiation, radon and dust emissions levels, the requirements of the Clean Water Act and the water quality permits applicable to the mine, and the fact that no discharge from the mine is anticipated.

During mine operation the direct radiation from the ore piles will probably not be measurable at distances greater than a few hundred meters from the mine site. In any event, it should not be possible to distinguish the mine induced radiation from the variations in the natural radiation environment which currently exist in the vicinity of the site.

Changes in radon gas levels in the community of Tusayan from the Canyon Mine are projected to be too small to detect and will remain within normal radon level fluctuations existing in the environment.

Ore transport to the mill will not expose inhabitants along the haulage route to any measurable increase in radiation. A few accidents may occur during the life of the mine when ore spillage occurs. A thorough and timely cleanup of any spills will not pose a health hazard from the radiation of the ore.

An extreme flood event exceeding that to be expected once every 500 years, followed by a total loss of the mine site diversion structures, could release several Curies of radioactivity from the ore piles to the downstream wash. However, residual contamination would be removed and returned to the mine yard. There would be no health hazard. The mine site is being designed to preclude accidental discharges to the wash; however, if an accidental release occurs, the impact must be assessed immediately and cleanup effected if the situation warrants.

Social and economic impacts will likely be felt the most in the community of Williams and are generally considered to be beneficial because of increased employment. Population increases or other development in Tusayan will probably be discouraged by lack of housing, a limited water supply and a

small existing work force. However, because the resources of the town are limited, even small increases in population will result in noticeable impacts.

Development of the mine site could slightly reduce the amount of land available for Indian religious practices, including hunting and gathering activities. However, mine development is not expected to affect the current level of Indian religious practices in the area. An archeological review of the site and consultation with affected Tribes have failed to disclose any specific sacred sites or properties which would be disturbed by any of the alternatives.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated religious beliefs.

Wildlife habitat on the Tusayan Ranger District or near vacant State and privately owned lands along haul route #7, can be adversely affected by the development of the mine site, improvement of the required haul routes and increased traffic flows over these routes. The additional mitigation measures developed in Alternatives 3, 4 and 5 should be more effective in reducing these impacts than measures described in Alternative 2.

The use of state highways for haul route #6 in Alternative 5 should have no measurable impacts on adjacent wildlife habitat since the increase in traffic level resulting from the 10 ore trucks would be insignificant when compared to the 2800-3800 average daily traffic that is already using these routes.

The possibility of significant ground water contamination from the mine is remote. Ground water flows, if they exist, are likely to be at least 1,000 feet below the lower extremities of the mine. This, plus the low potential for encountering groundwater in the mine, effectively eliminates the possibility of contaminating the Redwall-Muav aquifer. Groundwater flows, if present, will be monitored by a test well drilled at the site. Water samples will be taken, and if contamination is found, the well will be pumped and the water will be held on site or discharged in accordance with the Clean Water Act.

Data and information contained in this EIS indicates that neither the Grand Canyon National Park nor Havasupai Indian

Reservation should be affected either directly or indirectly by the development of the Canyon Mine. This conclusion is further supported from the apparent lack of any environmental degradation (other than visual impacts and the obvious inconsistent land use) caused by the operation of the Orphan Uranium Mine, located 2 miles west of Grand Canyon Village on the south rim of the Grand Canyon. It was active during the period from 1956 to 1969, under regulatory guidelines much less restrictive than those which exist today. Radionuclide contamination of air, soil or water from the Orphan Mine has not been identified. For comparative purposes, the proposed Canyon Mine is some 13 air miles from the rim of the Grand Canyon. Implementation of mitigation measures in Alternatives 2-5 will minimize the likelihood of any adverse environmental impacts on the Grand Canyon National Park.

Alternatives 3, 4, and 5 provide for postoperational monitoring of the air, soil and water resources. Data will be compared to preoperation baseline data to determine if any significant environmental changes are occurring.

In summary, an evaluation of the development of the Canyon Mine has not identified any environmental impacts of Alternatives 2-5 which cannot be mitigated to a substantial extent through the implementation of the additional mitigation measures identified in the Plan of Operations and Alternatives 3, 4 and 5.

Comparison of Alternatives for Resolution of Issues and Concerns

None of the project alternatives fully resolves all of the identified issues and concerns (IC's). However, by implementing the mitigation measures identified in Section 2.5, Alternatives 3, 4 and 5 are considered environmentally acceptable by the Forest Service. Alternative 5, with the substitution of an overhead power line, has been selected as the Preferred Alternative.

IC #1-Social and economic impacts on the community of Williams and Coconino County as a whole are considered by the Forest Service to be beneficial and virtually the same for Alternatives 2-5.

If the No Action Alternative were implemented, there would be no change in current levels of employment, income, tax revenue or output as a result of the Canyon Mine. Demand for public services would remain at current levels. No cultural resource sites would be identified or disturbed by mine development or road improvement or construction.

IC #2-Reclamation measures required at the mine site are judged by the Forest Service to be satisfactory in Alternatives 2-5 although measures called for in Alternatives 3-5 are more comprehensive and oriented toward improving wildlife habitat at the mine site upon its closing. Under the No Action Alternative, of course, no reclamation would be required at the Canyon Mine site.

IC #3 -The least cost alternative is Alternative 2. Alternatives 3-5 indicate increased expenditures of $360,000 to $1,300,000 can be expected depending on the haul route used and mitigation measures required. Increased expenditures are generally associated with mitigation requirements. The No Action Alternative would result in no construction or development costs, however, the costs of exploration and environmental review could not be recovered by EFN.

IC #4 -Wildlife habitat will be affected to varying degrees in all alternatives depending on the ore haulage route used. Alternative 5 has the least impact on wildlife. Alternative 2 would have the greatest impact because of a lack of mitigation requirements. Mitigation measures in Alternatives 3 and 4 should be effective in reducing the adverse impacts on wildlife resulting from increased road traffic.

Alternatives 3-5 all call for "equivalent habitat replacement" resulting from the Forest's assumptions about the impacts of decreased habitat utilization caused by the mine and expanded transportation system. Alternative 3 also includes a proponent choice of road closure during May and June in lieu of habitat replacement.

The No Action Alternative would have no impact from mining or ore transport on wildlife or wildlife habitat and would require no mitigation. Any benefits associated with construction of alternative wildlife waters or replacement habitat would not be realized.

IC #5-Implementation of Alternatives 2-5 will have a negligible and insignificant effect on the make-up of vegetative types now present on the Tusayan Ranger District. The No Action Alternative would have no impact on vegetation at the Canyon Mine site.

IC #6-Visual quality associated with the Grand Canyon will not be affected by the development of the Canyon Mine regardless of the alternative selected for implementation. Alternatives 2-5 will alter the short term visual quality at the mine site. Reclamation measures should effectively restore the area to its present characteristic landscape.

0478

Haul route selection will have a limited effect on the scenic qualities on the Tusayan Ranger District. Implementation of Alternative 4 would have the greatest effect by constructing a road off the Coconino Rim in a location that would be visible to travelers going to and from the Grand Canyon using the east Highway 64 entrance. The No Action Alternative would have no impact on the visual quality of the area near the mine site.

IC #7 -Implementation of Alternatives 2-5 will have no appreciable effect on the air quality, which includes particulates, radon gas, or radioactive dust, at either the Grand Canyon or the community of Tusayan. Increases in particulate matter will be site specific along haul routes and at the mine site itself and are expected to be well within air quality standards. Current levels of air quality in the vicinity of the Canyon Mine site and haul routes would be unchanged by the No Action Alternative.

IC #8-Implementation of Alternative 5 and use of either the SP Crater haul route or the State Highway system would minimize impacts on National Forest resources and general forest environmental setting. It would, however, transfer the use, and resulting impacts, to private and State lands and existing highway systems at a greater cost to EFN. It is felt the environmental impacts on adjacent lands would be less than the overall impacts associated with the transportation routes identified in Alternatives 2, 3 or 4 if either of these routes are used.

The haul route identified in Alternative 4 would be most cost effective in providing a road that would meet long term management needs in the event other mines are developed in the eastern quadrant of the Tusayan Ranger District.

Haul routes included in Alternatives 2 and 3 are the most cost effective routes for hauling ore from the Canyon Mine to the mill in Blanding, Utah.

No ore would be transported under the No Action Alternative.

IC #9 -Mitigation measures and operational procedures included in Alternatives 3-5 will reduce the possibility of radionuclide contamination to surface or subsurface water sources, and identify any contamination at the earliest possible time. Alternative 2 does not include air, water and soil monitoring requirements to insure the operational designs of the mine are functioning properly. Under the Alternative 1, current parameters for water quantity and water quality would remain unchanged at the mine site. Soil resources at the mine site would not be affected.

0479

Neither the water quality on the Havasupai Indian Reservation nor the Grand Canyon National Park should be environmentally affected by the development of this mine under Alternatives 2-5. The Havasupai Reservation is located about 35 miles downstream from the mine site. A documented 100-year flood dissipated because of topographic features, about 14 miles downstream and 20 miles above the Reservation. Mitigation measures taken at the mine site would prevent any significant downstream radionuclide contamination in the event of an extreme flood occurrence.

IC #10 -Implementation of Alternatives 2-5 will have no demonstrable effect on Indian religious sites and practices. Consultation with the Hopi and Havasupai Tribes has not identified any specific sacred site which would be disturbed by the development of the mine or any of the haul route options. Similarly, a detailed archeological review of the site has disclosed no sites of religious significance.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated beliefs.

Development of the mine site (Alternatives 2-5) and haul route options requiring new construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any religious sites or areas be restricted. Furthermore, there is no physical evidence of Indian religious activity at the mine site. The development of the mine is not expected to significantly burden the traditional religious beliefs of either the Hopi or Havasupai Tribes.

The Preferred Alternative will include only the limited impacts associated with development of the mine site, as the haul route options included in the Preferred Alternative do not include any new road construction or significant reconstruction.

The No Action Alternative would have no impact on Indian religious sites or practices. The Hopi and Havasupai Tribes have expressed a preference for the No Action Alternative.

CHAPTER 2

ALTERNATIVES CONSIDERED INCLUDING THE PROPOSED ACTION

2.1 INTRODUCTION

This chapter provides a general but concise description of the action proposed by EFN and a range of reasonable alternatives. The project was broken down into its operational components (separate elements that, when joined together, form complete project alternatives). Each operational component was then discussed, reviewed and screened by the Forest Service Interdisciplinary Team during the preparation of the EIS, in order to effectively reduce the number of alternatives to those which would be financially and technically feasible and environmentally acceptable.

The major issues and concerns identified through the scoping process, management concerns of affected State and Federal agencies, pertinent legal and regulatory requirements and other relevant public comments were used in developing suitable alternatives for analysis. The alternatives to be considered in detail represent a reasonable range of opportunities that address the significant issues and concerns.

2.2 FORMULATION OF ALTERNATIVES

On November 29, 1978, the Council on Environmental Quality issued "Final Regulations for Implementing the National Environmental Policy Act" (NEPA) (Federal Register, Vol. 43, No. 230). In July 1979, the U.S. Department of Agriculture Forest Service issued Implementation Procedures for the National Environmental Policy Act (Revised November 1981, July 1982 and June 1985), which further defines Forest Service procedures. The regulations are intended to provide federal agencies with efficient, uniform procedures for translating the law into practical action.

The regulations direct that a reasonable range of alternatives be developed, and that alternatives are fully and impartially discussed and evaluated to disclose the environmental consequences of implementation of the proposed action and alternatives to the proposed action. One objective of the Forest Service is to develop a reasonable alternative which minimizes the environmental effects of project implementation.

The alternatives considered in detail can be used to estimate varying degrees of biological and physical effects which may result from mining operations. Generally, no environmental impacts have been identified in any alternative which cannot be mitigated to a substantial extent through the implementation of environmental mitigation measures.

Section 2.4 describes the alternatives evaluated and the mitigation measures unique to the particular alternative, while Section 2.5 provides a description of mitigation measures common to all alternatives.

2.2.1 Independent Operational Mine Components Considered in the Development of Alternatives

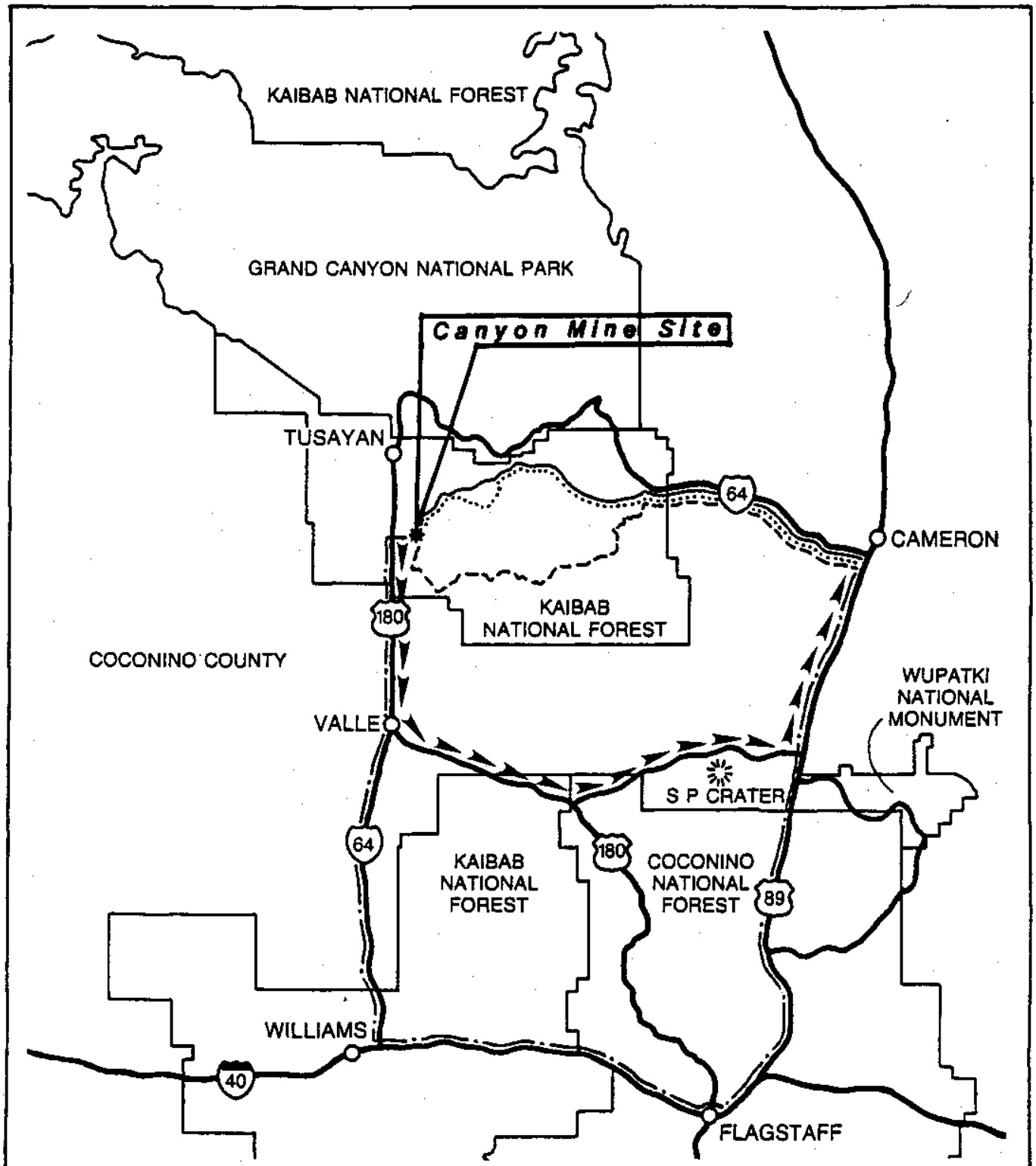
A mining project generally lends itself to analysis by operational components. Operational components are those separate elements that when joined together, form complete project alternatives (e.g. alternative mining methods, haul routes, etc.). The comments received during the scoping process were also frequently aimed at specific components. All reasonable component alternatives identified from the proposed Plan of Operations were considered in the component analysis. Independent operational components considered were:

1. Haul routes
2. Utility corridors
3. Transportation of workers
4. Sewage
5. Method of ore transport
6. Mine production rate
7. Method of mining
8. Potable water
9. Site configuration

Variations in location and geographic setting were considered for all design and operational components except the actual mine site., which is fixed by the ore body and claim ownership and control.

2.2.1.1 Operational components requiring separate alternative analysis

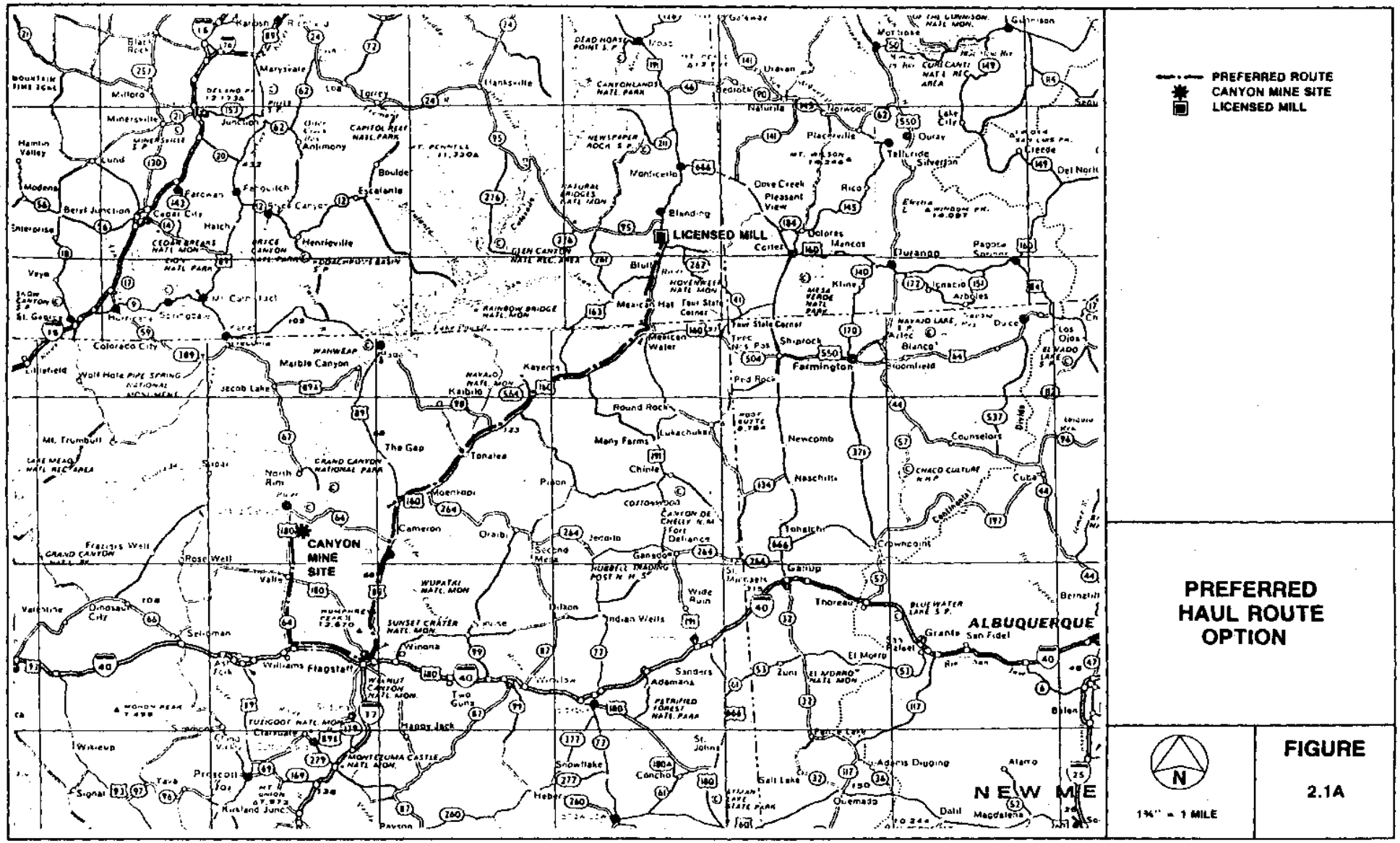
Each operational component was evaluated based on its potential to produce environmental effects.



HAUL ROUTE OPTION BY PROJECT ALTERNATIVE			
PROJECT	HAUL ROUTE		
ALTERNATIVE 2&3	OPTION 1	N	PROPOSED HAUL ROUTE OPTIONS FROM THE CANYON MINE SITE
ALTERNATIVE 3	OPTION 2		
ALTERNATIVE 4	OPTION 5		
ALTERNATIVE 5	OPTION 6		
ALTERNATIVE 5	OPTION 7		

FIGURE 2.1

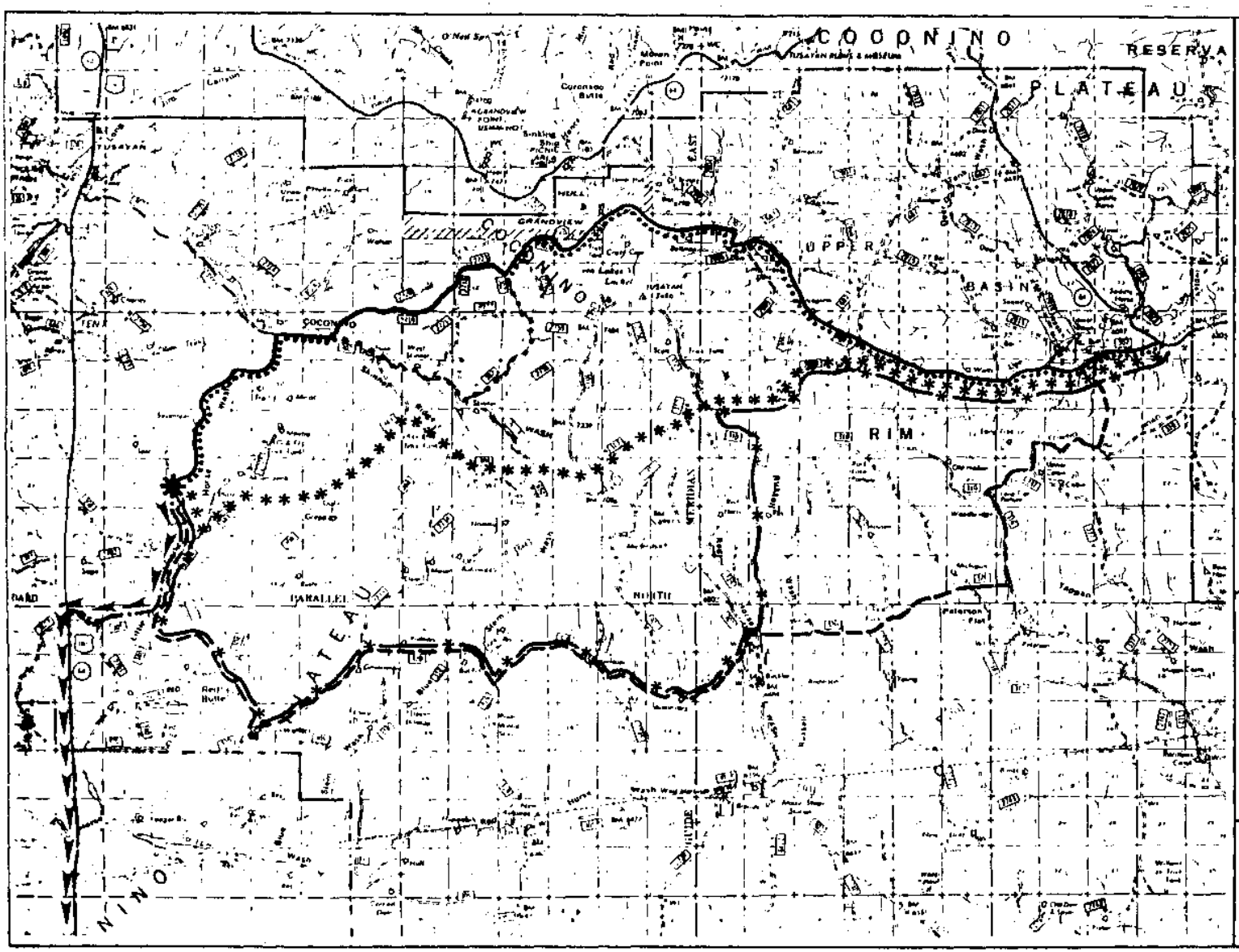
0501



PREFERRED HAUL ROUTE OPTION

FIGURE 2.1A

0502



HAUL ROUTE OPTION BY PROJECT ALTERNATIVE

PROJECT	HAUL ROUTE
ALTERNATIVE 2&3	OPTION 1
ALTERNATIVE 3	OPTION 2
(NO ALTERNATIVE)	OPTION 3
(NO ALTERNATIVE)	OPTION 4
ALTERNATIVE 4	OPTION 5
ALTERNATIVE 5	OPTION 6
ALTERNATIVE 5	OPTION 7

✱ CANYON MINE SITE

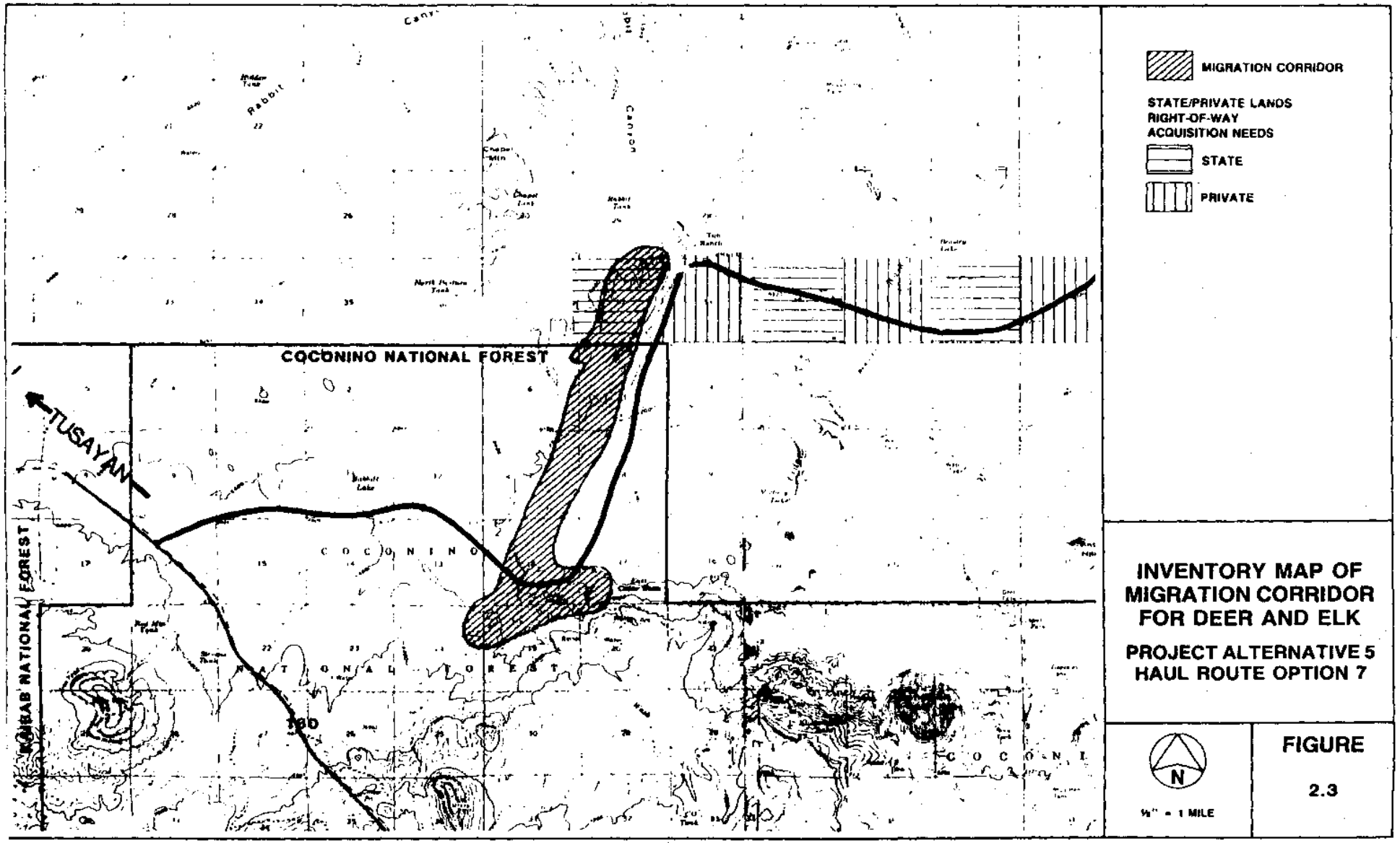
HAUL ROUTE OPTIONS

N

½" = 1 MILE

FIGURE 2.2

0503



INVENTORY MAP OF MIGRATION CORRIDOR FOR DEER AND ELK

PROJECT ALTERNATIVE 5
HAUL ROUTE OPTION 7

FIGURE 2.3

2.6

0504

(1) Haul routes.

Development of new or improvement of existing transportation systems on National Forest System lands have the potential of altering the general forest environment and setting. Consequently, proposed changes in existing transportation systems are viewed as having implications on the existing management of the Tusayan Ranger District.

A detailed analysis of the possible haul routes in the transportation component was undertaken, in order to identify the most effective haul routes (Appendix B). The analysis considered costs as well as environmental consequences to narrow the range of feasible haul route options. This was accomplished by comparing ore hauling routes to the individual issues that could be affected by changes in these routes. Figure 2.1, 2.1A, 2.2 and 2.3 are maps of the routes by assigned number. Table 2.1 lists the amount of new construction and reconstruction needed on each route.

Route #1 is the northern route south of the north Forest boundary proposed by EFN in the Plan of Operation. There will be a slight realignment near Hull Cabin.

Route #2 involves slight modifications to route #1, including realignments north of the mine site to avoid the Hull Cabin area.

Route #3 is the shortest alignment that could be devised without excessive new road construction. Route #3 requires new road construction to drop off the Coconino Rim escarpment near Newt Lewis Tank.

Route #4 incorporates a southern alignment to avoid key wildlife habitats, and then turns north and links up with route #3 at the Coconino Rim. Route #4 requires the same construction as in route #3 to drop off the Coconino Rim.

Route #5 traverses the southern portion of the Tusayan Ranger District. It requires new road construction off the Coconino Rim near the eastern boundary. This route was considered based on the possibility of future mining in the eastern quadrant of the Tusayan Ranger District. It is included to evaluate the environmental impacts and cost effectiveness of such a route in the event additional mines are proposed.

Route #6 involves almost entirely all highway haulage, except for the 4.8 miles from the mine site to State Highway 64. It eliminates the need for extensive new road construction.

Route #7 is a southern route that utilizes highway hauling and an existing road across State and private lands near SP Crater. It also minimizes road construction on the Forest and avoids most of the key wildlife habitats and waters.

TABLE 2.1 -- Haul Route Lengths and Comparison of Construction Needs by Haul Route

Route Number	New Construction	Reconstruction	Total[1]
	miles		
1	3.6	23.9	27.5
2	4.1	21.3	25.4
3	4.4	19.6	24.0
4	4.4	30.0	34.4
5	2.9	30.6	33.5
6	-0-	4.8	4.8
7	-0-	29.8	29.8

[1]Total length on Forest roads (off black-top).

Haul Route Evaluation

As a result of the evaluation shown in Table 2.2, five potential haul corridors were identified which will be incorporated as discrete component parts in the analysis of the four project alternatives.

Without a sophisticated weighting analysis of the various issues, any numerical ranking of the potential routes would be meaningless. The routes are thus ranked subjectively as providing a low, medium, or high resolution of the affected issue. These ratings are only meant to show relative impacts of the haul route options.

0506

TABLE 2.2 -- Screening Matrix For Transportation Component

Issue	Haul Route Option 1	2	3	4	5	6	7
IC#3, Costs minimized:							
-maintenance	M[1]	M	L	L	L	H	H
-construction	M	M	L	L	L	H	H
-haul costs	H	H	H	M	M	L	L
IC#4, Wildlife							
-elk calving areas	L	M	L	H	H	H	H
-key big game areas	L	M	L	L	H	H	M
_key waters	M	M	H	L	M	H	H
IC#5, Vegetation (loss of comm. timber)	M	L	M	M	H	H	H
IC#6, Visual Quality	M	M	L	L	L	H	H
IC#7, Air Quality (potential to affect air quality at Grand Canyon)	M	M	M	M	H	H	H
IC#8., Transportation							
-compatibility with potential future Dist. mgt. needs	H	H	L	L	H	N/A	N/A
-minimize impacts on private & State lands	H	H	H	H	H	H	L
IC#10, Indian Concerns							
-compatibility with religious sites and practices	M	M	M	M	M	H	H

[1]Ranking: H = High resolution of the issue
M = Moderate resolution of the issue
L = Low resolution of the issue

Rankings reflect impacts from new road construction, impacts from increased traffic flows associated with improved roads, and impacts from road use that displaces wildlife (Appendices B and C).

Haul routes #3 and #4 were eventually dismissed from further consideration because the new road construction necessary to implement these haul route options would create more environmental impacts on wildlife, recreation and visual qualities than would the use of existing transportation corridors.

Route #6 was evaluated as an optional component under the same alternative as route #7. Use of this route would be done in compliance with existing State and Federal transportation regulations.

Route #5, while not being as cost effective to EFN in this particular evaluation, was retained as a viable option since it avoids most key wildlife areas and could possibly serve future Forest management needs in a cost effective manner.

Routes #1, #2, and #7 were retained since they are reasonable from a cost standpoint, and environmental and social impacts could effectively be minimized through monitoring and mitigation measures.

Because of their similarity, Routes #1 and #2 are considered collectively under Alternative 3. Routes #6 and #7 are also similar and therefore both considered under Alternative 5. Routes #6 and #7 are designed to minimize road construction.

As a result of the screening analysis, five haul routes, #1, #2, #5, #6 and #7, were selected for detailed evaluation in project alternatives. These corridors may also include some internal alignment variations to prevent resource conflicts or reduce costs.

(2) Utility corridors

Utility corridors were evaluated because of their potential impacts on wildlife, surface disturbance and effects on visual resources through the removal of vegetation.

Three utility corridor options were considered: 1) overhead 3-phase 12.5KW powerline starting at the existing 69KW line just east of U.S 64 and following the shortest access to the mine site, 2) buried cable from Highway 64 along Forest Roads 305 and 305A to mine site, 3) overhead powerline from Highway 64 along Road 305 and 305A to the mine site, and 4) electrical generators at the mine.

Utility option 4 was eliminated due to the relative high cost with no apparent environmental advantages. While eliminating the need for a new utility corridor clearing, this option creates additional environmental concerns related to fuel storage, noise and air pollution from on-site power generation.

Because of their potential environmental effects, utility options 1-3 are evaluated as discrete parts of Alternatives 2-5.

(3) Transportation of workers

The transportation of mine workers was evaluated because of the potential for impacts resulting from increased traffic and a parking lot at the mine site.

The nearest available housing for mine workers is in Williams, a distance of 45 miles one-way from the Canyon Mine site. Some form of pooled transportation would seem to be a logical choice; however, the option of driving personal autos was considered as part of Alternative 3 because this preference by the mine workers may exist.

2.2.1.2 Description of independent operational components common to Alternatives 2-5

The component evaluation procedure eliminated those components which were of little or no consequence to the environment. These component parts did not have the potential to create measurable environmental consequences, and did not significantly affect issue resolution either by themselves or collectively; therefore, they did not warrant separate project alternative analyses. Project alternatives were analyzed with most such components identical or only slight modifications.

(1) Holding ponds

Waste rock generated during shaft sinking, development and mining will be removed and stockpiled on the surface in the waste disposal areas, to the extent such material cannot be utilized for road maintenance, dike construction, or utilized in the construction of the mine yard. Ore will be stockpiled on the surface near the shaft until shipment to a mill takes place. Since local precipitation will be in contact with this uranium ore, all surface runoff within the mine yard, as well as all water encountered during mining which cannot be utilized in the mining operation, will be collected and retained on-site in holding ponds until it evaporates or until it meets the discharge standards under the NPDES permit.

The holding pond(s) (Appendix B) must be adequate to receive local runoff from a 100 year thunderstorm event, plus normal annual runoff and water that may be pumped from the mine. The volume of water in the pond(s) must be maintained at a level that will allow a reserve pond volume to accommodate unforeseen and normally expected runoff events (Appendix B and Sec. 2.5.12).

The holding pond(s) would only be discharged in exceptional circumstances in accordance with the NPDES permit. Exact pond volume will depend on the amount of water encountered during the shaft sinking operation.

(2) Sewage

Sewage at the mine can be handled by using vault toilets, or by installing a leach field sewage system if sufficient water is available.

(3) Method of ore transport

In the early stages of identifying haul routes options, consideration was also given to transporting the ore by helicopter or rail. Both methods were deemed unreasonable due to exorbitant costs. Trucking was determined to be the only viable method. Specific haul routes are considered in detail in the four project alternatives.

(4) Mine production rate

The proposed Operating Plan calls for an average production rate of 200 tons/ day for the life of the mine. Although a number of production rates could be proposed, reasonable variances in these rates would not appreciably affect the impacts of the mine on the environment.

(5) Method of mining

Ore to be mined at the Canyon deposit occurs at a minimum depth of 900 feet. Open pit mining is not considered a reasonable alternative for this deposit as it is not economically feasible and would create greater surface disturbance and environmental impacts. In-situ leaching is not feasible because water is not available for injection and recovery wells. Underground mining is considered to be the only viable method.

Access to the deposit will be by a vertical shaft located northeast of the deposit in the area of operations as shown on Plate 2, Appendix A. This shaft will be sunk utilizing either a surface drill rig or by conventional methods using drilling and blasting.

After the vertical shaft has been sunk to a depth of approximately 1,400 feet below the surface and paralleling the breccia pipe, workings will be driven toward the deposit at various levels off the main shaft. The highest level of the mine will be located approximately 900 feet below the surface in the Coconino Formation and the lowest level is expected to be approximately 1,400 feet below the surface in the Supai Formation.

Once the initial underground drilling program has fully delineated the extent of the ore deposit, the lower level will be driven underneath the deposit due south to a point just outside of the furthest extent of the ore reserve. At this point, a vertical ventilation shaft will be drilled from the surface to connect with the workings. The ventilation shaft is used to exhaust air, thereby creating adequate airflow throughout the mine workings and, in addition, providing a second exit or escapeway from the mine in the event of an emergency. The ventilation shaft will be drilled using a one-foot diameter pilot hole from the surface to intersect the lowest elevation level. An eight-foot diameter upward reaming bit will then be attached to the drill pipe and the vertical ventilation shaft drilled upward to the surface.

Raises or vertical workings within the mine will connect the various mining levels within or very near the deposit. At various elevations from these raises, sublevel workings will be driven off to extract ore from the deposit. The broken ore will be dropped down raises, designed for such use, to draw points on the lower level. The ore will be hauled to the shaft, placed in skips and hoisted to the surface.

(6) Potable water

A water source of a few gallons per minute is needed for sanitation and underground drilling. At the start of activities, water will be trucked to the site. It is hoped that drilling the mine shaft may generate a flow of a few gallons per minute of water from the base of the Coconino Formation at a depth of approximately 1,000 feet. The ground water well that will be drilled to the Redwall formation at 2,500 to 3,000 feet is a second possible source of water although its primary purpose is for monitoring groundwater quality below the ore body. If neither of these sources produce water, trucking water from Williams or Bellemont will continue throughout the operation of the mine.

(7) Site configuration

Alternative configurations of facilities at the mine site were eliminated due to a lack of measurable and meaningful differences associated with alternative locations for on-site facilities. For example, the buildings or the holding ponds could be relocated within the project area but the change in environmental impacts to the area would be minimal.

0511

2.3 ALTERNATIVES ELIMINATED FROM DETAILED CONSIDERATION

The range of alternatives is relatively fixed in the case of a mining proposal on public land. Under certain circumstances, however, several alternatives other than modifications to the proposed Plan of Operation can be considered. Two alternatives that were initially considered as possible agency actions, but were dropped from further consideration, were withdrawal of land from mineral entry, and patenting (fee title ownership of mine site) of the lands in the area of the Canyon Mine by EFN.

It is national policy that public lands be open to mineral exploration and development unless there is some overriding need for protection of a surface resource(s) such as in the case of municipal watersheds, wilderness areas, or critical habitat for threatened and endangered species. And in addition, withdrawals must exempt any previous valid existing claims. It is therefore obvious that withdrawal is not a reasonable alternative for consideration.

Patenting of a mining claim is a discretionary option available to the claimant. EFN could apply for a patent from the United States, conveying fee title to the land encompassed by the claim. While such an action would change the legal relationships, it is probable that EFN would proceed with the mine as outlined in the proposed Plan of Operation. Forest Service authority would then be limited to the selection of haul routes and the mitigation measures associated with these routes. The patent alternative would not be advantageous to the Forest Service, because inholdings of private land are difficult to administer. Furthermore, the degree of monitoring for certain environmental impacts could possibly be lessened, at least within the patented mine site.

Other non-project alternatives were considered but eliminated from detailed consideration as remote, speculative and conjectural, providing no additional information which could aid the public or the Forest Service in considering the impacts of the proposed Canyon Mine. Furthermore, none of these alternatives would meet the need expressed by the applicant. Alternatives considered but eliminated as unreasonable in this context include energy conservation, alternative energy development (both fossil fuel and renewable resources) and obtaining uranium from other sources including opening new mines in other locations or reopening existing mines that have been closed due to economic circumstances.

2.4 ALTERNATIVES CONSIDERED IN DETAIL

The following alternatives have been developed to evaluate a reasonable range of project alternatives and to display the potential environmental consequences which may result from their implementation. The ultimate objective of this evaluation is to select a reasonable alternative or alternatives which address the identified issues and concerns and mitigate the effects of project implementation.

Alternative #1 - No Action Alternative

The No Action Alternative, for the purposes of this environmental evaluation, would involve disapproval of the Plan of Operations for the Canyon Mining Project. The plan would be returned stating the reasons for disapproval and request the proponent to submit a new plan that would meet the environmental and administrative constraints. While the Forest Service can require or impose reasonable environmental controls or conditions on an operating plan, they do not have the authority to disapprove a reasonable operating plan for a mining operation which will be conducted in a reasonable and apparently environmentally responsible manner (re: General Mining Law and 36 CFR 228). The use of this alternative, however, is consistent with previous Forest Service administrative decisions to treat the no action mining alternative as the no project option. It provides a sound baseline against which all other options can be compared.

For purposes of comparing alternatives and projecting environmental consequences, it is assumed that the No Action Alternative (disapproval of the Plan of Operations) will mean that no uranium mine will be developed at the Canyon Mine site. However, because EFN has contractual obligations and a need for uranium ore, disapproval of the Plan of Operations may encourage EFN to expand or accelerate its existing exploration program. If such exploration results in the discovery of a suitable ore body, implementation of the No Action Alternative could lead to the development of a mine at a different site. That site, and any impacts associated with such development, cannot be anticipated or predicted based on present knowledge. A subsequent mine proposal would, however, be subject to environmental review.

0513

Alternative #2 - Proposed Plan of Operations Using Hull Cabin Haul Route #1

This alternative involves the approval of the Plan of Operations as submitted by the proponent, EFN (Plan of Operations, Appendix A). The ore body at the Canyon Mine will be mined over a period of 5 to 10 years. The mining activities as proposed would require surface facilities within the area of operations encompassing approximately 17 acres, installation of a shortest-route overhead electric power line to provide power to the project area, and the utilization and upgrading of existing roads for access and ore haulage.

Prior to the construction of the mine yard, topsoil within the area of operations will be removed and stored in the form of a dike, for use in final reclamation activities. Several water diversion structures will be constructed and maintained by EFN to ensure that no surface runoff from outside the area of operations is allowed to enter. Surface drainage from the mine yard will flow into several holding ponds constructed within the area of operations. All surface runoff within the area of operations and all water encountered during the operations which cannot be utilized in connection with mining will be held on site in these holding ponds until it evaporates or until it meets the discharge standards of the Arizona Department of Health Services and the United States Environmental Protection Agency.

A portion of the mine yard will be used to stockpile up to 20,000 tons of ore prior to shipment to a mill for processing. Ore pads will be constructed to prevent leaching of mineral values contained within the ore grade material into the soil. At the conclusion of mining, all uranium ore which is uneconomical to process, will be hauled from the site to a previously approved location, or disposed of underground in the mined-out workings.

Ore haulage from the area of operations will take place along existing Forest Service roads, which are located south of the Grand Canyon National Park boundary (Fig. 2.1). Some realignment and upgrading will be necessary to improve the transportation system haul routes to acceptable standards. This work will be the responsibility of EFN. They will also share in the required maintenance of the Forest Service roads used during the ore haulage in proportion to use by EFN and other road users. Once ore production begins, it is anticipated that on the average, 10 ore trucks per day will enter, and 10 ore trucks per day will leave the area of operations. Ore haulage will be by trucks that meet the

Arizona Highway weight restrictions. Each load will be covered with a tarpaulin to prevent loss of material in transit.

After development work is completed, the mine will be operated at an average rate of 200 ton-per-day for approximately five years. Planned underground exploration may increase the tonnage to be mined and consequently, extend the operation's life by a number of years. Employment at the mine during the first few years of development will range from 15 to 30 personnel. As production capacity grows, employment could reach an estimated high of approximately 35 men at the 200 ton-per-day rate. A few experienced miners and supervisors will be transferred from existing EFN operations, but the majority of the work force will be hired locally.

At the end of all mining activities, EFN will remove all structures, clean the area of operations, seal the mine entrance, and reclaim all disturbed areas. After the removal of all equipment, the main shaft and vent shaft will be sealed in a manner approved by the appropriate regulatory agencies. The mine yard will be radiometrically surveyed and cleaned up to the extent dictated by regulations applicable at the time of closure or to the general range of naturally occurring background concentrations in the area if no such regulations then exist. The area of operations and all disturbed areas will be recontoured to blend with the surrounding topography. Previously stockpiled topsoil will then be spread evenly over the entire area of operations and revegetated.

All independent operational mine components described under Sec. 2.2.1.2 above, would be part of this alternative.

Alternative #3 - Proposed Plan of Operations with Monitoring of Soil, Air and Water; Equivalent Acre Wildlife Habitat Replacement and Relocation of Wildlife Waters., Hull Cabin Haul Route 1 and 2; Shortest Distance Overhead Powerline.

Alternative 3 is comprised of those independent operational mine components common to all alternatives described under Section 2.2.1.2, with several additional features:

1) modified surface water diversion structure design (2.5.12);

2) expanded monitoring program (2.5.10 and 2.5.11);

3) option to use haul routes #1 or #2, and the option to restrict hauling during May and June in lieu of wildlife habitat replacement for identified elk calving areas (2.5.14); and

4) private-car parking lot of .2 acre for 35 vehicles (Appendix B).

Alternative #4 - Proposed Plan of Operations with Monitoring of Soil, Air, and Water; Relocation of Wildlife Waters and Equivalent Acre Wildlife Habitat Replacement; Construct Coconino Rim Haul Route #5.

Alternative 4 is comprised of those independent operational mining components common to all alternatives that are described under Section 2.2.1.2, with several additional features:

1) modified surface water diversion structure design (2.5.12);

2) expanded monitoring program (2.5.10 and 2.5.11);

3) use of haul route #5 to lessen wildlife impacts and optimize future potential transportation system needs (Table 2.2);

4) overhead powerline along access road; and

5) Company provided common transportation for employees to and from mine site.

Alternative #5 - Proposed Plan of Operations with Monitoring of Soil, Air, and Water; Equivalent Acre Wildlife Habitat Replacement and Relocation of Wildlife Waters; Use S.P. Crater Haul Route #7 (Pending Right-of-Way Acquisition Across 20 Miles of State and Private Lands), or utilization of State and Federal highways over Haul Route #6.

Alternative 5 is designed to minimize road construction and reduce changes in the environmental setting associated with development of ore transportation routes. It is comprised of those independent operational mining components common to all alternatives that are described under Section 2.2.1.2, with several additional features:

(1) modified surface water diversion structure design (2.5.12),

(2) expanded monitoring program (2.5.10 and 2.5.11);

(3) use of haul route #6 (all highway) or #7 (if rights-of-way across State and private lands can be acquired);

(4) buried powerline along access road; and

(5) Company provides common transportation for employees to and from mine site.

Road Construction standards, maintenance requirements, Right-of-Way fees, and other items requiring special attention will be mutually agreed upon by EFN, State of Arizona, and private land owners.

Preferred Alternative

No Preferred Alternative was identified in the DEIS. Based on the analysis in the DEIS and public comments received in response to the DEIS, Alternative 5 has been selected as the Preferred Alternative with one minor modification. Alternative 5 included a buried powerline along the access road to the mine site; the Interdisciplinary Team concluded that burying the powerline increases costs significantly with no corresponding environmental benefits. The Interdisciplinary Team has, therefore, substituted an aboveground powerline.

The operational elements of the preferred alternative are:

1) Expanded monitoring of soil, air and water (described in Sections 2.5.10 and 2.5.11);
2) Modified surface water diversion structure (2.5.12);
3) Use of haul route #6 (the all highway route described in Section 2.2.1.1) or haul route #7 (the SP Crater road described in Section 2.2.1.1);
4) An overhead powerline from Highway 64 following the access road to the mine site (2.2.1.1);
5) Transportation of mine workers by the company (2.2.1.1); and
6) The mitigation measures applicable to all alternatives (described in Section 2.5) including equivalent acre replacement of disturbed wildlife habitat and relocation of key wildlife waters.

The DEIS noted that "Generally, no environmental impacts have been identified in any alternative which cannot be mitigated to a substantial extent." This conclusion is still valid. However, the Preferred Alternative represents the combination of operational components, mitigation measures and haul routes which are expected to minimize potential impacts and best responds to the issues and concerns identified in the EIS.

The reasons for selecting the specific components of the Preferred Alternatives are as follows:

1) <u>Expanded Monitoring</u> -- The air, soil and water monitoring program responds to issues and concerns raised during scoping and evaluated in the DEIS (IC #7, IC #9) and to comments on the DEIS. The

groundwater monitoring well, while expensive, is an important element of the monitoring/mitigation strategy as it assures that important water sources, including springs which are sacred to the Hopi and Havasupai, will not be adversely affected by the Canyon Mine. The monitoring program also responds to the fear of radioactive contamination of air, water and soil expressed by some members of the public. Finally, the results of the monitoring program will provide important data for the evaluation of future mining proposals in the area, if any.

2) Modified Surface Water Diversion -- The alternative flood diversion plan is clearly superior. It provides for increased flood control capacity (a 500-year event) with less surface disturbance at the mine site.

3) Haul Routes -- The Preferred Alternative offers EFN the choice of two haul routes -- haul route #6, the all highway route through Williams and Flagstaff, and haul route #7, the SP Crater road which crosses private and state lands south of the Kaibab National Forest. Either haul route option minimizes potential impacts on wildlife (Table 2.7.), cultural resources and Grand Canyon National Park. These benefits, however, create substantial increased costs for the applicant. Haul route #6 is the longest route, resulting in the highest hauling costs. Haul route #7 is the next most expensive option and will also require that EFN acquire state and private rights-of-way at additional costs.

These haul route options were selected for the Preferred Alternative, despite the increased costs, for three reasons. First, this alternative is most responsive to public comments. Second, while it is believed that the impacts of any haul route option evaluated in the EIS can be successfully mitigated, this alternative creates the least potential for adverse impacts. Finally, and most importantly, this alternative provides the most flexibility for future transportation decisions and precludes an irrevocable commitment of resources to road construction or improvements which might foreclose future transportation options. As the EIS notes, future uranium mines in this region are possible, however, it is impossible to predict the specific sites of any future mines. The selection of the Preferred Alternative, which uses existing roads and minimizes new construction, will allow reconsideration of ore

transportation routes when future mines, if any, are proposed. Selection of this alternative also allows future decisionmakers to consider the option of consolidating or dispersing ore truck traffic to minimize transportation costs and environmental impacts.

4) Overhead Powerline -- Alternative 5 includes a buried powerline along the access road to the mine site. Burying the powerline substantially increases project costs (Table 2.6) without any corresponding environmental benefit. Accordingly, Alternative 5 has been modified for purposes of the Preferred Alternative to include a surface powerline following the access road to the mine site.

5) Transportation of Mine Workers -- Company transportation of mine workers is preferable to private transportation because it reduces surface disturbance (no large employee parking lot is required), access to the mine site and traffic to and from the mine.

6) Wildlife Mitigation -- While the potential wildlife impacts of Alternative 5 are small, any loss of key wildlife habitat should be mitigated. Implementation of the Preferred Alternative will require that EFN replace the 32 acres of big game foraging habitat lost at the mine site and replace one key watering area. In addition, operating restrictions may be placed on the use of haul route #7 to avoid potential impacts on elk migration.

7) Other Mitigation -- Other mitigation measures, including management of ore transportation, reclamation and fire protection (see Section 2.5) are common to all project alternatives, including Alternative 5. All of those measures are incorporated in the Preferred Alternative.

2.5 MITIGATION MEASURES

Management constraints and guidelines, corresponding mitigation, and monitoring and control measures needed "to ensure that the final actions conform to all other applicable laws relating to Forest Service activities" are discussed in this chapter, as directed by the Forest Service NEPA Procedures

Handbook (FSH 1909.15 6/85). The intent of the general constraints, guidelines, and mitigation measures is to ensure that adverse environmental impacts are avoided or minimized during construction and operation of the project, and during reclamation following mine closure.

Special attention was directed toward (1) controlling drainage, reducing erosion and sedimentation potential, and offsite radionuclide contamination from the mine area, waste piles and roads, and (2) mitigating the effects of the selected ore haulage route.

Monitoring programs were designed to mitigate public and resource management concerns, and to verify the projected effects of project implementation. These programs concentrate on air, soil and surface and ground water quality monitoring.

2.5.1 Regulatory Requirements

Operations of the proposed Canyon Mine will be subject to legal and regulatory requirements imposed by federal and state law. The question of applicable environmental standards was raised at the public scoping meeting. While these standards are not technically mitigation, in response to those questions important statutes and requirements that limit to some extent the magnitude of any impacts of mining, are summarized in this section.

Clean Water Act

Water quality is regulated by the Environmental Protection Agency and the State of Arizona. The Canyon Mine has applied for a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act to regulate any discharge from the mine site. EPA and the State share responsibility to insure compliance with that permit. Before the permit is granted, the State of Arizona must certify that the discharge from the mine site, if any, will comply with Arizona water quality standards. The permittee has an affirmative duty under the permit to notify EPA of any incident of noncompliance which may endanger health or environment. EPA retains authority to inspect the mine site or company records to insure compliance with the permit. Noncompliance with the conditions of the permit subject Energy Fuels to substantial civil and criminal penalties under Section 309 of the Act. Citizens' suits are also possible to ensure compliance.

The federal Clean Water Act regulates the discharge of pollutants into surface waters. The Canyon Mine must receive a National Pollution Discharge Elimination System (NPDES) permit from the EPA in order to release any water from the mine site. Although EFN does not anticipate encountering significant quantities of groundwater at the site, the company applied for an NPDES permit on December 20, 1984, for the possible discharge of mine drainage water.

The proposed mine is a "new source" under EPA regulations. Pursuant to Section 511 of the Clean Water Act, the issuance of an NPDES permit to a new source is subject to the environmental review requirements of NEPA. EPA is meeting its obligations under NEPA by cooperating with the Forest Service in the preparation of this EIS. A final NPDES permit for the Canyon Mine cannot be issued until at least 30 days after the date of issuance of the FEIS. Prior to issuing an NPDES permit, EPA must also make a proposed permit available for public review and comment, and provide the opportunity for a public hearing if there is significant public interest.

An NPDES permit for the discharge of mine drainage from a uranium mine must contain effluent limitations established under national EPA guidelines for the Ore Mining and Dressing Point Source Category at 40 CFR Part 440, Subpart C. These guidelines contain limitations on carbonaceous oxygen demand, zinc, dissolved radium 226, total radium 226, uranium, pH, and total suspended solids. In addition, all NPDES permits must contain any more stringent limitations necessary for achieving compliance with State Water Quality Standards.

The applicable Arizona State Water Quality Standards are those radiochemical standards which apply to all Arizona surface waters, and specific standards for trace substances which are based upon the protected uses of the receiving waters. The radiochemical standards are found at A.C.R.R. 9-21-204.B. and are based on federal drinking water standards. The protected uses of the receiving waters are those which are designated for the nearest downstream surface water segment listed in Appendix A of R9-21-208. The nearest designated surface water segment downstream of the proposed discharge point is Cataract Creek (tributary to Havasu Creek). The protected uses of this segment are: Aquatic and Wildlife (cold water fishery), Full Body Contact, Agricultural Irrigation, and Agricultural Livestock Watering. As no discharges will be permitted which do not meet these standards, authorized discharges will have no adverse environmental impact, and it is recommended that a permit be issued.

Under NPDES permits, facilities are required to sample their discharges and report pollutant concentrations to EPA and the Arizona Department of Health Services (ADHS). Such reports are public information. Permitted facilities are inspected regularly for compliance with the Clean Water Act. NPDES permits give EPA and ADHS personnel right of entry for inspection and sampling. Violation of the Clean Water Act are subject to civil penalties of up to $10,000 per day, with higher penalties for willful or negligent violations.

Cultural Resource Protection Laws

Cultural resources are protected pursuant to a number of Federal laws, the most important of which are the Antiquities Act of 1906 (16 USC §§ 431-433), National Historic Preservation Act of 1966 as amended in 1980 (16 USC §§ 470-470a), Historical and Archaeological Data Preservation Act of 1974 (16 USC §§ 469-469h), American Indian Religious Freedom Act (42 USC § 1996) and the Archaeological Resource Protection Act of 1979 (16 USC §§ 470aa-47011). Generally, the acts require consultation and/or surveys and other investigations of significant cultural resources and attempt to protect such resources from theft, vandalism, removal or other direct or indirect adverse impacts, by data recovery, site recovery or avoidance.

Clean Air Act

The EPA has promulgated standards to protect the public from exposure to Radon-222 emissions under authority of Section 112 of the Clean Air Act. These regulations call for bulkheading (sealing-off) abandoned areas of a mine, in order to reduce radon-222 emissions to the above ground air. These requirements are specified at 40 CFR Part 61. Airborne radiation from the Canyon Mine is discussed in Section 4.2.5.2, and Appendix E.

Endangered Species Act

Protection of threatened or endangered species occurs under the Endangered Species Act. (16 USC § 1531 et seq.). Section 7 of that Act generally prevents the Forest Service from authorizing any action that is likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of its critical habitat. Section 9 of that Act prohibits EFN from taking, hunting, harassing, killing or harming any wildlife species listed as endangered. Section 11 of the Act imposes substantial civil and criminal penalties for knowing or willful violations of the Act. Citizen suits are also available to ensure compliances.

Mine Safety and Health Act

Mine safety and health is regulated by the Federal Mine Safety and Health Administration and the Arizona State Mine Inspector. The Mine Safety and Health Administration imposes substantive standards for mine construction and operation, in 30 CFR § 57,"Safety and Health Standards--Metal and Non-Metal Underground Mines," and retains authority for inspection of mines and enforcement of its standards. Any incidents of noncompliance may give rise to civil and criminal penalties. The Arizona State Mine Inspector has similar authority. He applies the safety and health standards of Chapter 3 of Title 27 of the Arizona Statutes.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act requires that Federal Agencies consider Native American beliefs and practices in the formulation of policy and approval of actions. The intent of the Act is to insure for traditional Native religions the same rights of free exercise enjoyed by other religions. However, it does not afford Indian religions a more favored status than other religions, but only insures equal treatment. The Act does not mandate protection of Tribal religious practices to the exclusion of all other courses of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices.

2.5.2 Reclamation Plan

The Reclamation Plan for the Canyon Mine Project is described in the Plan of Operations in Appendix A and supplemented by the Forest Service in Appendix B. The objective of the plan is to restore the approximately 17-plus acres of land disturbed by the mining operation and the mine entrance road, to as near natural a condition as possible after the mine is closed. The plan outlines a program for returning the disturbed area to vegetative productivity.

Prior to the construction of the mine yard, topsoil within the area of operations will be removed and stored for use in final reclamation activities. Storage will be in the form of a dike around the northern perimeter of the yard.

At the end of mining activities, EFN will remove all structures, clean the area of operations, seal the mine entrance and reclaim the disturbed areas. After the removal of all equipment, the main and vent shafts will be sealed in a manner approved by the appropriate regulatory agencies. The

mine yard will be radiometrically surveyed and cleaned-up to the extent dictated by regulations applicable at the time of closure. The area of operations and all disturbed areas will be recontoured to blend with the surrounding topography. Previously stockpiled topsoil will then be spread evenly over the entire area of operations and revegetated.

EFN will be required to provide a performance and reclamation bond of $100,000 before mining activities start. The amount of this bond was determined by using cost estimates in Appendix B (p. 13) and adding a contingency amount based on inflation and possible estimating error, then discounted over a 7-year planning horizon.

The reclamation plan will be updated prior to closure, utilizing any revised forest land use objectives, new technology and operating experience.

2.5.3 Visual Impacts

The mine head frame and support facilities will be painted with earth tone colors. Implementation of this mitigation measure will be ensured by ongoing review by the Forest Service.

2.5.4 Public Safety

A 6-foot chainlink security fence with lockable gates will be constructed on the outside edge of the top of the 4-foot dike that surrounds the area of operations. All gates will be locked during periods of inactivity at the mine. Signs will be posted on all sides of the fenced perimeter to indicate "no trespassing," and "uranium mine." Energy Fuels will maintain the integrity of this fencing as well as monitor other aspects of the safety and security program. Federal safety inspection requirements, administered by the State Mine Inspector through the Mine Safety and Health Administration, will ensure that a safe working environment is maintained.

2.5.5 Ore Haulage Control

All ore trucks will be covered with a tarpaulin to prevent loss of material in transit. The tarpaulin will be lapped over the sides of of the truck bed approximately one foot and secured every 3 or 4 feet with a tiedown rope. In the event of a truck accident that causes ore spillage, Energy Fuels will take

immediate aggressive action to: 1) notify Arizona or Utah Departments of Public Safety and Transportation, 2) notify appropriate tribal councils and the Bureau of Indian Affairs, if the ore spill occurs on Indian lands, and 3) clean up any spilled material. All uranium ore will be removed from the spill site within two working days of the time of the spill, unless the appropriate Federal and State agencies deem that such action is prevented by conditions beyond the control of Energy Fuels. In any event, all State and Federal cleanup standards relating to spillage of the ore will be strictly adhered to.

2.5.6 Air Quality

Ore stockpiles will be managed at all times to eliminate the potential for wind dispersed radioactive dust. This may require management of the stockpiled ore by wetting or chemical treatment. In project alternatives that incorporate the following sections of roads, excessive dust will be controlled by appropriate dust abatement methods: Forest Service Road 302 from the junction of Forest Service Road 2723 to the junction of Forest Service Road 307; Forest Service Road 307 from the junction of Forest Service Road 302 to the junction of Forest Service Road 2804.

2.5.7 Noise

The project will be designed and operated in a manner to reduce noise to the lowest practical levels. All equipment will be carefully maintained to achieve the lowest practical noise levels (e.g., replacing worn-out mufflers, tightening loose parts, etc.).

2.5.8 Erosion Control

Erosion from all access and haul roads and the area of operations that are disturbed during construction activities will be controlled by revegetating these areas immediately after construction. Stabilization of the stockpiled topsoil will also be accomplished by revegetation. The outside slopes of the dikes that surround the mine yard will be riprapped with barren rock fragments taken from the mine during shaft construction. These fragments should exceed six inches on any one face.

The following species and application rates are recommended for revegetation of disturbed areas:

Species	Percent in Mix		Lbs./Acre for 25 seeds per sq. ft.		Pounds Needed In Mixture
Crested Wheat	30	X	6.4	=	2
Pubescent Wheatgrass	30	X	15.4	=	4.5
Smooth Brome	25	X	9.8	=	2.5
Yellow Sweet Clover	15	X	4.6	=	1
Lbs. of mix. for 25 seeds/ft. (pure live seed)				=	10 lbs./ac.*

*Application rate is for drilling; for broadcasting double this rate.

Drill the following browse species separately:

Four-wing saltbush	4 lbs./ac.
Winterfat	4 lbs./ac.

The following general guidelines will be followed as a part of the erosion control mitigation measures:

1. Construct drainage on relocated roads in accordance wit' forest Service standards.

2. Minimize changes in configuration of existing drainage courses around the mine perimeter.

3. Improve drainage channels in the immediate area of the mine site by removing obstructions to increase channel capacity.

4. Revegetate all disturbed areas as soon as possible. Reseed previously reclaimed areas if necessary until a vigorous vegetative cover is established.

5. The minimum elevation of the base of the ore pads at the southern end of the yard, will be at the height of the top of the dike ... well above the 500-year-flood high-water level.

6. All abandoned roads outside the mine perimeter will be brought to original grade, ripped, water barred and revegetated.

7. The dike and the primary drainage courses in the vicinity of the mine will be routinely maintained to ensure ther integrity at all times.

2.5.9 Fire Protection

The riprapped dike slopes surrounding the mine yard will be maintained as a fire break. A water storage tank of 12,000 gallon capacity and fire extinguishers as required by OSHA, will be maintained on-site in case of structural or wildland fires. Project personnel will be instructed in appropriate fire suppression techniques.

2.5.10 Radiological Monitoring Before and During Mine Operation

Under CEQ regulations, monitoring of impacts may be treated as mitigation. The following monitoring is contemplated as part of the proposed action or the alternatives.

The radiological monitoring program involves collection of appropriate data before the mine is operational. Additional measurements will be made as needed during mine operation and in the event of an accidental release of radioactivity to the downstream wash. A final survey will be conducted at the time the mine is closed to assess the impact of the mine, if any, on the project area.

Preoperational Baseline Information

The preoperational baseline data collection program will last one year prior to ore production and will involve background measurements of direct gamma radiation, radon gas and progeny concentrations, and radioactivity concentrations in air, soil and water.

Direct gamma radiation measurements will be obtained by duplicate independent monitoring devices and at a minimum of 12 locations. Dosimeters will be exchanged quarterly and provide cumulative dose information. Readings from a pressurized ion chamber and a scintillometer will be recorded whenever the dosimeters are exchanged. The monitoring sites are described below and shown in Figure 2.4. Measurements to date are reported in Appendix E.

Mine Sites	Eight compass headings and a special additional location in the wash immediately south of site. Each site is approximately 1/4 mile from proposed mine shaft.

Owl Tank	In center of wash just north of tank.
Tusayan	Grand Canyon Airport.
Tusayan	Tusayan Ranger District Office.

Radon measurements have been and will be performed quarterly using an instrument which obtains independent measurements of radon gas concentrations and the daughter product "working level" exposure. Measurements will be made at the mine site, Tusayan and other locations as deemed necessary.

Water samples have been and will be collected from the wash and Owl Tank semiannually, based on availability of water. Additional samples will be collected at Havasu Springs, Indian Gardens, and Blue Springs. Results to date are reported in Appendix F.

Soil samples have been and will be collected from the sites listed here and shown in Figure 2.4. Results to date are reported in Appendix E.

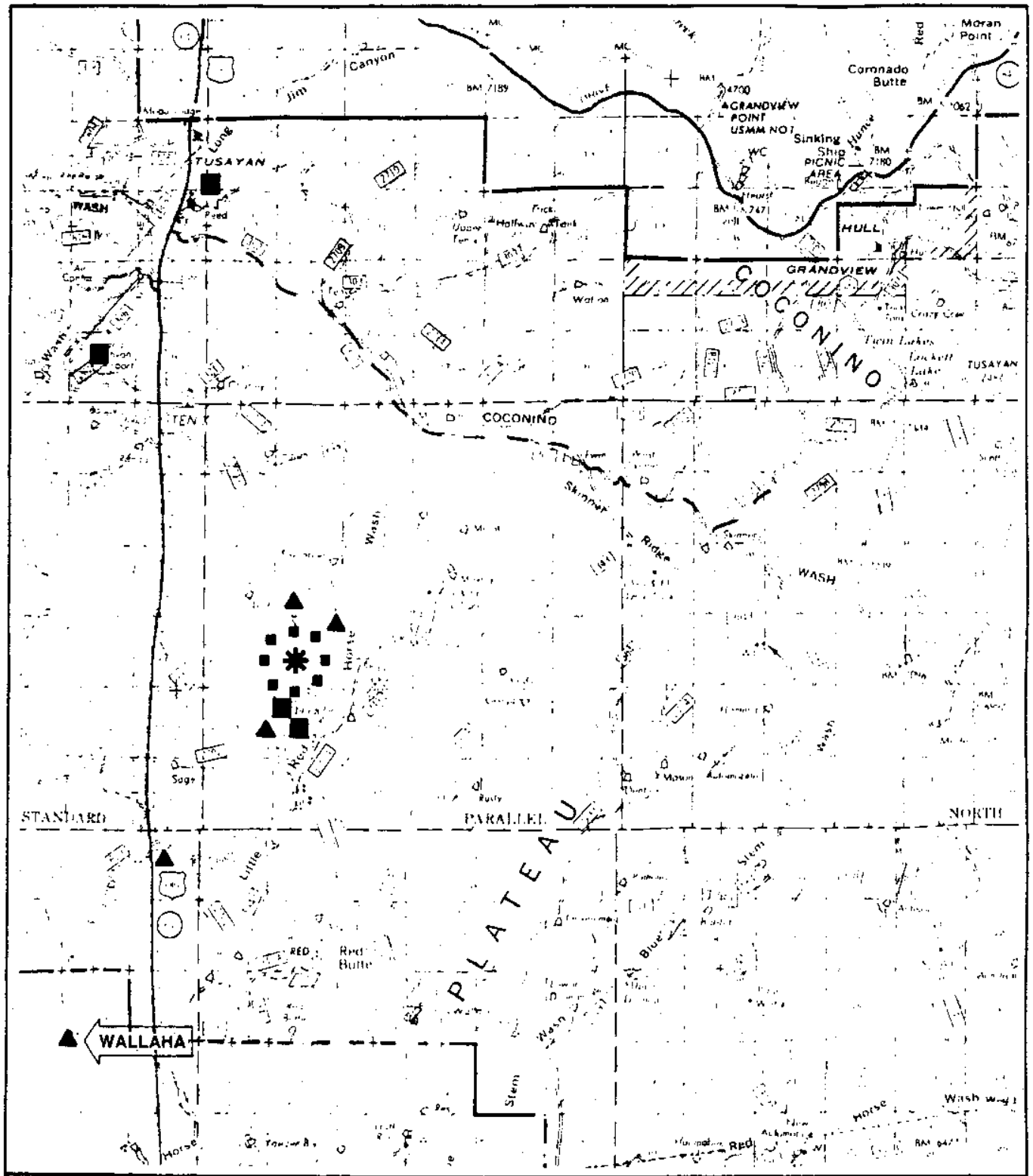
-Upwash north of Canyon Mine Site (background)
-Upwash northwest of Canyon Mine Site (background)
-Downwash immediately below Canyon Mine Site
-Owl Tank
-Little Red Horse Wash at U.S. Highway 180
-Big Red Horse Wash at east-west dirt road (unnamed) crossing just west of north-south railroad spur, and approximately 1 mile west of Willaha ranch-house ruins.

Operational Measurements

After the mine is in operation, the quarterly dosimetry measure ments, pressurized ion chamber, and scintillometer measurements will continue at the 12 established sites. Additional sites may be established along the haulage route.

Based on time and need, radon measurements will continue at Tusayan and will be rotated among other sites such as Owl Tank, the ore and waste piles, in the mine office, and atop the exhaust vent. The objective will be to collect sufficient radon information to determine whether any measurable increase occurs at Tusayan.

Soil and water samples will be collected until such time as sufficient data is available to delineate possible radionuclide increases from accidental releases and to ensure that ground water, if present, will not be adversely impacted. Thereafter, except for water from the mine well and soil from the survey



■ BACKGROUND RADIATION SITES AROUND PROPOSED MINE ■ ADDITIONAL BACKGROUND RADIATION SITES ▲ SOIL COLLECTION SITES ✱ CANYON MINE SITE	N ½" = 1 MILE	RADIOLOGICAL MONITORING SITES	FIGURE 2.4

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location immediately downwash from the mine yard, routine soil and water sampling should not be needed unless some extraordinary event dictates additional samples be taken.

Whenever a haulage accident occurs, a radiological report will be prepared. The report will contain such information as the amount of material spilled, the extent of area affected, measures taken to provide an adequate cleanup, results of the final radiological survey, and estimates of any possible non-occupational exposures.

Following any storm event where the surface water control features fail, the flooded area downstream from the mine site would be radiometrically surveyed. Any soil showing radiation levels above baseline measurements would be removed and returned to the mine site.

2.5.11 Groundwater Monitoring

A water well to the Redwall-Muav aquifer will be constructed and tested at the Canyon Mine site prior to the intersection of ore by mining operations. If groundwater is yielded, the well would be completed with blank and steel casing, and a standard 5-day single borehole pumping test, followed by a 5-day recovery period, would be conducted to determine aquifer permeability and to obtain groundwater samples for laboratory chemical analyses. After the pumping test program is complete, the well would be equipped as a water supply and groundwater monitoring well. Water samples for chemical analyses will be obtained at 3-month intervals during the first year of the sampling program. After results for the first year are analyzed, the frequency of sample collection may be modified. The water samples will be analyzed for routine constituents, trace elements, gross alpha and beta radiation, uranium and radium 226.

In the event that groundwater becomes contaminated during the mining operations, continuous pumping will be maintained until critical constituents are reduced to drinking water standards or to within ten percent of ambient concentrations, or to some comparable standard approved by the Forest Service. The pumped water will be stored in the mine yard ponds and discharged only when it meets NPDES standards. With the drawdown that occurs as a result of pumping, no contaminants should leave the area in the groundwater since all flow would be directed toward the well.

If groundwater is not yielded from the Redwall-Muav aquifer at the mine site, the test borehole will be plugged and abandoned in accordance with requirements for the Arizona Department of Water Resources.

2.5.12 Surface Floodwater Control at Mine Site

The adequacy of the proposed flood channels at the mine site was investigated as part of the hydrologic studies that tracked the disposition of flood flows through the mining area toward the Havasupai Reservation. Based on the specifications given in the proposed Plan of Operations, the proposed flood channels were adequate for at least a 100-year flood event. However, there was concern raised about locating an artificial channel along the sideslope at the east side of the mine yard. An alternative to this proposal was drafted (Appendix D) by the consulting hydrologist. This modified design would increase the flood carrying capacity of the channels to handle a 500-year event and would preclude the possibility of runoff from local intense storms from either entering or leaving the operating site, thereby eliminating the potential of downstream radionuclide contamination from ore stock piles. Construction of these channels will require less surface disturbance than the original proposal. The original diversion proposal is a part of Alternative 2. This modified proposal has been incorporated into Alternatives 3-5.

Holding pond(s) in the mine yard must be adequate to receive local runoff from a 100-year thunderstorm event, plus normal annual runoff and water that may be pumped from the mine. The volume of water in the pond(s) must be maintained at a level that will allow a reserve pond capacity to accommodate unforeseen and normally expected runoff events. With these factors taken into consideration, a pond volume of about 6 acre-feet is recommended, with no more than 3 acre-feet of storage used at any time. The ponds must be lined with plastic or impervious material to prevent percolation into the substrate. (See Appendices B & D for detailed discussion of mine-yard runoff).

Average annual potential evaporation at the mine site is estimated to be greater than 50 inches per year. A pond having a surface area of one acre and a depth of 4 feet can be expected to lose most of its capacity to evaporation each year. Thus, one storage facility of this capacity could be used to hold water pumped from the mine and runoff from the portion of the mine yard which contains ore. A second storage facility could be used to collect non-contaminated runoff from within the yard, and would be discharged in accordance with the NPDES permit. Exact pond volume will depend on the amount of water encountered during the shaft-sinking operation.

Prior to stockpiling ore, EFN will construct an ore pad at least one foot thick. This pad will prevent leaching of mineral values from the ore into the soil as a result of rainfall.

2.5.13 Traffic Control

Traffic control will be needed for ore trucks entering State Highway 64 from Forest Road 305, when the highway haul options are used.

2.5.14 Wildlife Mitigation

The following are recommended methods of mitigating potential wildlife impacts:

1. Mine Site:
   Improve and rehabilitate an alternate 32-acre foraging area. Create a forage opening in the pinyon-juniper woodland by mechanically removing trees and brush and seeding with desired species. See Appendix C, page 25 for details.

2. Elk Calving Areas:
   Construct one reliable wildlife water source on the Tusayan District. (The water source will be located in an area with suitable forage and cover, and will be fenced to exclude livestock. See Appendix C for details.) Closing the affected road section to all traffic during the calving season (May 1-June 30) may be used as an alternative to construction of a wildlife water source.

3. Key Waters:
   Important wildlife waters impacted by the haul road traffic will be relocated. For each impacted key water source, one earthen tank will be constructed in a suitable location away from roads. All new tanks will be fenced to exclude livestock.

4. New Road Construction:
   Improve and rehabilitate an alternate foraging area equivalent to the number of acres removed from production by new road construction (in addition to "1" above).

2.5.15 Raptor Protection

Overhead powerlines must have a 60-inch minimum separation of wires.

2.5.16 Pooled Worker Transportation

Employees will be provided transportation to and from the mine site by a Company van or bus. Driving of individual vehicles to the mine will be discouraged.

Table 2.3 summarizes the mitigation measures that apply to the different alternatives.

TABLE 2.3 -- Mitigation Measures That Apply to Project Alternatives

MITIGATION MEASURE	Alternative # 2[1]	3	4	5
1. Compliance with laws and regulations	X[2]	X	X	X
2. Mine site reclamation	X	X	X	X
3. Visual resource	X	X	X	X
4. Public safety controls	X	X	X	X
5. Ore haulage control (spills)	X	X	X	X
6. Air quality management		X	X	X
7. Noise management		X	X	X
8. Erosion control	X	X	X	X
9. Fire protection		X	X	X
10. Radiological monitoring		X	X	X
11. Groundwater monitoring		X	X	X
12. Surface runoff diversion	X	X	X	X
13. Control of truck access at SR 64				X
14. Wildlife mitigation				
a. replacement foraging area		X	X	X
b. new water source to offset loss of elk calving habitat near haul road or close road during calving season		X		
c. construct replacement waters impacted by haul route		X	X	X
15. Raptor protection		X	X	X
16. Pooled worker transportation	X		X	X

[1]The mitigation measures that are marked under this alternative were proposed by EFN in the original Plan of Operations.

[2]An "X" indicates that the listed mitigation measure is specified as part of that alternative.

2.6 COMPARISON OF ALTERNATIVES

Under Alternative 1, No Action, the Forest Service would reject the Proposed Plan of Operations. No mine would be allowed and no roads constructed or improved. The No Action Alternative is intended to provide baseline data relevant to the issues and concerns, against which the impacts of the other four alternatives can be compared. Implementation of this alternative is in direct conflict with the general mining laws and Secretary regulations which provide a statutory right to pursue a reasonable mining operation, and also provide the Forest Service the authority to require reasonable environmental controls.

The following tables display the effects of each alternative against the identified issue and concern. A narrative discussion relates those effects which could not be quantified.

TABLE 2.4 SOCIO-ECONOMIC IMPACTS ON COCONINO COUNTY

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
Local and Regional Economic Impacts	Change in Employment (primary and secondary - number of jobs affected)	-0-	Williams +58 Coconino Co. +102 (occurs over 1-5 yr)	----------same for all Alternatives----------		
	Changes in Total Annual Income For Coconino County ($)	-0-	3,086,900 +0.52%	3,086,900 +0.52%	3,086,900 +0.52%	3,086,900 +0.52%
	Changes in Total Annual Gross Output for Coconino County ($)	-0-	3,925,400 +0.16%	3,925,400 +0.16%	3,925,400 +0.16%	3,925,400 +0.16%
	Annual Tax Revenues (Sales, Property and severence) ($)	-0-	297,500	297,500	297,500	297,500
Effect on Williams Water Supply	Total Storage Capacity (ac.ft.)	2,750				
	Potable City Consumption 1/ (ac.ft./yr.)	350				
	Canyon Mine Projected Needs (ac.ft./yr.)		8	8	8	8
	Change in City's Annual Demand(%)		2.3	2.3	2.3	2.3
Cultural Resources 2/	Relative Archeological Site Density along Haul Routes	No Effect	Low	Low	High	Low to moderate
Social Impacts	Lifestyle, Beliefs and Attitudes	No Effect	Most employment should come from existing labor pool in Williams, provided employment qualifications can be met. For some people who fear radiation or covet solitude, the existence of a uranium mine may change their attitude and beliefs regarding the project area.			
	Population Change	No Effect	Population of Williams or Coconino County will not change appreciably as a result of the mine.			
City & County Infrastructure						
a) School Enrollment	Enrollment	No Effect	A small increase in school enrollment at Williams would have no impact. Excess capacity now exists.			
b) No. of Police	Number of Police	No Effect	No significant change anticipated.			
c) Fire Protection	Amount	No Effect	No change required.			
d) Medical Facilities	Amount	No Effect	Adequate emergency medical facilities available in Grand Canyon Village and Williams.			
e) Housing	Amount	No Effect	Adequate housing exists in Williams. None available in Tusayan.			

1/ Includes all water sold by the City of Williams to all customers, local and otherwise. Design capacity is 1120 ac-ft/yr. (Data from the City of Williams Draft Comprehensive Plan, 1985)

2/ Low si[illegible]nsity = <9 sites/mi.^{2}, moderate density = 9-25 sites/mi.^{2}, high den[illegible] >25 sites/mi.^{2}.

TABLE 2.5 RECLAMATION OF MINE SITE

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
Need for Reclamation	Area Requiring Restoration (ac.)1/	NA	17	17	17	17
Measures/Methods	Revegetation -mixture (species) -application (type)	 NA NA	Seeding of all disturbed sites will be accomplished as specified in Section 2.5, for erosion control.			
	Stablilization of Stockpiled Topsoil (narrative)	NA	Not required	Stockpiled top soil will be seeded with the same application specified in Section 2.5.8 for erosion control.		
	Surface Facilities Removal (narrative)	NA	All improvements will be removed from the mining site.			
	Radioactive Waste Disposal (narrative)	NA	The mine yard will be radiometrically surveyed and any material found which exceeds normal background levels will be removed from the area, backfilled into the shaft or hauled from the Project Area.			
Reclamation Bond	Amount ($)	NA	-0-	100,000	100,000	100,000

1/ Minor amounts of road obliteration will be required during construction of haul route. These amounts are not included here. Similarly a small amount of restoration is required in the utility corridor, but since this is constant and insignificant, it is not included in this table.

TABLE 2.6 PROPONENT INCURRED PROJECT AND MITIGATION COSTS 1/

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; WILDLIFE MITIGATION; MONITOR WATER, AIR AND SOIL; USING HAUL RTS 1 OR 2; SHORTEST DISTANCE OVERHEAD POWERLINE		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W; WILDLIFE MITIGATION USING HAUL ROUTE #6 (ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION	
				Route #1	Route #2		Route #6	Route #7
Transportation	Hauling ($)	-0-	2,790,000	2,790,000	2,693,200	3,351,000	4,866,800	3,940,080
	Construction ($)	-0-	1,371,400	1,371,400	1,328,700	1,920,500	225,600	643,906
	Maintenance ($)	-0-	192,500	192,500	177,800	227,500	33,600	208,600
Monitoring	Radiation: Air, Soil and Water ($)	-0-	-0-	70,000	70,000	70,000	70,000	70,000
	Groundwater: Well Construction ($)	-0-	-0-	250,000	250,000	250,000	250,000	250,000
	Water Sampling ($) 2/	-0-	-0-	42,000	42,000	42,000	42,000	42,000
Equivalent Habitat Improvement	Key Waters: Relocation ($) 3/	-0-	-0-	34,080	25,560	25,560	8,520	8,520
	Create Replacement 4/ Foraging Area ($)	-0-	-0-	6,840	6,910	6,680	6,170	6,170
Site Reclamation	Total Costs ($)	-0-	72,320	72,320	72,320	72,320	72,320	72,320
Worker Transport 5/	Total Costs ($)	-0-	51,300	3,600	3,600	51,300	51,300	51,300
Cultural Resource Mitigation	Total Costs ($) (incl. haul route clearance)	-0-	11,550	11,550	11,340	12,150	9,280	11,500
Powerline	Total Costs ($)		90,200	90,200	90,200	236,100	309,600	309,600
Right-of-Way Acquisition	Total Costs ($) (incl. survey)	-0-	-0-	-0-	-0-	-0-	-0-	12-30,000
Total Project Costs	Net Discounted Costs ($) 6/	-0-	3,398,282	3,760,971	3,643,962	4,785,699	4,242,417	4,102,632

1/ Some costs are one-time expenditures, such as road construction and reclamation; others are recurring annual costs; all are shown here as total project costs, based on 2 pre-mining & 5 mining years. Cost estimates are based on data from contractors, trade journals, etc., and are for comparison only. Actual costs could vary significantly from these estimates.

2/ Prior to the start of mining operations samples will be taken at the Redwall-Muav springs every 6 months for 18 months. After the groundwater well has been drilled, and if it produces water, samples will be taken from the well 4 times each year. This will replace the sampling at the springs. If groundwater contamination is detected at the well, pumping will be initiated, along with sampling at the springs. (See Section 2.5.11 for details.)

3/ Estimated at $8,520 for construction of a new tank, including fencing.

4/ This is an "equivalent-acre" cultural treatment required to mitigate the loss of habitat at the mine site and new road construction.

5/ Alternatives 2, 4 & 5 include Company costs of pooled worker transportation; Alt.3 includes cost of 35-car parking lot.

6/ Includes all listed project costs, discounted at 10% over a projected 7-year planning horizon.

TABLE 2.7 IMPACTS ON WILDLIFE

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; WILDLIFE MITIGATION; MONITOR WATER, AIR AND SOIL; USING HAUL RTS 1 OR 2; SHORTEST DISTANCE OVERHEAD POWERLINE; 35-CAR PARKING LOT		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION	
				Route #1	Route #2		Route #6	Route #7
Elk Calving Habitat 1/	Acres Potentially Impacted (within 0.5 mi. of road)	-0-	228	228	55	-0-	-0-	-0-
	Percent of Habitat Impacted (%)	-0-	11	11	3	-0-	-0-	-0-
Deer/Antelope/Turkey Fawning & Nesting Habitat 2/	Acres Potentially Impacted	-0-	No Quantifiable Impacts					
Elk Migration Routes	Percent of Population Affected	-0-	-0-	-0-	-0-	-0-	-0-	11 8/
Area Lost From New Road Construction 3/	Acres Taken Out of Production by Roads	-0-	9	9	10	7	-0-	-0-
Big Game Foraging Habitat 4/	Area Directly Impacted by Mine Site (acres)	-0-	32	32	32	32	32	32
Total Acres of Habitat Replacement 5/	Acres of Vegetative Treatment Required (ac.)	-0-	-0-	41	42	39	32	32
Key Waters 6/	Number of Waters Impacted	-0-	3	3	2	3	1	1
	% of All Key Waters in Area	-0-	13	13	9	13	4	4
Replacement Waters 7/	Total Needed as Mitigation Measure (no.)	-0-	-0-	4	3	3	1	1

1/ Estimated total acres of elk calving habitat within Tusayan Ranger District is 2,000 acres. Impacted elk calving habitat will be mitigated by constructing 1 water.

2/ To date there are no studies that show a definite relationship between increased traffic and impacts on these habitats.

3/ Habitat lost from new road construction will be mitigated by vegetative treatments at alternate sites.

4/ Includes acreage of natural opening at mine site; mitigated by vegetative treatments at alternate sites (reflected in total acres of habitat replacement).

5/ Based on total acres impacted: acreage within the natural opening at the mine site, and acres of habitat taken out of production by new road construction.

6/ Important waters that are adjacent to the haul road.

7/ Number of new wildlife waters needed to offset the impacts of elk calving habitat impacted and key waters along the haul routes.

8/ Impacts to elk migration are speculative and unquantifiable. If additional information indicates that significant impacts occur, the haul road would be temporarily closed during the migration period.

TABLE 2.8 EFFECT ON VEGETATION

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; WILDLIFE MITIGATION; MONITOR WATER, AIR AND SOIL; USING HAUL RTS 1 OR 2; SHORTEST DISTANCE OVERHEAD POWERLINE; 35-CAR PARKING LOT		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W; WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
				Route #1	Route #2		(same for both haul route options)
Loss of Grazing Capacity and Timber Production 1/							
1) Grazing Capacity	District Total (AUM's)	16,424.0					
	Amount Lost (AUM's)	-0-	7.9	7.9	8.0	6.6	5.2
	Amount Lost (%)	-0-	0.05	0.05	0.05	0.04	0.03
2) Timber Annual Allowable Cut	District Total (MBF)2/	1809.0					
	Amount Lost (MBF/yr.)	-0-	1.52	1.52	2.89	0.62	0.06
	Amount Lost (%)	-0-	0.08	0.08	0.16	0.03	0.003
Loss of Vegetation							
1) Ponderosa Pine	District Total (acres)	96,182.0					
	Amount Lost (acres)	-0-	7.9	7.9	8.0	3.2	0.3
	Amount Lost (%)	-0-	0.008	0.008	0.016	0.003	0.00
2) Pinyon-Juniper	District Total (acres)	175,770.0					
	Amount Lost (acres)	-0-	2.4	2.4	2.4	6.9	6.9
	Amount Lost (%)	-0-	0.001	0.001	0.001	0.004	0.00
3) Forest Vegetations Similar to Mine Site	District Total (acres)	13,551.0					
	Amount Lost (acres)	-0-	15	15	15	15	15
	Amount Lost (%)	-0-	0.11	0.11	0.11	0.11	0.11
Threatened, Endangered and Sensitive Plant Species	Species Present Amount of Impact (narrative)	Disturbed rabbitbrush	No T&E species are present on the Ranger District. The only known sensitive species "disturbed rabbitbrush" (Chrysothamnus molestus) can safely be avoided in both haul route and power corridor location. It does not exist in the mine-yard area.				

1/ As a result of mine yard construction and road improvements.

2/ The timber removed is associated with road clearings, and represents a permanent loss of annual allowable cut.

TABLE 2.9 EFFECT ON VISUAL QUALITY OF GRAND CANYON AND KAIBAB FOREST 1/

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	***Preferred Alternative*** ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
Impacts on Viewed Landscape	Forest Service Visual Quality Objectives (VQO) 2/ 1) Preservation: Management activities except for very low visual impact recreation facilities are prohibited. 2) Retention: No change in landscape qualities related to size, intensity, amount, direction, pattern, etc., should be evident. 3) Partial Retention: Man's activities remain visually subordinate to the characteristic landscape. 4) Modification: Man's activities dominate but will borrow from existing visual characteristics. 5) Maximum Modification: Man's activities will dominate the view.	Current Objectives: Retention, partial retention, modification and maximum modification for various locations on the Tusayan Ranger District (See Fig. 3.6)	Current Objectives: Modification and maximum modification--Meets objectives and will not appreciably alter visual characteristics adjacent to haul routes	Current Objectives: Modification an maximum modification--Meets objectives and will not appreciably alter visual characteristics adjacent to haul routes	Current Objective: Maximum modification--Within Forest guidelines but will result in road scar on Coconino Rim	Current Objective: Maximum modification--Changes in visual appearance of Forest will remain unaltered along existing forest roads
Impacts on Grand Canyon Park and State Highway 64	Changes in Visual Experience at Park and State Route 64	No Change	No Change 3/	No Change 3/	No Change	No Change

1/ The Canyon Mine is located 13 miles south of the south rim of the Grand Canyon. Terrain and vegetative cover restricts visibility of the mine in the surrounding area to less than 1/2 mile. Therefore the Canyon Mine will not be seen from either SH. 64 or the Grand Canyon. Visual quality impacts on Forests lands will largely be dependent on haul route selection.

2/ Visual quality objectives are determined by: (1) variety class [i.e., attraction of the area's physical features (landforms, vegetation and waterform)]. and (2) sensitivity level (i.e., people's concerns about the scenic quality of an area. See Sec. 3.2.4.)

3/ The only potential effect mining activity might have on the Grand Canyon National Park, is a slight reduction in visibility in the extreme SE corner of the Park. This would result from road dust from ore trucks traversing the sharp turn near Hull Cabin on haul route #1, under extreme meteorological conditions. Visibility into the Grand Canyon would be unaffected since this small affected area is south of the rim road.

TABLE 2.10 EFFECTS ON AIR QUALITY AT GRAND CANYON, TUSAYAN AND MINE SITE

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
Predicted Impacts on Air Quality	Predicted Impacts of Particulates and Radon Gas Emissions on Air Quality at Grand Canyon National Park (narrative)	The GCNP is a mandatory class 1 area.	No significant impact of radon gas or suspended particulates will occur in the park from the proposed mining project, even under the most extreme "worst-case" conditions.			
	Predicted Impacts of Suspended Particulates and Radon Gas Emissions on Air Quality at Mine, Tusayan and Along Haul Routes					
	Radon: (pCi/L)					
	Average for Western U.S.	0.2				
	Projected Increase in Levels (Due To Mine) at:					
	1) Owl Tank		0.019	----Same for all alternatives.--------		
	2) Tusayan		0.005			
	Particulates: (ug/m^3)					
	NAAQS Standards	260 (24-hr. max.)				
	Current Levels	47-58(24-hr. max.)				
	Projected Levels					
	1) Mine Site		26 (24-hr. max.)2/	----Same for all alternatives.--------		
	2) Haul Routes		22 (24-hr. max.)			
	Radioactive Dust: (ug/m^3)3/					
	Current Levels	background				
	Projected Levels		0.01 increase4/	----Same for all alternatives.--------		
Monitoring	Requirements (narrative)	N/A	Required during the life of the mining operation, to detect changes in background readings for radon and radioactive dust.			

1/ Total suspended particulates.

2/ These predicted values are in addition to existing (background) levels.

3/ These calculations assume that all potentially radioactive dust is 1% uranium.

4/ This is 300 times less than limits set for facilities which require a radioactive materials license.

TABLE 2.11 EFFECTS OF TRANSPORTATION ROUTE SELECTION 1/

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION	
				Route #1	Route #2		Route #6	Route #7
Road Construction	New Construction (miles)	-0-	3.6	3.6	4.1	2.9	-0-	-0-
	Reconstruction (miles)	-0-	23.9	23.9	21.3	30.6	4.8	29.8
Hauling 2/	To Cameron (tons/mile)	-0-	48.5	48.5	46.4	54.5	128.8	85.0
Integration With Potential Future Forest Resource Management Needs	Degree of Integration (Narrative)	No commitment, future options open	Compatible (upgrades existing roads)	Compatible (upgrades existing roads)(both routes)		Compatible (access to southwest side) with possible future needs	No commitment on Forest, utilizes State and private land	
Surfacing Material Pits 3/	Total Required (volume cu. yd.)	-0-	54,000	54,000	54,000	63,500	53,500	53,500
	(surface acres disturbed)	-0-	2.8	2.8	2.8	3.4	3.2	3.2
Traffic Use on Haul Route	Seasonal Average Daily Traffic Before Project Construction (no.) 4/	Not Applicable	17	17	17	21-23	2,900 to 10,150	not available
	Projected Average Daily Traffic After Construction (no.)	Not Applicable	40	40	40	46	2,900 to 10,150	not available
	Percent Increase in Traffic	Not Applicable	135	135	135	109	0.6	not available
Monitoring	Radiometric Surveys Along Haul Routes 5/	Not Applicable	Data gathered from other uranium mining operations, show no increase in detectable radiation along ore haul routes.					
Wildlife 6/	Potential Increase in Impacted Area of Key Wildlife Habitat(ac.)	-0-	237	237	65	7	-0-	-0-

1/ Transportation hauling costs, construction costs and costs associated with mitigation requirements are shown on Tables 2.6 (Project Mitigation) & 2.7 (Wildlife).

2/ May require traffic control at intersection of Forest Road 305 and State 64 if Alternative 5 is selected.

3/ Based on truncated cone 15' deep, 3:1 sideslopes. Calculated area x 2 for clearing, equipment, etc.

4/ Average Daily Traffic (ADT) along haul routes (Seasonal averages on Forest roads). Traffic on Route #6 includes 2,900 ADT on SR 64, 10,150 ADT on I-40, 7,600 ADT on US 89, and 3100 ADT on US 160 to the US 191 turn-off to Blanding.

5/ Based on surveys along haul roads in northern Arizona, any increase in radiation caused by passing ore trucks, will be indistinguishable from background radiation. Individuals standing along the highway shoulder would receive a radiation dose too small to measure. The truck driver will receive slightly more radiation than an airline pilot. (See Appendix E.)

6/ Includes direct and indirect impacts from haul routes (acres of elk calving habitat within .5 mi. of haul road and are a taken out of production by new road construction).

TABLE 2.12 IMPACTS ON WATER AND SOIL RESOURCES

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
Radionuclide Contamination of Down Stream Lands and Waters thru Flooding of Ore Stockpiles at Mine Site	Diverson Channel Capacity (cfs)	NA	1,827	2,120	2,120	2,120
	Expected 500-yr. Flood (cfs)1/	NA	2,085	2,085	2,085	2,085
	Potential of Flood Waters Reaching Uranium Ore Stockpiles (narrative)	NA	Uranium ore stockpiles will be above the dike height in the southern part of the mine yard and will therefore be above the 500-year flood level.			
	Potential of 100-yr. Flood Reaching Lower Portion of Cataract Cr.	NA	Maximum flow during August 1984 event (100 yrs.+ recurrence interval) was was 2447 cfs. This flow dissipated at a large flat area about 14 miles below the mine site--about 12 miles upstream from Cataract Creek.			
	Sampling for Change from Baseline Surface Water Quality (piC/L):					
	1) Arizona statewide average:					
	Gross alpha	4.9				
	Gross beta	6.4				
	Ra-226	0.2				
	2) Current levels at Owl Tank:					
	Gross alpha	<2	For the life of the mine and until all post mining cleanup operations are completed, surface water and soil sampling will be required annually between Aug.15 and Sept.15 and after any release of water from mine site.			
	Gross beta	5.6 (25)2/				
	Ra-226	0.76 (17)				
	Uranium					
	Sampling for Change from Baseline Soil Radionuclide Level	NA				
	Current levels: (piC/L)3/					
	1) At Owl Tank					
	Gross alpha	35 (9)	" " " " " " " " " "			
	Gross beta	28				
	Ra-226	1.6 (14)				
	Uranium					
	2) Wash SSW					
	Gross alpha (pCi/L)	23 (10)	" " " " " " " " " "			
	Gross beta (pCi/L)	32				
	Ra-226 (pCi/L)	1.8 (14)				
	Uranium					

1/ This flood-flow prediction in cubic feet per second (cfs) is based on a general storm with antecedent soil moisture at saturation.

2/ Values in parenthesis are the percent error at one standard deviation.

3/ See text in Section 3.2.7.4, Chapter 3, for complete assays.

TABLE 2.12 (continued) IMPACTS ON WATER AND SOIL RESOURCES

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT	ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE ROAD CONSTRUCTION
						Preferred Alternative
Possible Groundwater Contamination by Radionuclides	Sampling for Change from Baseline Quality at Redwall Springs in Grand Canyon & Havasu Canyon Current levels: 1/	NA				
	1) Havasu 2/		Sampling is not a requirement or part of EFN's Plan of Operation.	Assuming permission is granted by landowner, sampling will be done during the life of the mine and until all post mining cleanup operations are completed.		
	Gross alpha (pCi/L)	<8				
	Gross beta (pCi/L)	6.4 (30) 3/				
	Ra-226 (pCi/L)	0.45 (38)				
	2) Indian Gardens 2/		" " "	" " " " " " " " " "		
	Gross alpha (pCi/L)	<4				
	Gross beta (pCi/L)	3.2 (56)				
	Ra-226 (pCi/L)	0.25 (40)				
	3) Mine-Site Well		Sampling will be required if water is found in the Redwall-Muav aquifer. (See Section 2.5.11 for details.			
	Gross alpha (pCi/L)	NA				
	Gross beta (pCi/L)					
	Ra-226 (pCi/L)					

1/ See Table 3.6, Chapter 3, for complete assays.

2/ Before mining operations start, samples will be taken every 6 mos. for 18 mos. After the groundwater well has been drilled, and if it produces water, samples taken 4 times a year from the well, will replace the sampling at the springs, unless groundwater contamination is detected at the well. Then pumping will be initiated, along with renewed sampling at the springs.

3/ Values in parenthesis are the percent error at one standard deviation.

TABLE 2.13 IMPACTS ON AMERICAN INDIAN RELIGIOUS CONCERNS

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE HAUL ROUTE IMPACTS
				Route #1	Route #2		
Direct Impact on Religious Sites	Sites Affected (no.)	0	No specific sites have been identified which would be impacted by the development of the mine site or the proposed haul routes.				
Interference With Access to Religious Sites (eg. burial grounds or shrines)	Sites Affected (no.)	0	Access to religious sites would not be curtailed by operational activities.				
	Trails Intersected by Mine Site or Haul Routes (no.)[a]	0					
Interference With Gathering of Religious Articles (eg. feathers & herbs)	Land Temporarily Lost to Hunting & Gathering (ac.)[b]	0	39	39	36	37	32
	Potential Gathering Areas Impacted by Ore Hauling (mi.)[c]	0	3.6	3.6	2.3	2.9	0
Compatibility with Traditional Religious Beliefs	Narrative	Consistent with traditional beliefs	Development of lands of Hopi ancestral occupancy for commercial purposes conflicts with stated Hopi traditional religious beliefs.				

[a] Trails leading to sites with religious significances.

[b] The Hopi and Havasupai Tribes indicate that the area near the mine site is used for hunting and gathering, but there is no evidence that the Canyon Mine site has been used for religious practices. (Areas shown here represent the sum of the mine site plus any new road corridors.)

[c] Number of miles of new road construction.

2.6.1 Comparison of Alternatives for Resolution of Issues and Concerns

None of the project alternatives fully resolves all nine identified issues and concerns, however by implementing the identified mitigation measures in Section 2.5, Alternatives 3, 4 and 5 are environmentally acceptable to the Forest Service. Alternative 5, with the substitution of an overhead powerline, has been selected as the Preferred Alternative.

IC #1 -Social and economic impacts on the community of Williams and Coconino County as a whole are considered by the Forest Service to be generally beneficial and virtually the same for Alternatives 2-5.

If the No Action Alternative were implemented, there would be no change in current levels of employment, income, tax revenue or output as a result of the Canyon Mine. Demand for public services would remain at current levels. No cultural resource sites would be identified or disturbed by mine development or road improvement or construction.

IC #2 -Reclamation measures required at the mine site are considered by Forest Service to be satisfactory in Alternatives 2-5, although measures called for in Alternatives 3-5 are more comprehensive and oriented toward improving wildlife habitat at the mine site upon its closing. Under the no action alternative, of course, no reclamation would be required at the Canyon Mine site.

IC #3 -The least cost alternative is Alternative 2. Alternatives 3-5 indicate increased expenditures of $360,000 to $1,300,000 can be expected depending on the haul route used and mitigation measures required. Increased expenditures are generally associated with mitigation requirements. The No Action Alternative would result in no construction or development costs, however, the costs of exploration and environmental review could not be recovered by EFN.

IC #4 -Wildlife habitat will be affected to varying degrees in all alternatives depending on the ore haulage route used. Alternative 5 has the least impact on wildlife. Alternative 2 would have the greatest impact because of a lack of mitigation requirements. Mitigation measures in Alternatives 3 and 4 should be effective in reducing the adverse impacts on wildlife resulting from increased road traffic.

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Alternatives 3-5 all call for "equivalent habitat replacement" to mitigate the impact of decreased habitat utilization caused by the mine and expanded transportation system. Alternative 3 also includes a proponent choice of road closure during May and June in lieu of habitat replacement to offset the impacts to elk calving habitat.

The No Action Alternative would have no impact from mining or ore transportation on wildlife or wildlife habitat and would require no mitigation. Any benefits associated with construction of alternative wildlife waters would not be realized.

IC #5 -Implementation of Alternatives 2-5 will have a negligible and insignificant effect on the makeup of vegetative types now present on the Tusayan Ranger District. The No Action Alternative would have no impact on vegetation at the Canyon Mine site.

IC #6 -Visual quality associated with the Grand Canyon will not be affected with the development of the Canyon Mine regardless of the alternative selected for implementation. Alternatives 2-5 will alter the short term visual quality at the mine site. Reclamation measures should effectively restore the area to its present visual landscape characteristics.

Implementation of mitigation measures in Alternatives 2-5 will minimize the likelihood of any adverse environmental impacts on the Grand Canyon National Park. To date the only apparent environmental impacts of the Orphan uranium mine, located on the south rim of the Grand Canyon at Maricopa Point, have been the conflicts of the mine with the National Park management objectives and some degradation of the scenic qualities of the Grand Canyon rim. Radionuclide contamination of air, soil or water has not been identified. For comparative purposes, the proposed Canyon Mine is some 13 airline miles from the rim of the Grand Canyon.

Haulage route selection will have a limited effect on the scenic qualities on the Tusayan Ranger District. Implementation of Alternative 5 would have the greatest effect by constructing a road off the Coconino Rim in a location that would be visible to travelers going to and from the Grand Canyon using the east Highway 64 entrance. The No Action Alternative would have no impact on the visual quality of the area near the mine site.

IC #7 -Implementation of Alternatives 2-5 will have no appreciable effect on the air quality, which includes particulates, radon gas, or radioactive dust, at either the Grand Canyon or the community of Tusayan. Increases in

particulate matter will be site specific along haul routes and at the mine site itself and are expected to be well within air quality standards. Current levels of air quality in the vicinity of the Canyon Mine site and haul routes would be unchanged by the No Action Alternative.

IC #8 -Implementation of Alternative 5 using the Highway or SP Crater haul routes (#6 or #7) would minimize impacts on the National Forest environment and resources by limiting road improvements to existing roadways. It would, however, transfer the use, and resulting impacts, to private and State lands, and at a greater cost to EFN (Table 2.2).

The haul route identified in Alternative 4 would be most cost effective in providing a road that would meet long term management needs in the event other mines are developed in the eastern quadrant of the Tusayan Ranger District.

Haul routes included in Alternatives 2 and 3 are the most cost effective routes for hauling ore from the Canyon Mine to the mill in Blanding, Utah.

No ore would be transported under the No Action Alternative.

IC #9 -Mitigation measures and operational procedures included in Alternatives 3-5 will reduce the possibility of radionuclide contamination to surface or subsurface water sources, and identify any contamination at the earliest possible time. Alternative 2 does not include air, soil and water monitoring requirements to ensure the operational designs of the mine are functioning properly. Under the No Action Alternative, current parameters for water quantity and water quality would remain unchanged at the mine site. Soil resources at the mine site would not be affected.

Neither the water quality on the Havasupai Indian Reservation nor the Grand Canyon National Park should be affected by the development of the mine under Alternatives 2-5. The Havasupai Reservation is located about 35 miles downstream from the mine site. A documented 100 year flood dissipated because of topographic features, about 14 miles downstream and 20 miles above the Reservation. Mitigation measures taken at the mine site would prevent any significant downstream radionuclide contamination in the event of an extreme flood occurrence.

IC #10 -Implementation of Alternatives 2-5 will have no appreciable effect on Indian religious sites and practices and will not burden traditional Tribal religious beliefs. Consultation with the Hopi and Havasupai Tribes has not identified any specific sacred site or the presence of any sacred plants used for ceremonial purposes which would be

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disturbed by the development of the mine or any of the haul route options. Similarly, a detailed archeological review of the site has disclosed no sites of religious significance.

Development of the mine site (Alternatives 2-5) and haul route options requiring new construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any religious sites or areas be restricted. Furthermore, there is no evidence of Indian religious activity at the mine site itself or along any of the proposed haul routes.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated religious beliefs.

The Preferred Alternative will include only the limited impacts associated with development of the mine site, as the haul route options included in the preferred alternative do not include any new road construction or significant reconstruction.

The No Action Alternative would have no impact on Indian religious beliefs, sites or practices. The Hopi and Havasupai Tribes have expressed a preference for the No Action Alternative.

DOCUMENT #2

United States
Department of
Agriculture

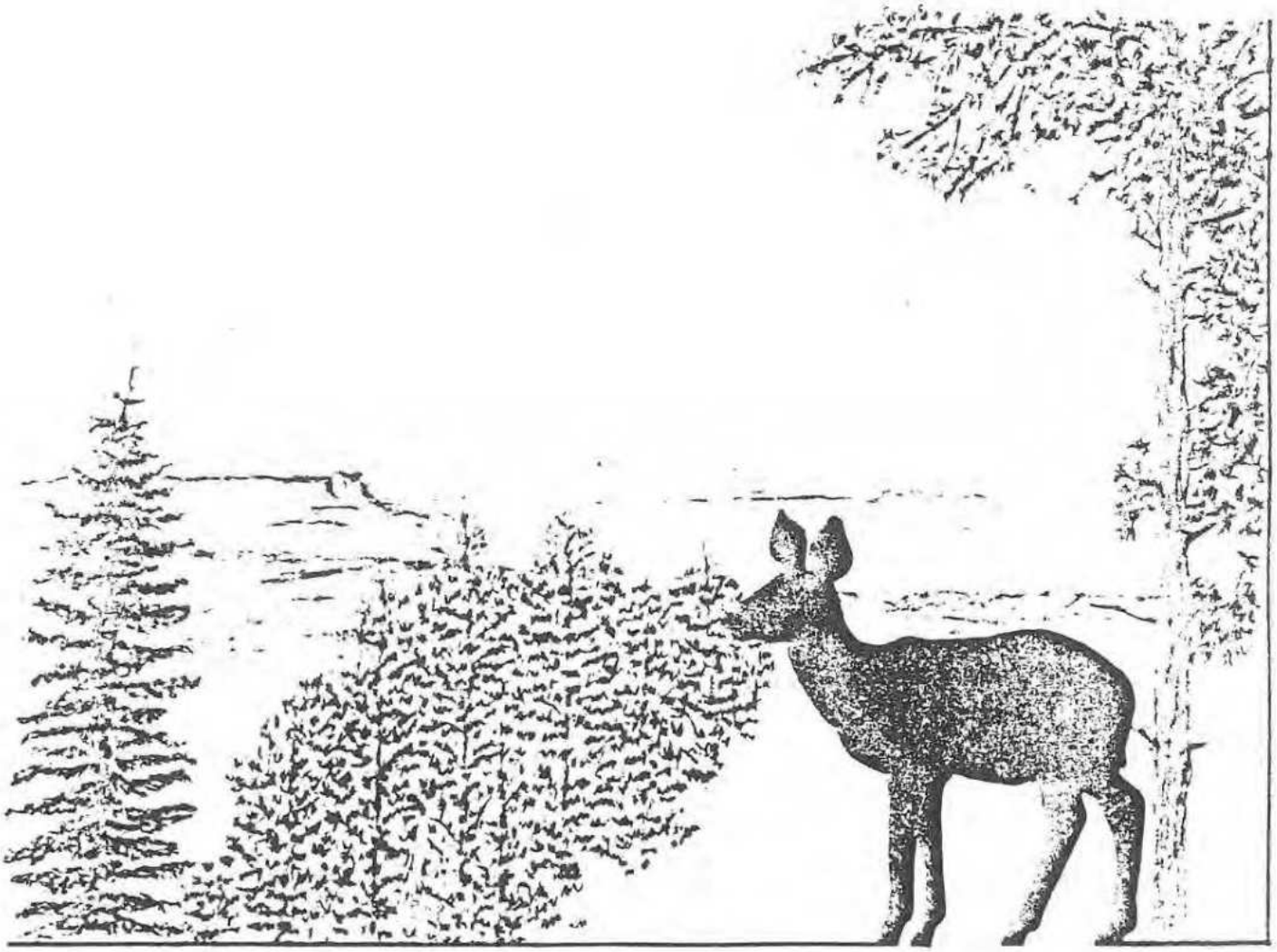
Forest Service

Southwestern
Region

Kaibab National
Forest

December 1985

Appendix
Draft Environmental Impact Statement
Canyon Uranium Mine



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ENVIRONMENTAL IMPACT STATEMENT
CANYON URANIUM MINING PROPOSAL
COCONINO COUNTY, ARIZONA

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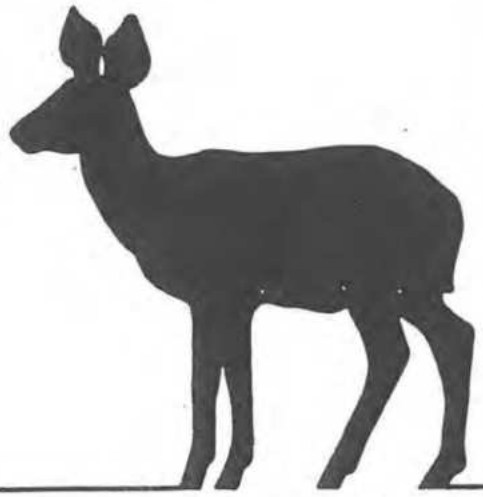
Groundwater Conditions



Report

July 17, 1985

GROUNDWATER CONDITIONS
CANYON MINE REGION
COCONINO COUNTY, ARIZONA

PREPARED FOR
U. S. FOREST SERVICE
KAIBAB NATIONAL FOREST
WILLIAMS, ARIZONA

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(*Not included; on file at Kaibab National Forest)

APPENDIX

Appendix

A WELL NUMBERING SYSTEM

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GROUNDWATER CONDITIONS
CANYON MINE REGION
COCONINO COUNTY, ARIZONA

SUMMARY OF CONCLUSIONS

The following conclusions are based on analysis of hydrogeologic and hydrochemical data obtained during the Canyon Mine environmental impact investigations.

1. The proposed mining operations at the Canyon Mine site will have little or no impact on groundwater circulation and storage in perched aquifers, and will have negligible or no impact on yield from springs and wells which yield groundwater from perched aquifers.

2. The proposed mining operations will have little or no impact on chemical quality of groundwater in perched aquifers.

3. The proposed mining operations will have negligible impact on groundwater circulation and storage in the Redwall-Muav aquifer, and will have negligible impact on yield from springs which issue from the Redwall-Muav aquifer.

4. With the implementation of planned mitigation actions, the possibility for deterioration of chemical quality of groundwater in the Redwall-Muav aquifer due to proposed

mining operations is small. Any deterioration of chemical quality of groundwater in the Redwall-Muav aquifer would be detected by the groundwater monitoring program.

INTRODUCTION

Underground mining operations to extract uranium ore for a period of approximately ten years have been proposed by Energy Fuels (Energy Fuels Nuclear, Inc.) for the Canyon Mine site located about six miles southeast of Tusayan, Arizona. At the mine site, the ore-bearing zone occurs within a mineralized breccia pipe which is believed to extend upward to the land surface from the Redwall Limestone. During mining operations, a vertical shaft will be constructed outside the breccia pipe structure, and tunnels will extend laterally from the shaft to intersect ore-bearing zones. The mine openings will penetrate from the land surface to the upper part of the Supai Group, about 1,400 feet below land surface. Water for domestic and industrial use will be needed at the mine site. The quantity required for domestic use is projected by Energy Fuels personnel to be about five gpm (gallons per minute), and might be obtained from a groundwater supply and monitoring well which will be completed in the Redwall-Muav aquifer at the mine site. The depth to the top of this aquifer at the mine site is about 2,300 feet below land surface. Shaft construction and mining operations will take place in rock formations which are well known from descriptions by eminent geologists at exposures in the walls of the Grand Canyon. The rim of the Grand Canyon, at its closest point, lies about nine miles north of the Canyon Mine site.

PREVIOUS INVESTIGATIONS

Hydrogeologic conditions on the Coconino Plateau along the south rim of the Grand Canyon have been reported by many authors; five publications are most pertinent to understanding the occurrence and circulation of groundwater in the Canyon Mine site area. Metzger (1961) discusses relations between geology and groundwater resources along the south rim of the Grand Canyon and gives preliminary conclusions for quantity and rate of recharge and discharge. Huntoon (1982) reports results of investigations on groundwater circulation in the plateau regions adjacent to the Grand Canyon and indicates that groundwater discharge from these regions is chiefly to springs in the Grand Canyon. A compilation of data for groundwater discharge at springs along the Colorado River in the Grand Canyon is given by Johnson and Sanderson (1968). The Grand Canyon National Park, Water Resources Management Plan (1984) provides an excellent summary of hydrogeologic and hydrochemical data for the Park and adjacent areas. Loughlin (1983) provides interpretations and conclusions for hydrodynamic conditions at the time of formation of breccia pipes in the Grand Canyon area and for groundwater circulation near important springs.

HYDROGEOLOGIC CONDITIONS

The lithology and deformation of the rock formations in the Canyon Mine site area are principal controls for circulation and storage of groundwater. The outcrop areas of the geologic units and the surface traces of principal structural features in the Canyon Mine area are shown on **Figure 1.** A hydrogeologic section showing thickness of the sedimentary rock formations, geometry of the mineralized breccia pipe, and planned locations of the mine openings are shown on **Figure 2.** Locations of water wells and springs in the Canyon Mine site area are shown on **Figure 3.** An inventory of data for water wells and test holes in the Canyon Mine area is given in **Table 1.** Records for the principal springs which issue from the southern wall of the Grand Canyon and in southern tributary canyons from Havasu Springs on the west to Blue Springs on the east (**Figure 1**) are summarized in **Table 2.** The well numbering system used by the Arizona Department of Water Resources and in this report is described and illustrated in **Appendix A.**

STRATIGRAPHY AND HYDROGEOLOGIC CHARACTERISTICS

Alluvial deposits, Moenkopi Formation, and Kaibab Limestone crop out at the land surface in the Canyon Mine area. Volcanic rocks crop out in the southern part of the area shown on **Figure 1.** Navajo Sandstone and Chinle Formation crop out east of the Little Colorado River, but these rocks do not occur at the mine site. Geologic units which do not crop out but exist in the subsurface in the Canyon Mine area, to the projected base of the mine openings, are in descending order: Toroweap Formation, Coconino Sandstone, Hermit Shale, and the upper part of the Supai Group. The lower part of the Supai Group and the Redwall, Temple Butte, and Muav Limestones, Bright Angel Shale, Tapeats Sandstone, and Precambrian rocks lie at depths below the deepest projected depth for the mine openings (**Figure 2**).

Alluvial Deposits

The alluvial deposits comprise a heterogenous mixture of unconsolidated to consolidated rocks ranging in grain size from silt and clay to boulders. The alluvium is of Quaternary and Tertiary age and crops out chiefly in valley floors and along the margins of volcanic rocks (Figure 1). The thickness of alluvial deposits ranges from a feather edge to a few feet where exposed in valley floors. The older alluvial deposits may be more than 100 feet in thickness at the margins of the volcanic rocks.

Alluvial deposits which occur in the valley floors are permeable and transmit recharge waters from the land surface to underlying formations. Occasionally, where alluvial deposits overlie less permeable rocks, temporary perched groundwater reservoirs may exist in these deposits. Such perched reservoirs are usually ephemeral and the stored water is lost to evapotranspiration and slow downward seepage after periods of precipitation deficit.

Volcanic Rocks

The volcanic rock sequence comprises pyroclastics, including volcanic ash and cinders, lava-flow rocks, dikes, and plugs. The thickness of the volcanic rock sequence ranges from approximately 20 feet at the edge of some lava flows to more than 1,000 feet near eruptive centers.

Surficial cinder cover provides excellent infiltration media. The subsurface sequence of volcanic rocks commonly has a low vertical permeability and retards downward water movement unless extensively fractured. Perched groundwater zones occur locally in the volcanics and discharge at seeps and springs. Locally, these perched groundwater zones have been penetrated by wells and yield small, and often poorly reliable, quantities of water for domestic and stock use.

Navajo Sandstone and Chinle Formation

Sedimentary rocks including Navajo Sandstone and Chinle Formation overlie Moenkopi Formation at places east of the Little Colorado River (Figure 1). These units are isolated from the Canyon Mine site area by the Little Colorado River Gorge, lie above the water table in the regional aquifer, and lie above the strata in which the mine openings will occur.

Moenkopi Formation

The Moenkopi Formation in the Canyon Mine area is a thin-bedded, fine grained, red sandstone and mudstone. Near the Canyon Mine site the Moenkopi has been completly eroded in most areas. However, at the land surface directly over the breccia pipe, Moenkopi occurs in thicknesses ranging from a feather edge to about 60 feet. The presence of the remnant Moenkopi strata is due to collapse of the pipe prior to erosional stripping of Moenkopi and subsidence of the lowermost part of the unit into the collapse depression.

The fine grain size and poor sorting in the strata of the Moenkopi Formation cause the unit to function as a confining layer; the formation transmits water only where it is extensively fractured (Cosner 1962). Because of the small area where the Moenkopi crops out, and the abundant fractures which would occur in the brittle sandstone strata during subsidence, the Moenkopi Formation is not expected to function as an effective confining layer and perched groundwater would not be expected to occur in the unit at the Canyon Mine site.

Kaibab Limestone

The Kaibab Limestone comprises thick- to thin-bedded, jointed, cherty, and sandy dolomitic limestone. It crops out over large areas in northern Arizona including the Canyon Mine site, and forms the rim rock of the Grand Canyon (Figure 1). At the Canyon Mine site the thickness of the Kaibab is about 300 feet (Figure 2).

The Kaibab Limestone is a brittle formation and is extensively fractured in areas where geologic structural movements have occurred. Water percolation through these fractures has enlarged the openings by solution and, at many places, has created extensive cavern systems. Large caverns in the Kaibab may be inspected at Grand Canyon Village, and have been observed at Wupatki National Monument (Cosner, 1962), at Babbitt Ranch west of the Canyon Mine site (Harshbarger, 1973), and at many other localities in northern Arizona. Where Kaibab is exposed, surface water percolates readily downward via the fractures and solution openings and thus the unit comprises an important recharge medium.

Toroweap Formation

The Toroweap Formation consists of upper and lower fine-grained sandstone and shale members separated by a middle massive limestone member (McKee, 1974). Due to variability in composition, the topographic expression of the Toroweap ranges from a weak slope-forming unit to a cliff-former. At the Canyon Mine site the thickness of the Toroweap is about 300 feet (Figure 2).

The sandstone in the upper and lower members of the Toroweap is similar to the sand of the Coconino Sandstone; however, the cementation for the Toroweap is weaker. Shale beds within the upper and lower members of the formation are confining layers and locally cause accumulation of thin and

discontinuous perched groundwater zones in overlying sandstone strata. The Toroweap is considered to be a minor aquifer and yields small quantities of groundwater to wells in the Canyon Mine site area.

The middle massive limestone member of the Toroweap is brittle and is extensively fractured. Fractures in the limestone are commonly enlarged by solution activity and solution openings are abundant in this member. Groundwater percolates downward readily via fractures and solution openings in the limestone member.

Coconino Sandstone

The Coconino Sandstone is very fine- to fine-grained, cross-bedded sandstone composed of subangular to well rounded, frosted quartz grains. The Coconino is usually a cliff-former in outcrops, is a well-lithified and brittle rock unit, and contains extensive fractures near fault zones. At the Canyon Mine site the thickness of the Coconino is about 550 feet (Figure 2).

The Coconino Sandstone is the principal aquifer throughout much of northern Arizona at locations where the regional water table occurs above the base of the unit. At Flagstaff, municipal water supply wells obtain groundwater from the Coconino aquifer, and hydraulic coefficients have been computed from results of pumping tests. Average transmissivity and coefficient of storage for the Coconino aquifer at the Flagstaff Woody Mountain municipal well field are reported by Montgomery and DeWitt (1975) to be 30,000 gpd/ft (gallons per day per foot width of aquifer at 1:1 hydraulic gradient) and 0.05 (dimensionless; ratio of volume of water released per unit surface area per unit decline in head), respectively. Average permeability is about 50 gpd/ft^2. At the Woody Mountain well field, the permeability of the formation is large due to the occurence of abundant fractures (Montgomery and DeWitt, 1975), and pumping rates from individual wells

are as much as 1,000 gpm. Where the sandstone is not abundantly fractured, permeability is small, and pumping rates from individual wells are commonly less than 100 gpm.

Along the south rim of the Grand Canyon the water table occurs below the base of the unit and the Coconino does not contain groundwater at most locations. Where favorable structural conditions exist, and where mudstone strata in the underlying Hermit Shale form a confining layer, perched groundwater zones may occur, and may supply small quantities of water to springs and wells for domestic and stock use.

Hermit Shale

The Hermit Shale consists of red sandy shale and fine-grained friable sandstone. Where it crops out, it forms a slope between the overlying cliff-forming Coconino Sandstone and the underlying bench- and slope-forming Supai Group. At the Canyon Mine site the thickness of the Hermit is about 100 feet (Figure 2).

Due to its fine-grained lithology, the Hermit Shale generally retards the downward percolation of groundwater and the unit is considered to be an important confining layer.

Supai Group

The Supai Group consists of alternating siltstone, fine-grained sandstone, and some limestone beds. Where the Supai crops out in the Grand Canyon north of the Canyon Mine site, the formation is a ledge- and slope-former. The siltstone units are red and are in flat lenticular beds. The sandstone units are light brown but in many places are stained red by the overlying siltstone. At the Canyon Mine site the Supai is about 1,050 feet thick (Figure 2).

Because the Supai Group is composed chiefly of siltstone and fine-grained sandstone, groundwater does not move readily through the fine-grained rock matrix, although some downward percolation of groundwater does occur (Metzger, 1961). The upper part of the Supai contains sandstone beds which yield small quantities of water from local perched groundwater zones to seeps in the Grand Canyon; the unit is reported to yield small quantities of groundwater to wells in the Canyon Mine site area. However, the Supai functions chiefly as a confining layer, retarding downward water movement to the more permeable underlying formations.

Redwall, Temple Butte, and Muav Limestones

The Redwall Limestone is a thick-bedded, cliff-forming, fine-grained limestone and dolomite. Although the top of the unit has been encountered, the formation has not been completely penetrated by exploration boreholes at the Canyon mine site. The thickness of the Redwall at the Canyon Mine site is estimated from thicknesses reported from the Grand Canyon to be about 450 feet. The depth to the top of the Redwall at the mine site is about 2,300 feet. The Temple Butte Limestone underlies the Redwall and consists of interbedded dolomite, dolomitic sandstone, sandy limestone, siltstone, and sandstone. The unit crops out as thin ledges and occupies small channels cut into the underlying Muav Limestone. The thickness of the Temple Butte at the mine site is estimated from exposures in the Grand Canyon to range from a feather edge to as much as 140 feet. The Muav Limestone consists chiefly of dolomitic limestone. The lower part of the unit is gradational with the underlying Bright Angel Shale and contains a few beds of shale and sandstone. The Muav forms alternating cliffs and slopes. The thickness of the Muav Limestone at the mine site is estimated from exposures in the Grand Canyon to be about 300 feet. The depth to the top and base of the Redwall-Temple Butte-Muav sequence is approximately 2,300 and 3,050 feet, respectively, at the Canyon Mine site (Figure 2).

The Redwall-Temple Butte-Muav sequence lies below or partly below the regional water table and comprises the extensive and prolific Redwall-Muav aquifer in northern Arizona. Although the permeability of unfractured rock in the Redwall-Muav aquifer is very small, the presence of solution openings which have developed along fractures provides for the transmission of large quantities of groundwater. Data are presently (1985) insufficient to quantify permeability and porosity of the Redwall-Muav aquifer.

At Grand Canyon Village, and at most locations along the South Rim, the upper part of this aquifer system has been drained due to the down-cutting of the Grand Canyon. However, large quantities of groundwater discharge from the aquifer at Havasu Spring and Blue Spring, where the strata have been flexed downward, and where major faults occur (Figure 1). Indian Gardens Spring, located on the Bright Angel Fault about 14 miles north of the Canyon Mine site, is the closest spring which discharges from the Redwall-Muav aquifer.

Bright Angel Shale and Tapeats Sandstone

The Bright Angel Shale is composed chiefly of mudstone and shale strata but also contains minor thicknesses of sandstone and limestone. The unit functions as an effective confining layer; no large springs issue from formations below this shale. The Tapeats Sandstone consists of cross-bedded, poorly sorted, coarse sandstone and conglomerate. Because the Tapeats is overlain by the Bright Angel, only small quantities of groundwater issue from seeps in the Tapeats. The Bright Angel Shale and the Tapeats Sandstone are not known to yield groundwater to wells in the Grand Canyon region. The thicknesses of the Bright Angel and the Tapeats at the Canyon Mine site are estimated from exposures in the Grand Canyon to be about 200 and 250 feet, respectively (Figure 2).

PRECAMBRIAN ROCKS

The presence of sedimentary, metamorphic, and igneous rocks of Precambrian age which underlie the Tapeats Sandstone at the Canyon Mine site are indicated from geologic relations in the Grand Canyon and from analysis of deep oil test holes in the Flagstaff vicinity. The permeability and porosity of the Precambrian rocks exposed in the Grand Canyon are very low, and these rocks together with the Tapeats Sandstone and the Bright Angel Shale are expected to function as the basal confining layer to the important groundwater transmission system contained in the Redwall-Muav aquifer.

STRUCTURAL FEATURES

The principal structural features in the Canyon Mine site area are a series of north to northeast trending faults, including the Vishnu and Bright Angel Faults; and major north to northwest trending flexures, including the Havasu Downwarp, and the Supai, Grandview-Phantom, and East Kaibab Monoclines (Figure 1). Abundant fractures occur along the axial traces of these flexures (Huntoon, 1982). The altitude of the strata in the area of the Canyon Mine site is higher than the strata to the east which has been flexed downward along the Grandview-Phantom Monocline and the East Kaibab Monocline, and is higher than the strata to the west which has been flexed downward along the Supai Monocline (Figure 1). The regional dip of the Kaibab Limestone and underlying strata of Paleozoic age in the Canyon Mine site area ranges from 1/2 to 1-1/2 degrees and is to the southwest.

The effects of faults and other fractures on movement and occurrence of groundwater in the Canyon Mine site area cannot be overemphasized. Recharge from precipitation, snowmelt, and streamflow percolates readily downward through the fractured rocks to the underlying perched and principal aquifer systems. Solution cavities, which also enhance water movement, are concentrated along these fractures. Lateral groundwater movement in the Redwall-Muav aquifer occurs chiefly in fractures and solution openings which are concentrated along the principal structural features. Most of the groundwater discharge from this aquifer occurs at springs which lie on the principal structural features.

Energy Fuels geologic personnel report that field investigations and exploration drilling operations have not encountered major faults or fractures outside the breccia pipe at the Canyon Mine site.

HYDROGEOLOGIC CHARACTERISTICS OF BRECCIA PIPES

The most common mining operations in the Grand Canyon area are associated with breccia pipes, which are cylindrical or conical collapse features in sedimentary rocks and at some locations are mineralized (National Park Service, 1984). Breccia pipes are believed to result from collapse of roof rocks, commonly to the land surface, over solution cavities in the Redwall Limestone (Loughlin, 1983). The structures are generally circular in surface exposure and are commonly rimmed by inward dipping collapsed strata (Billingsley, Ulrich, and Barnes, 1983). Brecciated rock exposed at the surface or in mine workings consists of angular blocks ranging in size from less than one inch to more than ten feet in diameter, and is composed of rocks from adjacent or overlying strata. Locations of more than 40 breccia pipe structures are shown on Figure 1. Two pipes are located in the walls of Havasu Canyon, near Supai Village (Figure 1). The Orphan Pipe is located on the rim of the Grand Canyon about 1-1/2 miles northwest of Grand Canyon Village (Figure 1). Many breccia pipes have been observed in the vicinity of the Little Colorado River Gorge. Several of the pipes in the Grand Canyon area have been mined, chiefly for their copper and uranium minerals.

ORPHAN MINE

Possibly the best known breccia pipe mine in the Grand Canyon area is the Orphan Mine near Grand Canyon Village. The Orphan breccia pipe is about 350 feet in diameter (Gornitz, 1969), and has a vertical dimension of about 2,000 feet. The mineralized portion of the pipe and mine openings occur at similar stratigraphic levels as for the Canyon Mine site. The most abundant minerals in the mineralized parts of the Orphan pipe were: uraninite, chalcopyrite, bornite, chalcocite, tennanite, and pyrite. The

ore deposit was discovered in 1893 and the mining claim was patented in 1906. Commercial mining of uranium minerals from the Orphan Mine began in 1956 and mining operations ceased in 1969 (National Park Service, 1984).

HACK CANYON MINES

Mining operations by Energy Fuels are presently active at several breccia pipe mines north of the Grand Canyon. The Hack Canyon mines have been producing uranium minerals for several years. The mineralized portions of the pipes and mine openings occur at similar stratigraphic levels as for the Canyon Mine site. Inspection of hydrogeologic conditions in the Hack II and III mines in June 1985 indicated that the breccia blocks are firmly cemented by carbonate, ferrugenous, or ore minerals. The porosity of the breccia is low; voids between blocks are filled with firmly cemented matrix.

The Hack Canyon mine workings were nearly dry; small quantities of groundwater were yielded from a perched groundwater body at the base of the Coconino Sandstone. The quantity of water yielded was estimated to be less than five gpm, and was captured and used in the mine. Energy Fuels personnel indicated that the discharge rate shows seasonal variation, and that discharge has decreased from the time of commencement of mining operations.

EXISTING WELLS

Records are available for more than 150 wells and exploration boreholes in the Canyon Mine site area which are sufficiently nearby to provide data pertinent to this study. These records are summarized in Table 1. Locations of wells and exploration boreholes are shown on Figure 3. Most of the wells yield small quantities of groundwater from discontinuous perched aquifers in alluvial deposits, in volcanic rocks south of the Canyon Mine site, in the Chinle or Moenkopi Formations east of the mine site, in the Toroweap Formation, in the basal part of the Coconino Sandstone, or in the Supai Group. Several wells which yielded small quantities of water when drilled are presently dry.

Records for exploration borehole (A-29-3)20bdc, located at the Canyon Mine site, indicate that it is owned by the U. S. Forest Service and was drilled by Gulf Mineral Resources Company to a depth of 1,580 feet (Table 1, Figure 3). Examination of the drilling data for this borehole indicates that, during drilling operations, perched groundwater was encountered in the Kaibab Limestone at a depth of 140 feet. Initial groundwater yield from this borehole was reported to be about eight gpm. Exploration borehole (A-29-3)31cda, located about 2-1/2 miles southwest from the Canyon Mine site, is owned by the U. S. Forest Service and was drilled by Gulf Mineral Resources Company to a depth of 1,560 feet (Table 1, Figure 3). Examination of the drilling data for this borehole indicates that, during drilling operations, perched groundwater was encountered in the Kaibab Limestone at a depth of 160 feet. Initial groundwater yield from this borehole was reported to be about 12 gpm. Groundwater yield from these two boreholes reportedly decreased as drilling operations continued and eventually ceased. Cement plugs were installed in these boreholes at land surface and at a depth of 200 feet, and the boreholes were abandoned.

Records indicate that the closest water wells to the Canyon Mine site include: well (A-29-2)34dbb owned by Hatch and located four miles southwest of the mine site; and six wells [(A-30-2)24a1, (A-30-2)24a2, (A-30-2)24bbb,

(A-30-2)25b, (A-30-2)25c, and (A-30-2)25dd], located at Tusayan, six miles northwest of the mine site (Table 1; Figure 3). No hydrologic data are reported for the Hatch well; the six wells at Tusayan are reported to yield groundwater from the Toroweap Formation. Four of the wells at Tusayan were inspected in 1977 and were reported to be not used due to inadequate yield.

The Anita Copper Company shaft (A-29-2)16 is reported to be 514 feet deep and is located five miles southwest of the Canyon Mine site (Table 1; Figure 3). The shaft is reported to bottom in the Coconino Sandstone. Depth to water in the shaft was reported to be 500 feet at time of completion in 1904.

Well (A-25-2)27aba, owned by Black Mesa Pipeline Company and located 25 miles south of the Canyon Mine site, was drilled sufficiently deep to penetrate the Redwall-Muav aquifer (Table 1; Figure 3). Water level for the well is reported to be 2,839 feet below land surface, and altitude of water level is reported to be 3,326 feet msl (feet above mean sea level). Exploration boreholes (A-27-9)15ccc, (A-27-9)21abd, (A-33-8)22cd, and (B-28-1)35cab were drilled sufficiently deep to penetrate the Redwall-Muav aquifer, but the reports do not indicate that groundwater was encountered in this aquifer.

Discharge rates for the wells listed in Table 1 range from less than 0.1 gpm to 50 gpm. Records and notes in the files of the Water Resources Division, U. S. Geological Survey, Flagstaff, Arizona, suggest that recorded pumping rates were excessive for many wells which obtain groundwater from perched aquifers in the Toroweap Formation and the Coconino Sandstone.

GROUNDWATER CIRCULATION

Groundwater moves from areas of recharge to areas of discharge. In the Canyon Mine site area, groundwater recharge occurs chiefly from infiltration of rainfall and snowmelt on the plateau south and southeast of the Grand Canyon. The Grand Canyon and its larger tributary canyons function as groundwater drains; groundwater discharges to the Canyon at many small springs and seeps and at a few large springs.

The absence of perennial streams, other than those fed by springs in the Grand Canyon and its tributaries, is one of the most noticeable hydrologic characteristics of the Canyon Mine site area. Although precipitation in the mine area is approximately 15 inches per year (Sellers and Hill, 1974), much of the rainfall and snowmelt is lost through evapotranspiration, and most of the remaining fraction infiltrates via permeable surficial deposits and via fractures and solution openings in the Kaibab Limestone. This water moves downward until it meets a confining rock layer with sufficiently small permeability to detain the flow. Where the water is detained, a saturated zone forms above the confining layer, and lateral groundwater movement begins. Because the confining layers are not completely impermeable, part of the perched water eventually leaks downward through the confining layer. The remaining groundwater will move laterally until it encounters fractures which permit the water to move downward and bypass the confining layer, or until the water discharges along canyon walls at seeps and springs.

Circulation in Perched Aquifers

Substantial quantities of groundwater may be perched above confining layers in areas where fractures are sparse. These conditions occur most commonly in the Toroweap Formation where groundwater is perched in sandstone units overlying shaley confining strata, and in the base of the Coconino Sandstone where groundwater may be perched on the mudstone strata

of the Hermit Shale. At these places, the perched aquifers may yield small quantities of groundwater for domestic and stock use. Because the perched water leaks slowly downward through the confining layers and moves downward along fractures, the perched reservoirs are commonly small, thin, and discontinuous. If the groundwater stored in these perched reservoirs is not replenished annually by rainfall and snowmelt, wells and springs which yield from the perched aquifers may fail. A comparison of the quantity of groundwater yielded to seeps and springs from the perched aquifers to the quantity yielded from the Redwall-Muav aquifer is interpreted to indicate that the principal direction of groundwater movement is downward in the rocks overlying the Redwall-Muav aquifer.

Yield from Perched Aquifer Springs

Several springs issue from fractures or sandstone strata in the Toroweap Formation, Coconino Sandstone, and the Supai Group along the south wall of the Grand Canyon and its southern tributary canyons from Havasu Spring to Blue Spring. Records are available for three of these springs (Table 2) and indicate that average discharge is less than one gpm. The most important springs that discharge from these strata are Sinyella Spring in the western wall of Havasu Canyon, Great Thumb Spring in 140 Mile Canyon, Fossil Spring in Fossil Canyon, and Dripping Springs and Santa Maria Spring in Hermit Creek Canyon (Figure 3).

Small springs and seeps discharge from volcanic rocks south of the Canyon Mine site. These springs and seeps are exit points for groundwater which has become perched on poorly permeable, unfractured lava-flow rocks. These perched aquifers are discontinuous and lie above the strata in which the mine openings will occur.

Circulation in the Redwall-Muav Aquifer

Groundwater enters the Redwall-Muav aquifer from overlying rocks where the direction of water movement is chiefly downward. When this groundwater enters the saturated zone in the Redwall-Muav aquifer, the direction of water movement becomes chiefly lateral toward large springs along the south wall of the Grand Canyon and its southern tributary canyons. Water movement is believed to occur principally in widely spaced fracture and solution openings which are concentrated along principal structural features (Huntoon, 1974). These principal structural features include the Havasu Downwarp, and the Supai, Grandview-Phantom, and East Kaibab Monoclines (Figure 1).

Only one water well penetrates the Redwall-Muav aquifer in the Canyon Mine Site area and only sparse data are available for water levels. Well (A-25-2)27aba, located about 25 miles south of the Canyon Mine site (Figure 3), obtains water from the Redwall-Muav aquifer. Altitude of static water level is reported to be 3,326 feet msl (Table 1).

Yield from Redwall-Muav Aquifer Springs

More than 60 springs issue from fractures or solution openings in the Redwall-Muav aquifer along the south wall of the Grand Canyon and its southern tributary canyons. The largest springs in the Grand Canyon discharge from this aquifer and include Havasu Spring and Blue Spring. Average discharge rate from Havasu Spring is about 30,000 gpm, from Blue Spring is about 44,000 gpm, and from composite flow in the Blue Springs area is about 100,000 gpm (Loughlin and Huntoon, 1983). The large discharge rate from these springs has caused hydrologists to conclude that essentially all groundwater in the region along the south rim of the Grand Canyon issues either at Blue Springs or at Havasu Spring. The nearly constant rate of groundwater discharge from these springs is interpreted to

indicate that the groundwater basins tributary to the springs are extensive and that the quantity of groundwater in storage in the aquifer system is large with respect to annual replenishment.

Many smaller springs also discharge from fractures or solution openings in the Redwall-Muav aquifer. The most important smaller springs are Hermit Spring (about 210 gpm) in the lower reaches of Hermit Creek Canyon and Indian Gardens Spring (about 300 gpm) in Garden Creek Canyon (Table 2; Figure 3). Because the discharge rates for these springs follow a seasonal pattern, the drainage areas for the springs are believed to be small and restricted to areas near the rim of the Grand Canyon.

Salient data for Havasu Spring, Indian Gardens Spring, and Blue Springs are summarized as follows:

Spring	Distance from Canyon Mine (miles)	Altitude (feet,msl)	Discharge Rate (gallons per minute)
Havasu Spring	42	3,250	30,000
Indian Gardens	14	3,740	300
Blue Springs (composite)	28	3,165	100,000

The altitude of the top of the Redwall-Muav aquifer at the Canyon Mine site is projected to be about 4,200 feet msl, about 900 feet below the base of the mine openings (Figure 2). The altitude of the base of the aquifer system at the site is projected to be about 3,450 feet msl. These relations indicate that the base of the Redwall-Muav aquifer at the Canyon Mine site is higher than the groundwater discharge points at Havasu and Blue Springs, and lower than the groundwater discharge point at Indian Gardens Spring. The top of the Redwall-Muav aquifer at the Canyon Mine site is higher than the groundwater discharge point at each of the three

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springs. The altitude of static water level at well (A-25-2)27aba, which penetrates the Redwall-Muav aquifer, was given as 3,326 feet msl (Table 1). These relations also indicate that the reported water level in well (A-25-2)27aba is lower than the base of the Redwall-Muav aquifer at the Canyon Mine site.

CHEMICAL QUALITY OF GROUNDWATER

Chemical quality of groundwater in the Canyon Mine site area is known from existing water quality data reported for wells and springs. These data provide documentation for baseline groundwater quality conditions prior to mining operations at the Canyon Mine site. Results of laboratory chemical analyses for water samples from 22 wells in the area shown on Figure 3 have been reported by Kister and Hatchett (1963), McGavock (1968), Loughlin (1983), and Loughlin and Huntoon (1983). These results are summarized in Table 3. In addition, results of analyses for water samples collected from more than 30 springs and creeks fed by groundwater discharge have been reported by Kister and Hatchett (1963), McGavock (1968), Johnson and Sanderson (1968), Walther (1970), Peterson et al. (1977), Cole and Kulby (1976 and 1979), Giegengack et al. (1979), Arizona Game & Fish Department (1983), National Park Service (1983), Loughlin (1983), Loughlin and Huntoon (1983), Usher et al. (1984), and Foust and Hoppe (1985). Results of analyses reported for Havasu, Indian Gardens, and Blue Springs, the three largest springs in the area, are summarized in Tables 4 and 5.

Existing water quality data for water wells in the Canyon Mine site area comprise analyses for routine constituents in water samples obtained from several perched aquifers (Table 3). Four exploration boreholes [(A-27-9)15ccc, (A-27-9)21abd, (A-33-8)22cd, and (B-28-1)35cab] and one water well [(A-25-2)27aba] are known to have penetrated the Redwall-Muav aquifer. However, the boreholes were abandoned and water quality data have not been reported for the water well. Water quality in the Redwall-Muav aquifer in the Canyon Mine site area is inferred from data for springs which discharge from the aquifer along the south wall of the Grand Canyon and its southern tributary canyons from Havasu Spring to Blue Springs.

PERCHED AQUIFER SYSTEMS

Perched aquifers reported to yield groundwater to the wells listed in Table 3 include, in descending order: alluvial deposits, volcanic rocks, Navajo Sandstone, Shinarump Member of the Chinle Formation, Moenkopi Formation, Kaibab Limestone, Toroweap Formation, and Coconino Sandstone.

Alluvial Deposits, Volcanic Rocks, Navajo Sandstone, Shinarump Member, Moenkopi Formation, and Kaibab Limestone

Perched groundwater in the alluvial deposits, volcanic rocks, Navajo Sandstone, Shinarump Member, Moenkopi Formation, and the Kaibab Limestone generally occurs large distances to the east, south, and southwest from the Canyon Mine site. Laboratory chemical analyses for groundwater samples from well (B-27-6)1adc, completed in alluvial deposits southwest from the mine site, indicate a calcium-sulfate water type with total dissolved solids content of 2,220 mg/l (milligrams per liter). Analyses for samples from well (A-25-6)20bdd, completed in volcanic rocks south from the mine site, indicate a calcium-bicarbonate water type. Analyses for groundwater from well (A-34-9)22b, completed in the Navajo Sandstone east from the mine site, indicate a calcium-bicarbonate water type with total dissolved solids content of 145 mg/l (Table 3). Analyses for samples from well (A-34-9)30a, completed in the Shinarump Member of the Chinle Formation east from the mine site, indicate a sodium-bicarbonate water type with total dissolved solids content of 1,000 mg/l. Analyses for groundwater from well (A-29-9)22dd, completed in the Moenkopi Formation east from the mine site, indicate a sodium-magnesium-bicarbonate water type with total dissolved solids content of 567 mg/l. Analyses for groundwater from well (A-28-9)35bac, completed in the Kaibab Limestone east from the mine site, indicate a sodium-chloride water type with total dissolved solids content of 2,920 mg/l.

Toroweap Formation and Coconino Sandstone

The Toroweap Formation and Coconino Sandstone comprise the most important perched aquifer system in the Canyon Mine site area. Results of laboratory chemical analyses for 13 wells completed in this system at large distances east from the mine site indicate calcium-magnesium-bicarbonate and sodium-chloride water types, with total dissolved solids content ranging from 447 to 4,110 mg/l (Table 3); average is about 1,360 mg/l. Results of analyses for three wells completed in the Toroweap-Coconino aquifer system several miles north and west from the mine site indicate a calcium-sulfate water type, with total dissolved solids content ranging from 594 to 1,120 mg/l (Table 3); average is about 790 mg/l.

Federal drinking water standards for parameters analyzed are given in Table 6. Results of analyses for eight of the 16 wells completed in the Toroweap-Coconino perched aquifer system indicate that concentrations of one or more of the following chemical parameters exceeded Federal standards for drinking water: sulfate, chloride, and total dissolved solids (Table 3). Water from seven of the 16 wells would be classified as slightly or moderately saline according to the criteria developed by Winslow and Kister (1956) for total dissolved solids content.

Discharge from Perched Aquifer Springs

Springs and seeps which occur above the Redwall-Muav aquifer along the south wall of the Grand Canyon and its southern tributary canyons discharge from perched aquifers. Discharge from these springs and seeps is generally less than one gpm (Loughlin and Huntoon, 1983; and National Park Service, 1984), and commonly occurs only during periods of rainfall and snowmelt (Johnson and Sanderson, 1968). Water quality data for routine constituents have been reported for Dripping Springs, which discharge from the Coconino Sandstone, and for Santa Maria Spring, which discharges from a sandstone

unit in the Supai Group. These data indicate a magnesium-bicarbonate water type, with total dissolved solids content ranging from 179 to 276 mg/l (Metzger, 1961).

REDWALL-MUAV AQUIFER

Existing water quality data reported for springs which discharge from the Redwall-Muav aquifer comprise one or more of the following types of analyses: routine constituents, trace elements, bacteriological parameters, and radiological parameters. These data are voluminous and have been reported by many scientists. The types of analyses most useful for providing baseline data to monitor effects of mining operations are the routine constituents, trace elements, and radiological parameters.

Foust and Hoppe (1985) evaluated available data and reported average concentrations of routine constituents and concentrations of trace elements in water from the following springs and creeks which are fed by the Redwall-Muav aquifer (Figure 3): Boucher Creek, Cottonwood Creek, Garden Creek, Hance Creek, Hermit Creek, Horn Creek, and Pipe Creek. Results reported by Foust and Hoppe (1985) and results summarized in Table 4 for Havasu Spring and Indian Gardens Spring indicate that discharge from springs along the south wall of the Grand Canyon west of the Little Colorado River is predominantly a calcium-magnesium-bicarbonate water type. A few of these springs discharge a magnesium-calcium-sulfate water type. Results for Blue Spring, and other springs which issue from the walls of the Little Colorado River Gorge, indicate a sodium-chloride water type (Loughlin and Huntoon, 1983).

Results of analyses for trace elements reported by Foust and Hoppe (1985) for several springs and creeks, and results summarized in Table 5 for Havasu Spring and Indian Gardens Spring, indicate that concentrations of the trace elements analyzed did not exceed Federal drinking water standards near the headwater areas (Table 6). However, analyses of water

samples collected near the mouths of creeks along the south wall of the Grand Canyon commonly indicated concentrations of arsenic, chromium, selenium, and silver which exceed Federal drinking water standards.

Reports of radiological analyses for water samples collected from springs and creeks along the south wall of the Grand Canyon are sparce. Results of analyses for dissolved uranium indicate the following: a concentration of 0.001 mg/l in a water sample collected from Garden Creek below the pumphouse; a concentration of 0.0026 mg/l in a water sample collected from Garden Creek near the mouth; and an activity of 3.5 picocuries per liter in a water sample collected from Havasu Creek near the confluence with the Colorado River (National Park Service, 1983).

Results of analyses reported by Peterson et al. (1977) for samples from five springs on the north wall of the Grand Canyon and Warm Spring, on the south wall about 60 miles northwest of the Canyon Mine site, which discharge from the Redwall-Muav aquifer indicate radium concentrations ranged from 0.10 to 0.66 picograms per liter, and uranium concentrations ranged from 0.0005 to 0.0085 mg/l.

GROUNDWATER MONITORING PROGRAM

A program for monitoring chemical quality of groundwater has been implemented for the Canyon Mine site area and comprises three program elements: an inventory of existing data for chemical quality of groundwater in the Canyon Mine site area, periodic collection and chemical analysis of water samples from Havasu, Indian Gardens, and Blue Springs, and construction of a groundwater supply and monitoring well at the Canyon Mine site.

EXISTING HYDROCHEMICAL DATA

Existing data for chemical quality of groundwater from wells which penetrate perched aquifers are summarized in Table 3. Existing data for chemical quality of groundwater which discharges from the Redwall-Muav aquifer at Havasu, Indian Gardens, and Blue Springs have been compiled and are summarized in Tables 4 and 5.

PERIODIC ANALYSIS OF SAMPLES FROM SPRINGS

In cooperation with the National Park Service, and with the Havasupai, Hopi, and Navajo Indian Tribes, a water quality monitoring program has been established by Energy Fuels and comprises periodic collection and laboratory chemical analyses of groundwater samples from Havasu, Indian Gardens, and Blue Springs, which are the largest springs along the south wall of the Grand Canyon. Water samples for laboratory chemical analyses will be obtained at six-month intervals during the first year of the sampling program. After results for the first year are analyzed, the frequency of sample collection may be modified.

Results of laboratory chemical analyses for the initial samples from the monitoring program have been obtained and are summarized in Tables 7, 8, and 9. The parameters analyzed include routine constituents, trace elements, gross alpha/beta radiation, uranium (isotopic and fluorometric), thorium, radium 226, and radium 228. These parameters were selected to provide comprehensive documentation of water quality at the springs prior to mining operations, and to provide a basis for monitoring water quality during mining operations. The initial samples were collected in duplicate on May 16-17, 1985 and were transmitted to qualified chemical laboratories in accordance with EPA (U. S. Environmental Protection Agency) protocol and in accordance with instructions from the laboratories. The samples were collected by personnel of Errol L. Montgomery & Associates, Inc. The water samples were analyzed using EPA recommended laboratory methods.

At the request of the Havasupai Indian Tribe, duplicate water samples were collected from Havasu Spring for submittal to an independent chemical laboratory selected by the Tribe. A representative of the Tribe observed the sample collection procedures and approved the sampling site. Sinyella Spring was suggested by the Tribe as an additional sampling site and the sampling party visited the spring on May 16, 1985. Sinyella Spring occurs approximately 22 miles southeast from Supai Village, in a small tributary canyon along the west wall of Havasu Canyon (Figure 3), and discharges from a perched aquifer near the base of the Coconino Sandstone. Flow from Sinyella Spring did not reach the mouth of the tributary canyon. This spring is isolated from the Canyon Mine site by Havasu Canyon and lies above the water table in the regional aquifer. Therefore, the spring was not included in the sampling round.

Results for routine constituents indicate the following: a calcium-bicarbonate water type for Havasu Spring, with average total dissolved solids content of 610 mg/l; a magnesium-bicarbonate water type for Indian Gardens Spring, with total dissolved solids content of 330 mg/l; and a sodium-chloride water type for Blue Spring, with total dissolved solids content of 2,315 mg/l (Table 7). These results corroborate historic water

quality data reported for the three springs (Table 4). The concentrations of total dissolved solids and chloride, and the specific electrical conductance for the sample collected from Blue Spring exceed Federal drinking water standards (Table 7).

Results for trace elements indicate the following: low concentrations of arsenic, barium, and boron were detected in the sample from Havasu Spring; no trace elements were detected in the sample from Indian Gardens Spring; and a low concentration of boron was detected in the sample from Blue Spring (Table 8).

Results for radiological parameters indicate that isotopes of uranium and thorium occur naturally in the discharge from each of the three springs. In addition, radium 226 was detected at low levels in the samples from Indian Gardens Spring and Blue Spring (Table 9). The gross alpha particle activity reported by EAL (EAL Corporation, Richmond, California) for a sample collected from Havasu Spring exceeds the Federal standard for drinking water (Table 6). The concentration of total uranium reported by EAL for a sample from Havasu Spring was higher than the range of values reported by Peterson et al. (1977) for six springs which discharge from the Redwall-Muav aquifer. Duplicate water samples from the three springs are being analyzed for radiological parameters by Arizona State University, Tempe, Arizona; however, results were not available for inclusion in this report.

As part of the sampling procedure, field measurements of relative ambient radiation were made at each sampling site using a scintillometer. At each site, one measurement was made directly above the water surface where samples were collected. A second measurement was made over dry ground, approximately 50 feet from the sampling site. Results of the scintillometer measurements are as follows:

SPRING	SCINTILLOMETER READING (microrems per hour) AT WATER SAMPLING SITE	50 FEET FROM SAMPLING SITE
Havasu	5-7	5-7
Indian Gardens	4-6	4-6
Blue	2	5

Radon is a radioactive daughter-product of radium, and commonly occurs as a gaseous emission from springs fed by groundwater containing elevated levels of radionuclides. Radon emissions from springs commonly result in ambient radiation near the springs which is higher than background levels. Results of the scintillometer measurements indicate that radiation detected near the springs was not higher than background radiation detected 50 feet from the springs.

GROUNDWATER SUPPLY AND MONITORING WELL

A water well to the Redwall-Muav aquifer will be constructed and tested at the Canyon Mine site prior to the intersection of ore by mining operations. If fractures and solution openings in the Redwall-Muav aquifer are sufficiently abundant that groundwater is yielded, the well would be completed with blank and steel casing, and a standard five-day single bore-hole pumping test, followed by a five-day recovery period, would be conducted to determine aquifer permeability and to obtain groundwater samples for laboratory chemical analyses. After the pumping test program is complete, the well would be equipped as a water supply and groundwater monitoring well. Water samples for chemical analyses will be obtained at six-month intervals during the first year of the sampling program. After results for the first year are analyzed, the frequency of sample collection

may be modified. The water samples will be analyzed for routine constituents, trace elements, gross alpha/beta radiation, uranium (isotopic and fluorometric), thorium, radium 226, and radium 228.

If fractures and solution openings are sufficiently sparse that groundwater is not yielded from the Redwall-Muav aquifer at the mine site, the test borehole will be plugged and abandoned in accordance with requirements of the Arizona Department of Water Resources.

CONCLUSIONS ON POTENTIAL IMPACT OF MINING OPERATIONS

Potential impacts on the groundwater systems due to proposed uranium mining operations at the Canyon Mine are: potential effects on groundwater circulation and storage in perched aquifers; potential effects on chemical quality of groundwater in the perched aquifers; potential effects on groundwater circulation and storage in the Redwall-Muav aquifer, and potential effects on chemical quality of groundwater in the Redwall-Muav aquifer. The following conclusions are based on analysis of hydrogeologic and hydrochemical data obtained during the Canyon Mine environmental impact investigation.

1. Potential effects on groundwater circulation and storage in perched aquifers. Perched aquifers do not occur at most locations in the Canyon Mine site area. If perched aquifers are not encountered by the mine openings, then the mining operations will have no effect on circulation and storage of perched groundwater.

   If perched groundwater is encountered by the mine openings, the perched water will drain to the mine openings and will be used for industrial purposes in the mine. Drainage of perched groundwater to the mine openings may remove groundwater from storage in the local perched system, but because the perched groundwater zones are commonly thin and discontinuous, the drainage would not be expected to influence other groundwater users.

   Application of the Theis (1935) non-equilibrium equation is the classical method for computing drawdown impact at various distances from the point of groundwater

withdrawal and for various periods and rates of withdrawal. If very conservative and worst case conditions were assumed, where the perched groundwater zone would be 100 feet thick and areally extensive, the aquifer permeability and coefficient of storage would be about 50 gpd/ft^2 and 0.05, respectively, as at the municipal wells at Flagstaff, and groundwater discharge at the Canyon Mine site would be 20 gpm for a period of 50 years, then standard hydraulic calculations using the Theis (1935) method predicts that drawdown of water level at the nearest well, located about 2-1/2 miles from the mine site, would be about 0.6 feet. The drawdown at Tusayan, located six miles from the mine site, would be about 0.1 foot. The drawdown impact would be less at pumping wells and at springs located at greater distances.

Because the assumed conditions are very conservative, our conclusion is that the proposed mining operations at the Canyon Mine site would have little or no impact on groundwater circulation and storage in perched aquifers, and will have negligible or no impact on springs and wells which yield groundwater from perched aquifers.

2. <u>Potential effects on chemical quality of groundwater in the perched aquifers</u>. Perched aquifers do not occur at most locations in the Canyon Mine site area. If perched aquifers are not encountered by the mine openings, then mining operations will have no effect on chemical quality of groundwater in the perched aquifers.

If perched groundwater is encountered by the mine openings, small amounts of native minerals, including radioactive minerals, in the mineralized pipe and in the rocks exca-

vated from the mine may enter the perched groundwater system. The entry may occur via contact of seepage water with aquifer strata in the mine openings or via recharge from the land surface of dissolved constituents or finely divided mineral fragments. Because the mine openings would function as a drain for local perched groundwater, small quantities of contaminants which might enter the perched groundwater would also tend to drain to the mine openings.

Because small quantities of potential contaminants in perched groundwater would tend to drain to the mine openings, our conclusion is that the proposed mining operations at the Canyon Mine site would have little or no impact on chemical quality of groundwater in perched aquifers.

3. Potential effects on groundwater circulation and storage in the Redwall-Muav aquifer. Energy Fuels plans to construct a test well at the Canyon Mine site. If sufficient permeability via fractures and solution openings occurs in the aquifer at the site, and if the potential for groundwater yield is sufficient, the well will be completed as a water supply and groundwater monitoring well. Total water requirements for domestic use at the mine are projected to be about five gpm.

Because discharge from the Redwall-Muav aquifer at springs is large, about 30,000 gpm at Havasu Spring, about 300 gpm at Indian Gardens Spring, and about 100,000 gpm (composite) at Blue Springs, and because groundwater storage in this aquifer is large, the extraction of five gpm at the mine will have negligible impact on yield from the springs. No water wells are presently constructed to

yield from the Redwall-Muav aquifer within 20 miles of the Canyon Mine site. Therefore, extraction of five gpm from the Redwall-Muav aquifer at the mine site will have no impact on water withdrawn from existing wells completed in this aquifer.

We conclude that the proposed mining operations will have negligible impact on groundwater circulation and storage in the Redwall-Muav aquifer,and will have negligible impact on yield from springs which issue from the Redwall-Muav aquifer.

4. Potential effects on chemical quality of groundwater in the Redwall-Muav aquifer. Recharge to the Redwall-Muav aquifer in the Canyon Mine site area occurs via infiltration of rainfall and snowmelt through the rocks which underlie the plateau south of the Grand Canyon. Under natural conditions, a fraction of this recharge water passes through mineralized breccia pipes. Small quantities of native minerals, including radioactive minerals, are continuously leached from the breccia pipes and travel in solution in the water. During mining operations the mine workings will be ventilated and much of the water will evaporate; excess water which may drain to the mine will be collected and used for industrial purposes.

Therefore, it is believed that the quantity of recharge water passing through the breccia pipe during mining operations will be reduced and the potential for movement of dissolved minerals will be reduced. After mining operations are complete and the natural recharge system at the mine site is reestablished, native minerals,

including radioactive minerals, will continue to be leached and to move to points of discharge with the groundwater.

Because the richest concentrations of minerals will be removed during mining operations, the quantity of minerals remaining to be leached will be reduced significantly.

Because the mine openings will penetrate the rocks from the land surface to the upper part of the Supai Group (Figure 2), the mine openings could function as a conduit and tend to concentrate movement of recharge water through the lower unmined parts of the breccia pipe after mining operations are complete. This potential concentration of flow will be mitigated by sealing the mine openings at the land surface to reduce the rate of inflow of recharge water in the immediate vicinity of the mine.

During mining operations, minerals in the walls of the mine openings in the breccia pipe are exposed to strongly oxidizing conditions. These conditions promote oxidation and tend to increase mobility of radioactive minerals. In the absence of mitigation, the rate of leaching of radioactive minerals by recharge water passing through the deposit could increase after mining operations are complete. This potential increase in rate of leaching will be mitigated by sealing the mine.

Although the possibility for deterioration in chemical quality of groundwater in the Redwall-Muav aquifer is believed to be small, a groundwater monitoring program to detect changes in water quality has been implemented by establishing a program of periodic collection of groundwater samples from Havasu, Indian Gardens, and Blue

Springs for laboratory chemical analyses. Prior to intersection of ore zones by the mine workings, the monitoring program will be augmented by periodic collection of groundwater samples from the Redwall-Muav aquifer at the mine site from the groundwater supply and monitoring well.

The groundwater monitoring program will be continued through the period of mining operations. In the unlikely event that a significant deterioration in chemical quality of groundwater in the Redwall-Muav aquifer occurs during mining operations, the groundwater supply and monitoring well could be used for access to the aquifer at the mine site for remedial actions.

We conclude that, with the implementation of planned mitigation actions, the possibility for deterioration of chemical quality of groundwater in the Redwall-Muav aquifer due to proposed mining operations at the Canyon Mine is small. Any deterioration of chemical quality of groundwater in the Redwall-Muav aquifer would be detected by the groundwater monitoring program.

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT
Form 1. Notice of Appeal from a Judgment or Order of a United States District Court

Name of U.S. District Court: U.S. District Court for the District of Arizona

U.S. District Court case number: 3:13-cv-08045

Date case was first filed in U.S. District Court: 03/07/2013

Date of judgment or order you are appealing: 05/22/2020

Fee paid for appeal? *(appeal fees are paid at the U.S. District Court)*

◉ Yes ○ No ○ IFP was granted by U.S. District Court

List all Appellants *(List **each** party filing the appeal. Do not use "et al." or other abbreviations.)*

Grand Canyon Trust;
Center for Biological Diversity;
Sierra Club

Is this a cross-appeal? ○ Yes ◉ No

If Yes, what is the first appeal case number?

Was there a previous appeal in this case? ◉ Yes ○ No

If Yes, what is the prior appeal case number? 15-15857 (consol. with 15-15754)

Your mailing address:

4404 Alcott St.

City: Denver State: CO Zip Code: 80211

Prisoner Inmate or A Number (if applicable):

Signature s/ Aaron M. Paul **Date** July 20, 2020

Complete and file with the attached representation statement in the U.S. District Court

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Form 6. Representation Statement

Instructions for this form: http://www.ca9.uscourts.gov/forms/form06instructions.pdf

Appellant(s) *(List **each** party filing the appeal, do not use "et al." or other abbreviations.)*

Name(s) of party/parties:

Grand Canyon Trust;
Center for Biological Diversity;
Sierra Club

Name(s) of counsel (if any):

Aaron M. Paul, Neil Levine (see additional counsel on the following pages)

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Email(s): apaul@grandcanyontrust.org; nlevine@publicjustice.net

Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

---

Appellee(s) *(List only the names of parties and counsel who will oppose you on appeal. List separately represented parties separately.)*

Name(s) of party/parties:

Heather Provencio, Forest Supervisor, Kaibab National Forest;
U.S. Forest Service, an agency in the U.S. Department of Agriculture

Name(s) of counsel (if any):

Sean C. Duffy, U.S. Department of Justice

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To list additional parties and/or counsel, use next page.

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

Continued list of parties and counsel: *(attach additional pages as necessary)*

Appellants

Name(s) of party/parties:

Grand Canyon Trust; Center for Biological Diversity; Sierra Club

Name(s) of counsel (if any):

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Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

Appellees

Name(s) of party/parties:

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EFR Arizona Strip LLC

Name(s) of counsel (if any):

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Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

Continued list of parties and counsel: *(attach additional pages as necessary)*

Appellants

Name(s) of party/parties:

Grand Canyon Trust; Center for Biological Diversity; Sierra Club

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Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

Appellees

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Name(s) of party/parties:

Name(s) of counsel (if any):

Address:

Telephone number(s):

Email(s):

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

APPEAL,CLOSED,PROTO,STD

U.S. District Court
DISTRICT OF ARIZONA (Prescott Division)
CIVIL DOCKET FOR CASE #: 3:13-cv-08045-DGC

Grand Canyon Trust et al v. Williams et al
Assigned to: Judge David G Campbell
Case in other court: Ninth Circuit Court of Appeals, 13-16994, Mandate 04/14/15
Ninth Circuit, 15-15754; Mandate 12/19/18
Ninth Circuit, 15-15857; Mandate 12/19/18
Ninth Circuit, 20-16401
Cause: 28:2201 Declaratory Judgment

Date Filed: 03/07/2013
Date Terminated: 05/22/2020
Jury Demand: None
Nature of Suit: 899 Other Statutes: Administrative Procedures Act/Review or Appeal of Agency Decision
Jurisdiction: U.S. Government Defendant

Plaintiff

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V.

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Michael K Kennedy
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ATTORNEY TO BE NOTICED

Date Filed	#	Docket Text
03/07/2013	1	COMPLAINT. Filing fee received: $350.00, receipt number 0970-7861346, filed by Center for Biological Diversity, Sierra Club, Grand Canyon Trust, Havasupai Tribe (submitted by Neil Levine). (Attachments: # 1 Civil Cover Sheet)(REK) (Entered: 03/07/2013)
03/07/2013	2	SUMMONS Submitted by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club (submitted by Neil Levine). (REK) (Entered: 03/07/2013)
03/07/2013	3	Corporate Disclosure Statement by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club (submitted by Neil Levine). (REK) (Entered: 03/07/2013)
03/07/2013	4	Filing fee paid, receipt number 0970-7861346. This case has been

		assigned to the Honorable David G. Campbell. All future pleadings or documents should bear the correct case number: CV-13-08045-PCT-DGC. Notice of Availability of Magistrate Judge to Exercise Jurisdiction form attached. (REK) (Entered: 03/07/2013)
03/07/2013	5	Summons Issued as to Michael Williams. (REK). *** IMPORTANT: When printing the summons, select "Document and stamps" or "Document and comments" for the seal to appear on the document. (Entered: 03/07/2013)
03/07/2013	6	MOTION for Admission Pro Hac Vice as to attorney Roger Flynn by Grand Canyon Trust. (Flynn, Roger) (Entered: 03/07/2013)
03/08/2013	7	MOTION for Admission Pro Hac Vice as to attorney Marc D. Fink by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit Certificate of Good Standing) (Fink, Marc) (Entered: 03/08/2013)
03/08/2013	8	MOTION for Admission Pro Hac Vice as to attorney Neil Levine by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit)(Levine, Neil) (Entered: 03/08/2013)
03/08/2013	9	NOTICE TO FILER OF DEFICIENCY re 8 MOTION for Admission Pro Hac Vice as to attorney Neil Levine filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club, Havasupai Tribe. Description of deficiency: Certificate of Good Standing not attached. Please see attached PDF for further information and instructions. (BAS) (Entered: 03/08/2013)
03/08/2013	10	MOTION for Admission Pro Hac Vice as to attorney Neil Levine by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit)(Levine, Neil) (Entered: 03/08/2013)
03/11/2013		PRO HAC VICE FEE PAID. $ 50, receipt number PHX131910 as to Roger Flynn. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (BAS) (Entered: 03/11/2013)
03/11/2013	11	ORDER pursuant to General Order 09-08 granting 6 Motion for Admission Pro Hac Vice. Per the Court's Administrative Policies and Procedures Manual, applicant has five (5) days in which to register as a user of the Electronic Filing System. Registration to be accomplished via the court's website at www.azd.uscourts.gov. (BAS)(This is a TEXT ENTRY ONLY. There is no.pdf document associated with this entry.) (Entered: 03/11/2013)
03/11/2013	12	MOTION for Admission Pro Hac Vice as to attorney Richard Warren Hughes on behalf of Havasupai Tribe. (BAS) (Entered: 03/12/2013)
03/12/2013		PRO HAC VICE FEE PAID. $ 50, receipt number PHX131911 as to

		Richard Warren Hughes. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (BAS) (Entered: 03/12/2013)
03/12/2013	13	ORDER pursuant to General Order 09-08 granting 12 Motion for Admission Pro Hac Vice. Per the Court's Administrative Policies and Procedures Manual, applicant has five (5) days in which to register as a user of the Electronic Filing System. Registration to be accomplished via the court's website at www.azd.uscourts.gov. (BAS)(This is a TEXT ENTRY ONLY. There is no.pdf document associated with this entry.) (Entered: 03/12/2013)
03/12/2013		PRO HAC VICE FEE PAID. $ 50, receipt number PHX131981 as to Neil Levine. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (BAS) (Entered: 03/12/2013)
03/12/2013	14	ORDER pursuant to General Order 09-08 terminating 8 Motion for Admission Pro Hac Vice; granting 10 Motion for Admission Pro Hac Vice. Per the Court's Administrative Policies and Procedures Manual, applicant has five (5) days in which to register as a user of the Electronic Filing System. Registration to be accomplished via the court's website at www.azd.uscourts.gov. (BAS)(This is a TEXT ENTRY ONLY. There is no.pdf document associated with this entry.) (Entered: 03/12/2013)
03/13/2013		PRO HAC VICE FEE PAID. $ 50, receipt number PHX132014 as to Marc D Fink. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (BAS) (Entered: 03/13/2013)
03/13/2013	15	ORDER pursuant to General Order 09-08 granting 7 Motion for Admission Pro Hac Vice. Per the Court's Administrative Policies and Procedures Manual, applicant has five (5) days in which to register as a user of the Electronic Filing System. Registration to be accomplished via the court's website at www.azd.uscourts.gov. (BAS)(This is a TEXT ENTRY ONLY. There is no.pdf document associated with this entry.) (Entered: 03/13/2013)
04/01/2013	16	NOTICE of Appearance by Beverly F Li on behalf of United States Forest Service, Michael Williams. (Li, Beverly) (Entered: 04/01/2013)
04/11/2013	17	MOTION for Preliminary Injunction by Grand Canyon Trust. (Hughes, Richard) (Entered: 04/11/2013)
04/11/2013	18	MOTION for Leave to File Excess Pages by Grand Canyon Trust. (Attachments: # 1 Text of Proposed Order)(Hughes, Richard) (Entered: 04/11/2013)
04/11/2013	19	LODGED Proposed Memorandum in Support of Plaintiffs' Motion for Preliminary Injunction re: 18 MOTION for Leave to File Excess Pages . Document to be filed by Clerk if Motion to Leave to File or Amend is granted. Filed by Grand Canyon Trust. (Attachments: # 1 Exhibit index

		+ 1-5, # 2 Exhibit 5-14, # 3 Exhibit 14-15, # 4 Exhibit 15-18, # 5 Exhibit 18-24)(Hughes, Richard) (Entered: 04/11/2013)
04/11/2013	20	*DECLARATION of Robin D. Silver re 17 MOTION for Preliminary Injunction by Plaintiff Grand Canyon Trust. (Hughes, Richard) *Modified to correct event on 4/15/2013 (TLJ). (Entered: 04/11/2013)
04/11/2013	21	*DECLARATION of Don Watahomigie re 17 MOTION for Preliminary Injunction by Plaintiff Grand Canyon Trust. (Hughes, Richard) *Modified to correct event on 4/15/2013 (TLJ). (Entered: 04/11/2013)
04/11/2013	22	*DECLARATION of Rex Tilousi re 17 MOTION for Preliminary Injunction by Plaintiff Grand Canyon Trust. (Hughes, Richard) *Modified to correct event on 4/15/2013 (TLJ). (Entered: 04/11/2013)
04/11/2013	23	*DECLARATION of Kim Crumbo re 17 MOTION for Preliminary Injunction by Plaintiff Grand Canyon Trust. (Hughes, Richard) *Modified to correct event on 4/15/2013 (TLJ). (Entered: 04/11/2013)
04/11/2013	24	*DECLARATION of Roger Clark re 17 MOTION for Preliminary Injunction by Plaintiff Grand Canyon Trust. (Hughes, Richard) *Modified to correct event on 4/15/2013 (TLJ). (Entered: 04/11/2013)
04/11/2013	25	Additional Attachments to Main Document re 17 MOTION for Preliminary Injunction *Order* by Plaintiff Grand Canyon Trust. (Hughes, Richard) (Entered: 04/11/2013)
04/12/2013	26	Additional Attachments to Main Document re 19 Lodged Proposed Document, *Exhibit 25* by Plaintiff Grand Canyon Trust. (Hughes, Richard) (Entered: 04/12/2013)
04/15/2013	27	Consent MOTION for Extension of Time to File Response/Reply as to 1 Complaint, 17 MOTION for Preliminary Injunction *(First Request)* by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 04/15/2013)
04/15/2013	28	NOTICE of Appearance by Michael K Kennedy on behalf of Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC. (Kennedy, Michael) (Entered: 04/15/2013)
04/15/2013	29	Corporate Disclosure Statement by Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC identifying Corporate Parent Energy Fuels Inc. for Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC.. (Kennedy, Michael) (Entered: 04/15/2013)
04/15/2013	30	* MOTION to Intervene *(Unopposed)* by Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC. (Attachments: # 1 Text of Proposed Order Proposed Order re MTI)(Kennedy, Michael) *Modified to correct filer on 4/17/2013 (JHER). (Entered: 04/15/2013)
04/15/2013	31	MEMORANDUM in Support of 30 MOTION to Intervene

		(Unopposed) by Intervenor Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC. (Attachments: # 1 Exhibit Decl of H Roberts, # 2 Exhibit Order re Doc 31, # 3 Exhibit Order re Doc 44)(Kennedy, Michael) (Entered: 04/15/2013)
04/15/2013	32	LODGED Proposed Answer to Complaint for Declaratory and Injunctive Relief re: 30 MOTION to Intervene *(Unopposed)*. Document to be filed by Clerk if Motion to Leave to File or Amend is granted. Filed by Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC. (Kennedy, Michael) (Entered: 04/15/2013)
04/17/2013	33	ORDER granting in part and denying in part 18 Motion for Leave to File Excess Pages. Signed by Judge David G Campbell on 4/17/2013. (NVO) (Entered: 04/17/2013)
04/17/2013	34	ORDER granting 27 Motion for Extension of Time to File Response/Reply re 17 MOTION for Preliminary Injunction. Defendants shall file a response to Plaintiffs' motion for preliminary injunction on or before 5/3/2013. Defendants shall file answers or otherwise respond to the complaint on or before 6/13/2013. Signed by Judge David G Campbell on 4/17/2013.(NVO) (Entered: 04/17/2013)
04/17/2013	35	ORDER ON MOTION TO INTERVENE granting 30 Energy Fuels Resources (USA) Incorporated and EFR Arizona Strip LLC Motion to Intervene. Signed by Judge David G Campbell on 4/17/13.(TLJ) (Entered: 04/17/2013)
04/24/2013	36	MOTION for Preliminary Injunction *Corrected* by Grand Canyon Trust. (Attachments: # 1 Text of Proposed Order Order Granting Plaintiffs' Motion for Preliminary Injunction)(Hughes, Richard) (Entered: 04/24/2013)
04/24/2013	37	MEMORANDUM in Support of *Plaintiffs'* 36 MOTION for Preliminary Injunction *Corrected* by Plaintiff Grand Canyon Trust. (Attachments: # 1 Exhibit Index + 1-5 (in part), # 2 Exhibit 5 (in part) - 11 (in part), # 3 Exhibit 11 (in part) - 14 (in part), # 4 Exhibit 14 (in part) - 15 (in part), # 5 Exhibit 15 (part), # 6 Exhibit 15 (in part) - 20 (in part), # 7 Exhibit 20 (in part) - Declaration of R. Silver (in part), # 8 Exhibit Declaration of R. Silver (in part) - Declaration of R. Clark) (Hughes, Richard) (Entered: 04/24/2013)
04/24/2013	38	NOTICE of Errata re 37 Memorandum,, by Plaintiff Grand Canyon Trust. (Hughes, Richard) (Entered: 04/24/2013)
04/24/2013	39	*MEMORANDUM in Support of *Plaintiffs' Motion for Preliminary Injunction re 36 by Plaintiff Grand Canyon Trust. (Attachments: # 1 Exhibit Index + Ex. 1 - Ex. 5, # 2 Exhibit Ex. 5 - Ex. 11, # 3 Exhibit Ex. 11 - Ex. 14, # 4 Exhibit Ex. 14 - Ex. 15, # 5 Exhibit Ex. 15, # 6 Exhibit Ex. 15 - Ex. 20, # 7 Exhibit Ex. 20 - Declaration of R. Silver, # 8 Exhibit Declaration of R. Silver - Declaration of R. Clark)(Hughes, Richard)*

		**Modified to link to document on 4/25/2013 (TLJ). (Entered: 04/24/2013)*
04/24/2013	40	*MOTION for Leave to File Excess Pages *(Unopposed) and for Extension of Time* by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Text of Proposed Order Proposed Order)(DePippo, David) *Modified to reflect lodged proposed document event not entered on 4/25/2013 (TLJ). (Entered: 04/24/2013)
04/25/2013	41	*LODGED Proposed Unopposed Motion to File Memorandum in Excess of Page Limit and for Extension of Time. Document to be filed by Clerk if Motion to Leave to File or Amend is granted. Filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (DePippo, David) *Modified to reflect incorrect PDF document attached. Duplicate of entry 40 . Attorney noticed on 4/26/2013 (TLJ). (Entered: 04/25/2013)
04/26/2013	42	ORDER granting 40 Motion for Leave to File Excess Pages. EFR and Federal Defendants shall coordinate their briefing to avoid duplication of arguments. Signed by Judge David G Campbell on 4/26/2013.(NVO) (Entered: 04/26/2013)
04/26/2013	43	Consent MOTION for Leave to File Excess Pages for Memorandum in Opposition to Motion for Preliminary Injunction by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 04/26/2013)
04/30/2013	44	ORDER granting 43 Federal Defendants' unopposed Motion for Leave to File Excess Pages. Signed by Judge David G Campbell on 4/30/2013.(NVO) (Entered: 04/30/2013)
05/02/2013	45	Consent MOTION for Extension of Time to File Response/Reply as to 36 MOTION for Preliminary Injunction *Corrected*, 34 Order on Motion for Extension of Time to File Response/Reply, by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order) (Li, Beverly) (Entered: 05/02/2013)
05/02/2013	46	ORDER granting 45 Motion for Extension of Time to File Response/Reply re 17 MOTION for Preliminary Injunction 36 MOTION for Preliminary Injunction. Response to motion for preliminary injunction due on or before 5/10/2013. Signed by Judge David G Campbell on 5/2/2013.(NVO) (Entered: 05/02/2013)
05/02/2013	47	Consent MOTION for Extension of Time to File *Memorandum in Opposition* by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Text of Proposed Order Proposed Order)(DePippo, David) (Entered: 05/02/2013)
05/02/2013	48	ORDER granting 47 Motion for Extension of Time to File Response/Reply re 17 MOTION for Preliminary Injunction 36

		MOTION for Preliminary Injunction. Response to motion for preliminary injunction due on or before 5/10/2013. Signed by Judge David G Campbell on 5/2/2013. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (NVO) (Entered: 05/02/2013)
05/06/2013	49	Joint MOTION for Protective Order by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 05/06/2013)
05/10/2013	50	NOTICE of Errata re 49 Joint MOTION for Protective Order by Defendants United States Forest Service, Michael Williams. (Attachments: # 1 Exhibit Corrected Stipulated Protective Order)(Li, Beverly) (Entered: 05/10/2013)
05/10/2013	51	NOTICE re of Lodging Administrative Record by United States Forest Service, Michael Williams . (Attachments: # 1 Affidavit Certification of Administrative Record by Elizabeth Schuppert)(Li, Beverly) (Entered: 05/10/2013)
05/10/2013	52	Consent MOTION to Seal *Confidential Administrative Record* by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 05/10/2013)
05/10/2013	53	RESPONSE in Opposition re 36 MOTION for Preliminary Injunction *Corrected* filed by United States Forest Service, Michael Williams. (Attachments: # 1 Exhibit A (Declaration of Michael Lyndon), # 2 Exhibit B (Declaration of Michael Linden), # 3 Exhibit C (Declaration of Elizabeth Schuppert), # 4 Exhibit D (Declaration of Margaret Hangan), # 5 Exhibit E (Declaration of Roger Congdon))(Li, Beverly) (Entered: 05/10/2013)
05/10/2013	54	Consent MOTION for Extension of Time to File Reply Brief and Extend Page Limit by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Levine, Neil) (Entered: 05/10/2013)
05/10/2013	55	RESPONSE to Motion re 36 MOTION for Preliminary Injunction *Corrected for Preliminary Injunction* filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Kennedy, Michael) (Entered: 05/10/2013)
05/10/2013	56	DECLARATION of David J. DePippo re 55 Response to Motion *for Preliminary Injunction* by Intervenor Parties EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Kennedy, Michael) (Entered: 05/10/2013)
05/10/2013	57	DECLARATION of William M. Holliday re 55 Response to Motion *for Preliminary Injunction* by Intervenor Parties EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Kennedy, Michael) (Entered: 05/10/2013)

05/10/2013	58	DECLARATION of Danny O. Flannery re 55 Response to Motion *for Preliminary Injunction* by Intervenor Parties EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Kennedy, Michael) (Entered: 05/10/2013)
05/10/2013	59	DECLARATION of Harold R. Roberts re 55 Response to Motion *for Preliminary Injunction* by Intervenor Parties EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Exhibit Decl of H Roberts Pt 2)(Kennedy, Michael) (Entered: 05/10/2013)
05/13/2013	60	NOTICE of Errata re 56 Declaration *of David J. DePippo* by Intervenor Parties EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Exhibit Attached Corrected Declaration of David J. DePippo)(DePippo, David) (Entered: 05/13/2013)
05/17/2013	61	REPLY to Response to Motion re 36 MOTION for Preliminary Injunction *Corrected* filed by Grand Canyon Trust. (Attachments: # 1 Affidavit Declaration of D. Kreamer, # 2 Exhibit 26)(Hughes, Richard) (Entered: 05/17/2013)
05/17/2013	62	NOTICE of Errata re 61 Reply to Response to Motion *for Preliminary Injunction* by Plaintiff Grand Canyon Trust. (Hughes, Richard) (Entered: 05/17/2013)
05/17/2013	63	REPLY to Response to Motion re 36 MOTION for Preliminary Injunction *Corrected* filed by Grand Canyon Trust. (Attachments: # 1 Affidavit Declaration of D. Kreamer, # 2 Exhibit 26)(Hughes, Richard) (Entered: 05/17/2013)
05/20/2013	64	ORDER pursuant to 50 Stipulated Protective Order (Corrected), PROTECTIVE ORDER. Signed by Judge David G Campbell on 5/20/2013. (NVO) (Entered: 05/20/2013)
05/20/2013	65	ORDER granting 54 Motion for Extension of Time Deadline as to 17 MOTION for Preliminary Injunction, 36 MOTION for Preliminary Injunction Corrected. Signed by Judge David G Campbell on 5/20/2013.(NVO) (Entered: 05/20/2013)
05/20/2013	66	ORDER GRANTING FEDERAL DEFENDANTS UNOPPOSED MOTION TO FILE UNDER SEAL 52 . ORDER that Federal Defendants' shall file under seal on or before 5/22/13 the confidential portions of the Administrative Record. Signed by Judge David G Campbell on 5/20/13.(TLJ) (Entered: 05/20/2013)
05/23/2013	67	ORDER directing the Clerk to accept for filing the Administrative Record in this matter (public and sealed) in non-electronic format. Signed by Judge David G Campbell on 5/23/13. (TLJ) (Entered: 05/23/2013)
05/23/2013		Disks of Administrative Record have been received and are stored in

		the Phoenix file room. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (CAD) (Entered: 05/23/2013)
05/31/2013	68	*Notice re Proof of Service re summons and complaint by Center for Biological Diversity, Sierra Club, Grand Canyon Trust, Havasupai Tribe. United States Forest Service served on 3/14/2013; Michael Williams served on 3/14/2013. (Levine, Neil) *Modified to correct event on 6/3/2013 (TLJ). (Entered: 05/31/2013)
06/03/2013	69	NOTICE re of Supplemental Authority by United States Forest Service, Michael Williams re 53 Response in Opposition to Motion, . (Attachments: # 1 Exhibit)(Li, Beverly) (Entered: 06/03/2013)
06/03/2013	70	RESPONSE re 69 Notice (Other) *of Supplemental Authority* by Plaintiff Grand Canyon Trust. (Hughes, Richard) (Entered: 06/03/2013)
06/13/2013	71	*MOTION to Dismiss Counts/Claims : 1,2,3,4,6,7,8 *for Lack of Jurisdiction and Memorandum in Support Thereof* by United States Forest Service, Michael Williams. (Li, Beverly) *Modified to correct motion type on 6/14/2013 (TLJ). (Entered: 06/13/2013)
06/28/2013	72	ORDER, Set/Reset Deadlines/Hearing as to 36 MOTION for Preliminary Injunction: Oral Argument set for 8/23/2013 at 02:30 PM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. Signed by Judge David G Campbell on 6/28/2013. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 06/28/2013)
06/28/2013	73	MOTION to Seal Document *Re: Plaintiffs' Motion to Stay Briefing and Consideration of Federal Defendants' Motion to Dismiss to Allow Discovery on Jurisdictional Defenses* by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Fink, Marc) (Entered: 06/28/2013)
06/28/2013	74	*Filed at Doc. 77 *SEALED LODGED Proposed Plaintiffs' Motion to Stay Briefing and Consideration of Federal Defendants' Motion to Dismiss to Allow Discovery on Jurisdictional Defenses re: 73 MOTION to Seal Document *Re: Plaintiffs' Motion to Stay Briefing and Consideration of Federal Defendants' Motion to Dismiss to Allow Discovery on Jurisdictional Defenses*. Document to be filed by Clerk if Motion to Seal is granted. Filed by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Text of Proposed Order)(Fink, Marc)*Modified on 7/3/2013 (MAP)*. (Entered: 06/28/2013)
07/02/2013	75	NOTICE re of Lodging Non-Confidential Administrative Record by United States Forest Service, Michael Williams re 51 Notice (Other) . (Attachments: # 1 Exhibit Declaration of Elizabeth Schuppert Certifying Supplemental Administrative Record, # 2 Exhibit Index)(Li, Beverly) (Entered: 07/02/2013)

07/03/2013	76	ORDER granting 73 Motion to Seal. ORDERED The Clerk is directed to file the document lodged as Doc. 74 under seal. Signed by Judge David G Campbell on 7/3/13. (cc: All Cnsl) (MAP) (Entered: 07/03/2013)
07/03/2013	77	SEALED MOTION by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club (Attachments: # 1 Exhibit 1, # 2 Exhibit 2)(MAP) (Entered: 07/03/2013)
07/03/2013		CD - Supplemental Admin Record received and stored in the Phoenix file room. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (CAD) (Entered: 07/03/2013)
07/09/2013	78	RESPONSE in Opposition re 77 SEALED MOTION to Stay filed by United States Forest Service, Michael Williams. (Li, Beverly) (Entered: 07/09/2013)
07/12/2013	79	*Consent MOTION for Extension of Time to File Reply Brief Re Plaintiffs' Motion for Stay by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Levine, Neil) *Modified to correct motion type on 7/15/2013 (TLJ). (Entered: 07/12/2013)
07/16/2013	80	ORDER granting 79 Motion for Extension of Time to File Response/Reply. Reply brief due 8/5/2013. Signed by Judge David G Campbell on 7/16/2013.(DGC, nvo) (Entered: 07/16/2013)
07/19/2013	81	*RESPONSE to Motion re 77 SEALED MOTION to Stay filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (DePippo, David) *Modified to reflect document is not in compliance with LRCiv 7.1(c). Attorney noticed on 7/22/2013 (TLJ). (Entered: 07/19/2013)
07/22/2013	82	ORDER re 72 Order, Set/Reset Motion and R&R Deadlines/Hearings. Motion Hearing set for 8/23/2013 at 2:30 PM is VACATED and RESET to 8/20/2013 at 9:30 AM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. Signed by Judge David G Campbell on 7/22/2013. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 07/22/2013)
08/05/2013	83	REPLY to Response to Motion re 77 SEALED MOTION to Stay filed by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Fink, Marc) (Entered: 08/05/2013)
08/15/2013	84	Order. The oral argument on the pending motions in this case set for 8/20/2013 at 9:30 a.m. is VACATED. The Court has determined that oral argument on the pending motions is not necessary. The Court will issue an order on the pending motions in this case shortly. Signed by Judge David G Campbell on 8/15/2013. This is a TEXT ENTRY

		ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 08/15/2013)
09/09/2013	85	ORDER granting in part 77 Motion to Stay Briefing and Consideration of Motion to Dismiss to Allow Discovery on Jurisdictional Defenses. Signed by Judge David G Campbell on 9/9/13.(MAP) (Entered: 09/09/2013)
09/09/2013	86	ORDER denying 36 Motion for Preliminary Injunction. Signed by Judge David G Campbell on 9/9/2013.(DGC, nvo) (Entered: 09/09/2013)
10/02/2013	87	*NOTICE OF INTERLOCUTORY APPEAL to 9th Circuit Court of Appeals re: 86 Order on Motion for Preliminary Injunction by Havasupai Tribe. Filing fee received: $ 455.00, receipt number 0970-9682311. (Attachments: # 1 Appeal Information Representation statement)(Hughes, Richard) *Modified to correct event on 10/3/2013 (TLJ). (Entered: 10/02/2013)
10/03/2013	88	USCA Case Number re: 87 Notice of Appeal. Case number 13-16994, Ninth Circuit Court of Appeals. (TLJ) (Entered: 10/03/2013)
10/03/2013	89	Amended NOTICE OF APPEAL to 9th Circuit Court of Appeals re: 86 Order on Motion for Preliminary Injunction by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club *(Interlocutory)*. (Levine, Neil) (Entered: 10/03/2013)
10/09/2013	90	MOTION to Stay re 85 Order on Motion to Stay *Discovery and Briefing Deadlines* by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 10/09/2013)
10/09/2013	91	MOTION to Supplement *or Complete the Administrative Record* by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit 1, # 2 Text of Proposed Order) (Levine, Neil) (Entered: 10/09/2013)
10/16/2013	92	ORDER GRANTING FEDERAL DEFENDANTS' MOTION FOR A STAY OF DISCOVERY AND BRIEFING DEADLINES IN LIGHT OF LAPSE OF APPROPRIATIONS re 90 Motion to Stay. Signed by Judge David G Campbell on 10/16/13.(TLJ) (Entered: 10/16/2013)
10/21/2013	93	STIPULATION RE: 92 Order on Motion to Stay *and Proposed Order re: Revised Briefing Deadlines* by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 10/21/2013)
10/29/2013	94	ORDER granting 93 Stipulation : re 91 MOTION to Supplement *or Complete the Administrative Record* filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club, Havasupai Tribe. Signed

		by Judge David G Campbell on 10/29/2013. (DGC, nvo) (Entered: 10/29/2013)
11/01/2013	95	RESPONSE in Opposition re 91 MOTION to Supplement *or Complete the Administrative Record* filed by United States Forest Service, Michael Williams. (Attachments: # 1 Affidavit (Second Declaration of Elizabeth Schuppert))(Li, Beverly) (Entered: 11/01/2013)
11/05/2013	96	Joint MOTION Enter Stipulated Agreement as Court Order by Center for Biological Diversity, EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit Stipulated Agreement, # 2 Text of Proposed Order)(Levine, Neil) (Entered: 11/05/2013)
11/06/2013	97	ORDER granting 96 Motion to Enter Stipulated Agreement. Signed by Judge David G Campbell on 11/6/2013.(DGC, nvo) (Entered: 11/06/2013)
11/08/2013	98	REPLY to Response to Motion re 91 MOTION to Supplement *or Complete the Administrative Record* filed by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Levine, Neil) (Entered: 11/08/2013)
12/16/2013	99	ORDER denying 91 Motion to Supplement. Signed by Judge David G Campbell on 12/16/2013.(DGC, nvo) (Entered: 12/16/2013)
12/18/2013	100	Joint MOTION for Extension of Time Exend Time to File Discovery Motion or Respond to Motion to Dismiss by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Levine, Neil) (Entered: 12/18/2013)
12/30/2013	101	ORDER granting 100 Motion for Extension of Time Deadline as to 71 MOTION to Dismiss for Lack of Jurisdiction. Signed by Judge David G Campbell on 12/30/2013.(DGC, nvo) (Entered: 12/30/2013)
01/21/2014	102	* Joint MOTION (Stipulation) for Extension of Time Extend Time to File Discovery Motion or Respond to Motion to Dismiss by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Levine, Neil). * Added MOTION for Extension of Time to File Response to Motion to Dismiss on 1/22/2014 (LAD). (Entered: 01/21/2014)
01/23/2014	103	ORDER granting in part and denying in part 102 Motion for Extension of Time Deadline; granting in part and denying in part 102 Motion for Extension of Time to File Response/Reply re 71 MOTION to Dismiss for Lack of Jurisdiction. On or before 1/29/14, Plaintiffs shall either respond to Defendants' motion to dismiss or the parties shall place a joint conference call to the Court to addrewss discovery issues. Signed by Judge David G Campbell on 1/23/2014.(DGC, nvo) (Entered: 01/23/2014)

01/29/2014	104	ORDER re 103 Order on Motion for Extension of Time, Order on Motion for Extension of Time to File Response/Reply. Telephone Conference set for 2/12/2014 at 03:00 PM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. Counsel for Plaintiff shall initiate a conference call to include counsel for all parties and the Court. Signed by Judge David G Campbell on 1/29/2014. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 01/29/2014)
02/12/2014	105	MINUTE ENTRY for proceedings held before Judge David G Campbell: Telephone Discovery Conference held on 2/12/2014. Plaintiffs identify 6 discovery issues. Plaintiffs to send a draft of a discovery matrix to defendants by 2/25/2014. Defendants' responses to plaintiffs by 3/4/2014. Parties to file with the Court by close of business on 3/5/2014 a single discovery matrix document in a format agreed upon by the parties. APPEARANCES: Telephonic appearance by Neil Levine and Marc Fink for Plaintiffs. Telephonic appearance by Richard Hughes for Plaintiff Havasupai Tribe. Telephonic appearance by Beverly Li and Dave Hattenbach for Federal Defendants. David DePippo for Intervenor defendants. Telephone Discovery Conference is set for 3/6/2014 at 11:00 AM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. (Court Reporter Patricia Lyons.) Hearing held 3:03 PM to 3:39 PM. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (TCA) (Entered: 02/12/2014)
03/05/2014	106	REPORT of Joint Discovery Matrix re: 105 by Plaintiff Grand Canyon Trust. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E, # 6 Exhibit F, # 7 Exhibit G, # 8 Exhibit H, # 9 Exhibit I)(Levine, Neil) (Entered: 03/05/2014)
03/06/2014	107	ORDER. Today's 11:00 a.m. discovery conference call with the parties is cancelled. The parties have thoroughly addressed their discovery disputes in the 24 page, single-spaced matrix they provided (Doc. 106), and the Court concludes that further argument is not needed. The Court will issue an order addressing the parties' discovery disputes. Signed by Judge David G Campbell on 3-6-14. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 03/06/2014)
03/06/2014	108	ORDER Re Discovery Dispute: 106 Report - Other filed by Grand Canyon Trust. The parties shall submit a stipulated schedule for completion of briefing on the motions to dismiss on or before 3/21/2014. Signed by Judge David G Campbell on 3/6/2014. (DGC, nvo) (Entered: 03/06/2014)

03/20/2014	109	STIPULATION re: 71 MOTION to Dismiss for Lack of Jurisdiction, 108 Order *Re: Revised Briefing Deadlines and In Camera Production of Privileged Documents* by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 03/20/2014)
03/28/2014	110	RESPONSE re: 108 Order *re: Privileged Documents* by Defendants United States Forest Service, Michael Williams. (Attachments: # 1 Affidavit Ramona Romero)(Li, Beverly) (Entered: 03/28/2014)
03/31/2014	111	ORDER pursuant to 109 Stipulation: re: 71 MOTION to Dismiss for Lack of Jurisdiction filed by Michael Williams, United States Forest Service, Set/Reset Deadlines/Hearing as to 71 MOTION to Dismiss for Lack of Jurisdiction: Response to motion to dismiss 71 due 5/2/2014; reply to 71 due 5/19/2014. Signed by Judge David G Campbell on 3/31/2014. (DGC, nvo) (Entered: 03/31/2014)
04/07/2014	112	ORDER re privileged documents provided for in camera review. Signed by Judge David G Campbell on 4/7/2014. (DGC, nvo) (Entered: 04/07/2014)
04/22/2014	113	NOTICE of Filing Amended Pleading pursuant to LRCiv 15.1(b) by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club . (Attachments: # 1 Exhibit A (Amended Complaint), # 2 Exhibit B (Amended Complaint - track changes), # 3 Exhibit C (Fed Defs' Consent), # 4 Exhibit D (Def-Int' Consent))(Fink, Marc) (Entered: 04/22/2014)
04/23/2014	114	NOTICE TO FILER OF DEFICIENCY re: 113 Notice of Filing - Amended Pleading (LRCiv 15.1(b)) filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club, Havasupai Tribe. Please file your amended pleading separately pursuant to the above referenced Local Rule. Deficiency must be corrected within one business day of this notice. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (LFIG) (Entered: 04/23/2014)
04/23/2014	115	AMENDED COMPLAINT against All Defendants filed by Center for Biological Diversity, Sierra Club, Grand Canyon Trust, Havasupai Tribe. (Attachments: # 1 Exhibit A (Fed Defs' Written Consent), # 2 Exhibit B (Def-Ints' Written Consent))(Fink, Marc) (Entered: 04/23/2014)
05/02/2014	116	*FILED at 120 - LODGED Proposed. Document to be filed by Clerk if Motion or Stipulation for Leave to File or Amend is granted. Filed by Havasupai Tribe. (Hughes, Richard) (Entered: 05/02/2014)
05/02/2014	117	First MOTION for Leave to File Excess Pages for motion *response to motion to dismiss* by Havasupai Tribe. (Attachments: # 1 Text of Proposed Order)(Hughes, Richard) (Entered: 05/02/2014)
05/02/2014	118	*RESPONSE to Motion re: 71 MOTION to Dismiss for Lack of

		Jurisdiction filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit List of Exhibits, # 2 Exhibit 1, # 3 Exhibit 2, # 4 Exhibit 3, # 5 Exhibit 4, # 6 Exhibit 5, # 7 Exhibit 6, # 8 Exhibit 7, # 9 Exhibit 8, # 10 Exhibit 9, # 11 Exhibit 10, # 12 Exhibit 11, # 13 Exhibit 12, # 14 Exhibit 13, # 15 Exhibit 14, # 16 Exhibit 15, # 17 Exhibit 16, # 18 Exhibit 17, # 19 Exhibit 18, # 20 Exhibit 19)(Levine, Neil) *Modified on 5/22/2014 to Seal Document Pursuant to Order 125 (MAP)* (Entered: 05/02/2014)
05/06/2014	119	ORDER granting 117 .Plaintiffs shall be allowed to file two briefs in response to the Federal Defendants Partial Motion to Dismiss, totaling no more than 30 pages, exclusive of certificates of service. The Clerk is directed to accept for filing the document lodged as Doc. 116 on the Courtsdocket. Signed by Judge David G Campbell on 5/6/2014.(TCA) (Entered: 05/06/2014)
05/06/2014	120	RESPONSE to Motion re: 71 MOTION to Dismiss for Lack of Jurisdiction filed by Havasupai Tribe. (REW) (Entered: 05/06/2014)
05/16/2014	121	Consent MOTION for Leave to File Excess Pages for Reply to Partial Motion to Dismiss by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 05/16/2014)
05/16/2014	122	Consent MOTION to Seal Document 118 Response to Motion to Dismiss for Lack of Jurisdiction *and Documents 118-14, 118-15, 118-18, and Have These Pleadings Stricken From The Public Record In Their Entirety, and Re-file a Redacted Version of Response Brief* by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order, # 2 Exhibit Redacted Version of Opposition Brief (Dkt. 118))(Levine, Neil) (Entered: 05/16/2014)
05/19/2014	123	REPLY to Response to Motion re: 71 MOTION to Dismiss for Lack of Jurisdiction filed by United States Forest Service, Michael Williams. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2)(Li, Beverly) (Entered: 05/19/2014)
05/22/2014	124	ORDER granting 121 Motion for Leave to File Excess Pages. Signed by Judge David G Campbell on 5/22/2014.(DGC, nvo) (Entered: 05/22/2014)
05/22/2014	125	ORDER granting 122 Motion to Seal. ORDERED Plaintiffs' opposition brief to defendants' motion to dismiss (Doc. 118) is deemed filed under seal in its entirety. Counsel for Plaintiffs shall file a redacted version of Plaintiffs' opposition brief and unsealed exhibits. Signed by Judge David G Campbell on 5/22/14.(MAP) (Entered: 05/22/2014)
05/23/2014	126	RESPONSE to Motion re: 71 MOTION to Dismiss for Lack of Jurisdiction filed by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit List of

		Exhibits, # 2 Exhibit #1, # 3 Exhibit #2, # 4 Exhibit #3, # 5 Exhibit #4, # 6 Exhibit #5, # 7 Exhibit #6, # 8 Exhibit #7, # 9 Exhibit #8, # 10 Exhibit #9, # 11 Exhibit #10, # 12 Exhibit #11, # 13 Exhibit #12, # 14 Exhibit #13, # 15 Exhibit #14, # 16 Exhibit #15, # 17 Exhibit #16, # 18 Exhibit #17, # 19 Exhibit #18, # 20 Exhibit #19)(Levine, Neil) (Entered: 05/23/2014)
07/23/2014	127	ORDER re: 71 MOTION to Dismiss for Lack of Jurisdiction filed by Michael Williams, United States Forest Service: Motion Hearing set for 8/1/2014 at 10:00 AM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. Signed by Judge David G Campbell on 7/23/2014. (DGC, nvo) (Entered: 07/23/2014)
08/01/2014	128	MINUTE ENTRY for proceedings held before Judge David G Campbell: Motion Hearing held on 8/1/2014. ORDERED taking under advisement 71 Motion to Dismiss for Lack of Jurisdiction. Court will issue an order. Plaintiff motion for summary judgment shall be filed on 10/15/2014. Defendant cross motion for summary judgment shall be filed on 11/14/2014. Plaintiff response/reply shall be filed on 12/12/2014. Defendant reply shall be filed on 1/16/2015. Parties agree that statement of facts will not be necessary. APPEARANCES: Richard Hughes for Plaintiff Havasupai Tribe. Marc Fink for Plaintiffs Sierra Club,Grand Canyon Trust, Center Biological Diversity. Beverly Li for Defendant Michael Williams and United States Forest Service. David DePippo and Michael Kennedy for Defendants Energy Fuels Resources and EFR Arizona Strip LLC. (Court Reporter Patricia Lyons.)Time in Court: 10:01 AM to 11:55 AM This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (TCA) (Entered: 08/01/2014)
08/04/2014	129	NOTICE re: Additional authority by Havasupai Tribe . (Hughes, Richard) (Entered: 08/04/2014)
08/07/2014	130	NOTICE re: of Supplemental Authority by United States Forest Service, Michael Williams re: 71 MOTION to Dismiss for Lack of Jurisdiction . (Attachments: # 1 Exhibit)(Li, Beverly) (Entered: 08/07/2014)
08/07/2014	131	ORDER denying 71 Motion to Dismiss for Lack of Jurisdiction. Signed by Judge David G Campbell on 8/7/2014.(DGC, nvo) (Entered: 08/07/2014)
08/13/2014	132	TRANSCRIPT REQUEST by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated for proceedings held on 08/01/14 hearing on Motion to Dismiss, Judge David G Campbell hearing judge(s). (DePippo, David) (Entered: 08/13/2014)
08/20/2014	133	STIPULATION FOR EXTENSION OF TIME TO ANSWER COMPLAINT re: 115 Amended Complaint . (Attachments: # 1 Text of

		Proposed Order)(Li, Beverly) (Entered: 08/20/2014)
08/21/2014	134	ORDER pursuant to 133 Stipulation For Extension of Time To Answer Complaint: Federal Defendants and Defendant-Intervenors shall file their answers to Plaintiff's amended complaint on or before 9/3/2014. Signed by Judge David G Campbell on 8/21/2014. (DGC, nvo) (Entered: 08/21/2014)
08/25/2014	135	NOTICE OF FILING OF OFFICIAL TRANSCRIPT of Motion Hearing Proceedings held on 8/1/2014, before Judge Campbell. Court Reporter Patricia Lyons. Transcript may be viewed at the court public terminal or purchased through the Court Reporter/Transcriber by filing a Transcript Order Form on the docket before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Redaction Request due 9/15/2014. Redacted Transcript Deadline set for 9/25/2014. Release of Transcript Restriction set for 11/24/2014. (VPB) (Entered: 08/25/2014)
09/03/2014	136	ANSWER to 115 Amended Complaint by United States Forest Service, Michael Williams.(Li, Beverly) (Entered: 09/03/2014)
09/03/2014	137	**Defendant-Intervenors'* ANSWER to 115 Amended Complaint by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (DePippo, David) *Modified event on 9/4/2014 (LFIG). (Entered: 09/03/2014)
09/08/2014	138	Joint MOTION for Leave to File Excess Pages for Summary Judgment Briefing by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Fink, Marc) (Entered: 09/08/2014)
09/12/2014	139	ORDER granting 138 Motion for Leave to File Excess Pages. Signed by Judge David G Campbell on 9/12/2014.(DGC, nvo) (Entered: 09/12/2014)
10/15/2014	140	MOTION for Summary Judgment by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Supporting Memorandum, # 2 Exhibit 1, # 3 Exhibit 2, # 4 Exhibit 3, # 5 Exhibit 4, # 6 Exhibit 5, # 7 Exhibit 6, # 8 Exhibit 7, # 9 Exhibit 8, # 10 Exhibit 9)(Levine, Neil) (Entered: 10/15/2014)
10/28/2014	141	Joint MOTION Approve Amended Stipulated Agreement and Adopt as Order of the Court by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit Amended Stipulated Agreement, # 2 Text of Proposed Order)(Levine, Neil) (Entered: 10/28/2014)
11/03/2014	142	ORDER granting 141 Motion to enter amended stipulated agreement. Signed by Judge David G Campbell on 11/3/2014.(DGC, nvo) (Entered: 11/03/2014)

11/04/2014	143	NOTICE OF ATTORNEY'S CHANGE OF ADDRESS/FIRM NAME by David J DePippo. (DePippo, David) (Entered: 11/04/2014)
11/04/2014	144	Consent MOTION for Extension of Time to File Response/Reply as to 140 MOTION for Summary Judgment by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Li, Beverly) (Entered: 11/04/2014)
11/04/2014	145	ORDER granting 144 Motion for Extension of Time to File Response/Reply re: 140 MOTION for Summary Judgment. Federal Defendants and Defendant Intervenors shall have until 11/19/2014 to file cross-motions for summary judgment and oppositions to Plaintiffs' motion for summary judgment. Signed by Judge David G Campbell on 11/4/2014.(DGC, nvo) (Entered: 11/04/2014)
11/19/2014	146	Cross MOTION for Summary Judgment by United States Forest Service, Michael Williams. (Attachments: # 1 Memorandum in Support, # 2 Exhibit 1--Transcript of Aug. 1, 2014 hearing)(Li, Beverly) (Entered: 11/19/2014)
11/19/2014	147	Cross MOTION for Summary Judgment by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Memorandum in Support, # 2 Ex. 1 to Memorandum, # 3 Proposed Order)(DePippo, David) (Entered: 11/19/2014)
12/08/2014	148	First MOTION for Extension of Time to File *Replies* by Havasupai Tribe. (Attachments: # 1 Text of Proposed Order)(Hughes, Richard) (Entered: 12/08/2014)
12/10/2014	149	ORDER granting 148 Motion for Extension of Time to File. Plaintiffs shallhave until 12/19/2014 within which to file their consolidated Reply in support of their Motion for Summary Judgment and Response to the Cross-Motions of Defendants and Defendants-Intervenors. Defendants and Defendants-Intervenors shall have until 1/29/2015 within which to file their Replies in support of their respective Cross-Motions for Summary Judgment. Signed by Judge David G Campbell on 12/10/2014.(DGC, nvo) (Entered: 12/10/2014)
12/12/2014	150	NOTICE OF ATTORNEY SUBSTITUTION: Jared S. Pettinato appearing for United States Forest Service, Michael Williams. Attorney Beverly F Li terminated. . (Pettinato, Jared) (Entered: 12/12/2014)
12/19/2014	151	*REPLY to Response to Motion re: 140 MOTION for Summary Judgment ; RESPONSE to 146 Cross MOTION for Summary Judgment , 147 Cross MOTION for Summary Judgment filed by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Affidavit, # 2 Affidavit)(Hughes, Richard) *Modified text on 12/22/2014 (ALS). (Entered: 12/19/2014)
01/27/2015	152	Joint MOTION for Leave to File Document Publicly by United States Forest Service, Michael Williams. (Attachments: # 1 Proposed Order)

		(Pettinato, Jared) (Entered: 01/27/2015)
01/28/2015	153	ORDER granting 152 Motion for Leave to File Document 525 as a public document. Signed by Judge David G Campbell on 1/28/2015. (DGC, nvo) (Entered: 01/28/2015)
01/28/2015	154	NOTICE re: of Filing of a Non-Confidential Version of Forest Service Administrative Record Document 525 by United States Forest Service, Michael Williams re: 153 Order on Motion for Leave to File . (Pettinato, Jared) (Entered: 01/28/2015)
01/29/2015		Disk - United States' Production Public Version of Administrative Record document 525 - has been received and is stored in the Phoenix file room. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (CAD) (Entered: 01/29/2015)
01/29/2015	155	REPLY to Response to Motion re: 146 Cross MOTION for Summary Judgment filed by United States Forest Service, Michael Williams. (Pettinato, Jared) (Entered: 01/29/2015)
01/29/2015	156	REPLY to Response to Motion re: 147 Cross MOTION for Summary Judgment filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Roberts Decl.)(DePippo, David) (Entered: 01/29/2015)
02/12/2015	157	STATUS REPORT *(Joint)* by United States Forest Service, Michael Williams. (Pettinato, Jared) (Entered: 02/12/2015)
02/18/2015	158	ORDER. Hearing set as to 147 Cross MOTION for Summary Judgment, 140 MOTION for Summary Judgment, 146 Cross MOTION for Summary Judgment: Motion Hearing set for 3/18/2015 at 01:00 PM in Courtroom 603, 401 West Washington Street, Phoenix, AZ 85003 before Judge David G Campbell. The parties will be allowed 45 minutes of argument per side. Signed by Judge David G Campbell on 2/18/2015. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 02/18/2015)
02/25/2015	159	NOTICE OF ATTORNEY'S CHANGE OF ADDRESS/FIRM NAME by Neil Levine. (Levine, Neil) (Entered: 02/25/2015)
03/18/2015	160	MINUTE ENTRY for proceedings held before Judge David G Campbell: Motion Hearing held on 3/18/2015. ORDERED taking under advisement 140 Motion for Summary Judgment; taking under advisement 146 Motion for Summary Judgment; taking under advisement 147 Motion for Summary Judgment. Court will issue an order. APPEARANCES: Richard Hughes for Plaintiff Havasupai Tribe. Marc Fink and Neil Levine for Plaintiffs Sierra Club, Grand Canyon Trust, Center for Biological Diversity. Jared Pettinato for Defendants Michael Williams and United States Forest Service. David DePippo and

		Michael Kennedy for Defendants Energy Fuels and EFR Arizona. (Court Reporter Patricia Lyons.) Hearing held 1:01 PM to 2:53 PM. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (TCA) (Entered: 03/18/2015)
03/19/2015	161	ORDER. In their reply memorandum, the Federal Defendants argued that Plaintiffs lack standing because they do not fall within the zone of interests of the 1872 Mining Law. Doc. 155 at 12-14. By the close of business on March 26, 2015, Plaintiffs shall file a response to this argument solely with respect to claim 4. The response shall not exceed five pages. Federal Defendants shall not file a reply unless requested by the Court. When asked to identify the specific law under which claim 4 is brought, Plaintiffs asserted at yesterday's hearing that it is a stand-alone claim under the APA and also is brought under the Mining Law and related regulations. Plaintiffs should address the government's argument that Plaintiffs do not fall within the Mining Law's zone of interests and therefore lack standing to pursue claim 4, and should also address how the zone of interets inquiry applies to their stand-alone APA claim. Signed by Judge David G Campbell on 3-19-15. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 03/19/2015)
03/26/2015	162	SUPPLEMENT in Response to Court Order (Doc. 161) re: 161 Order by Plaintiffs Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Levine, Neil) (Entered: 03/26/2015)
03/31/2015	163	NOTICE re: Notice of Record Citations by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated . (DePippo, David) (Entered: 03/31/2015)
04/01/2015	164	STATUS REPORT *(Joint)* by Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Fink, Marc) (Entered: 04/01/2015)
04/03/2015	165	REQUEST re: Request for Judicial Notice by Plaintiffs Center for Biological Diversity, Grand Canyon Trust, Havasupai Tribe, Sierra Club. (Attachments: # 1 Exhibit Technical Report)(Hughes, Richard) (Entered: 04/03/2015)
04/07/2015	166	ORDER - 1. Defendants' and Defendant-Intervenors' motions for summary judgment are granted on all counts. Docs. 146 , 147 . 2. Plaintiffs' motion for summary judgment is denied. Doc. 140 . 3. The Clerk shall enter judgment and terminate this action. (See document for further details). Signed by Judge David G Campbell on 4/7/15. (LAD) (Entered: 04/07/2015)
04/07/2015	167	CLERK'S JUDGMENT - IT IS ORDERED AND ADJUDGED that, pursuant to the Court's Order filed April 7, 2015, which granted the Motions for Summary Judgment, judgment is entered in favor of defendants and defendant-intervenors and against plaintiffs. Plaintiffs

		to take nothing, and the amended complaint and action are hereby dismissed. (LAD) (Entered: 04/07/2015)
04/14/2015	168	NOTICE OF APPEAL to 9th Circuit Court of Appeals re: 166 Order on Motion for Summary Judgment, 167 Clerks Judgment by Havasupai Tribe. Filing fee received: $ 505.00, receipt number 0970-11567382. (Hughes, Richard) (Entered: 04/14/2015)
04/14/2015	171	MANDATE of USCA: Appeal is DISMISSED re 13-16994, 87 Notice of Appeal, 89 Notice of Appeal - Amended. (Attachments: # 1 NDA) (Copies issued by Ninth Circuit)(LFIG) (Entered: 04/20/2015)
04/17/2015	169	MOTION for Injunction *Pending Appeal* by Havasupai Tribe. (Attachments: # 1 Text of Proposed Order)(Hughes, Richard) Modified on 4/17/2015 (KMG). (Entered: 04/17/2015)
04/17/2015	170	MEMORANDUM in Support of 169 MOTION for Injunction *Pending Appeal* by Plaintiff Havasupai Tribe. (Hughes, Richard) Modified on 4/17/2015 (KMG). (Entered: 04/17/2015)
04/20/2015	172	TRANSCRIPT REQUEST by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated for proceedings held on 03-18-2015, Judge David G Campbell hearing judge(s). (DePippo, David) (Entered: 04/20/2015)
04/20/2015	173	USCA Case Number re: 168 Notice of Appeal. Ninth Circuit Case Number 15-15754. (Copies issued by Ninth Circuit) (LFIG) (Entered: 04/20/2015)
04/27/2015	174	NOTICE OF APPEAL to 9th Circuit Court of Appeals re: 166 Order on Motion for Summary Judgment, 167 Clerks Judgment by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. Filing fee received: $ 505.00, receipt number 0970-11612784. (Fink, Marc) (Entered: 04/27/2015)
04/27/2015	178	NOTICE OF FILING OF OFFICIAL TRANSCRIPT of *Motion Hearing* Proceedings held on 03/18/2015, before Judge David G. Campbell. (Court Reporter: Patricia Lyons). The ordering party will have electronic access to the transcript immediately. All others may view the transcript at the court public terminal or it may be purchased through the Court Reporter/Transcriber by filing a Transcript Order Form on the docket before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Redaction Request due 5/18/2015. Redacted Transcript Deadline set for 5/28/2015. Release of Transcript Restriction set for 7/27/2015. (RAP) (Entered: 05/04/2015)
04/29/2015	175	USCA Case Number re: 174 Notice of Appeal. Case number 15-15857, Ninth Circuit. (Copies sent by the Ninth Circuit.) (KMG) (Entered: 04/29/2015)

04/29/2015	176	STIPULATION re: 169 MOTION for Injunction *Pending Appeal (Setting Briefing Schedule)* by United States Forest Service, Michael Williams. (Attachments: # 1 Proposed Order)(Pettinato, Jared) Modified on 5/13/2015 (KMG). (Entered: 04/29/2015)
04/30/2015	177	MOTION Injunction Pending Appeal by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Levine, Neil) (Entered: 04/30/2015)
05/11/2015	179	RESPONSE in Opposition re: 169 MOTION for Injunction *Pending Appeal*, 177 MOTION Injunction Pending Appeal filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E, # 6 Exhibit F)(DePippo, David) Modified on 5/13/2015 (KMG). (Entered: 05/11/2015)
05/11/2015	180	RESPONSE in Opposition re: 169 MOTION for Injunction *Pending Appeal*, 177 MOTION Injunction Pending Appeal filed by United States Forest Service, Michael Williams. (Attachments: # 1 Exhibit 1: Federal Land Policy Management Act of 1976, Pub. L. No. 94-579, 90 Stat. 2743, # 2 Exhibit 2: Letters from the Forest Service to tribes (May 8, 2015))(Pettinato, Jared) Modified on 5/13/2015 (KMG). (Entered: 05/11/2015)
05/12/2015	181	REPLY to Response to Motion re: 177 MOTION Injunction Pending Appeal filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Levine, Neil) (Entered: 05/12/2015)
05/13/2015	182	NOTICE re: Completion of Briefing by Havasupai Tribe re: 169 MOTION for Injunction *Pending Appeal* . (Hughes, Richard) Modified on 5/13/2015 (KMG). (Entered: 05/13/2015)
05/13/2015	183	TRANSCRIPT REQUEST *and Designation for Appeal* by Havasupai Tribe for proceedings held on 8/1/14, 3/18/15, Judge David G Campbell hearing judge(s). (Hughes, Richard) (Entered: 05/13/2015)
05/17/2015	184	*NOTICE re 169 MOTION for Injunction and 177 MOTION for Injunction by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated . (DePippo, David) *Modified to add document numbers on 5/18/2015 (LSP). (Entered: 05/17/2015)
05/26/2015	185	ORDER denying 169 Motion for Preliminary Injunction; denying 177 Motion injunction pending appeal. Signed by Judge David G Campbell on 5/26/2015.(DGC, nvo) (Entered: 05/26/2015)
05/27/2015	186	*NOTICE re: No Transcripts Requested by Center for Biological Diversity, Grand Canyon Trust, Sierra Club . (Fink, Marc)*Incorrect event - attorney noticed to re-file with correct event Modified on 5/28/2015 (REK). (Entered: 05/27/2015)
12/19/2018	190	MANDATE of USCA (15-15754, 15-15857) that the judgment of the

		district court is AFFIRMED with respect to claims under NEPA and NHPA re: 174 Notice of Appeal filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club, 168 Notice of Appeal filed by Havasupai Tribe. With respect to the claim under FLPMA, the judgment is VACATED and the case is REMANDED for consideration of the claim on the merits. The parties shall bear their own costs. (Attachments: # 1 Order, # 2 Order and Opinion)(LAD) (Entered: 12/19/2018)
01/07/2019	191	ORDER re: 190 USCA Mandate. The parties shall file a joint report and recommendation with the court on or before 1/28/2019 regarding what future of this case. Status Report due by 1/28/2019. Signed by Senior Judge David G Campbell on 1/7/2019. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 01/07/2019)
01/09/2019	192	NOTICE OF ATTORNEY'S CHANGE OF ADDRESS/FIRM NAME by Neil Levine. (Levine, Neil) (Entered: 01/09/2019)
01/10/2019	193	NOTICE TO FILER OF DEFICIENCY re: 192 Notice of Change of Address/Firm Name (Attorney) filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. Document not in compliance with LRCiv 7.1(a)(3) - Party names must be capitalized using proper upper and lower case type. ***No further action is required***. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (MSA) (Entered: 01/10/2019)
01/11/2019	194	NOTICE OF ATTORNEY SUBSTITUTION: Sean C. Duffy appearing for United States Forest Service, Michael Williams. Attorney Jared S Pettinato terminated. . (Duffy, Sean) (Entered: 01/11/2019)
01/14/2019	195	NOTICE TO FILER OF DEFICIENCY re: 194 Notice of Attorney Appearance/Substitution - USA filed by Michael Williams, United States Forest Service. Document not in compliance with LRCiv 7.1(a)(3) - Party names must be capitalized using proper upper and lower case type. ***No further action is required***. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (MSA) (Entered: 01/14/2019)
01/17/2019	196	Consent MOTION to Stay by United States Forest Service, Michael Williams. (Duffy, Sean) (Entered: 01/17/2019)
01/18/2019	197	ORDER granting 196 Motion to Stay. Government counsel shall promptly notify the Court when funding allows them to return to work, at which point the Court will reset the due date for the joint status report. Signed by Senior Judge David G Campbell on 1-18-19. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 01/18/2019)
01/30/2019	198	NOTICE re: Restoration of Funding by United States Forest Service, Michael Williams . (Duffy, Sean) (Entered: 01/30/2019)

02/22/2019	199	ORDER re: 191 Order, Set Deadlines, 197 Order on Motion to Stay, 198 Notice (Other) filed by Michael Williams, United States Forest Service Status Report due by 3/15/2019. Signed by Senior Judge David G Campbell on 2/22/2019. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC, nvo) (Entered: 02/22/2019)
03/15/2019	200	STATUS REPORT *(Joint)* by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Levine, Neil) (Entered: 03/15/2019)
03/20/2019		Remark: Pro hac vice motion granted for Aaron M Paul on behalf of Grand Canyon Trust, Sierra Club and Center for Biological Diversity. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (BAS) (Entered: 03/20/2019)
03/23/2019	201	ORDER. The Court has read the parties' status report and concludes that the content of the administrative record should be determined before supplemental summary judgment briefing is undertaken. The Court concludes that a motion to strike the Rogers declaration should not be filed at this time as it appears the previous declaration will not be relied upon in the further briefing. Plaintiffs shall file a motion to complete the record by April 5, 2019; Defendants' joint response to the motion shall be filed by April 19, 2019; Plaintiffs' reply shall be filed by April 26, 2019. Plaintiffs' proposed schedule for summary judgment briefing (to begin 21 days after the Court rules on the record motion) is accepted and will be followed by the parties. Signed by Senior Judge David G Campbell on 3-23-19. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 03/23/2019)
04/05/2019	202	MOTION to Complete the Administrative Record by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit 1 to 4, # 2 Text of Proposed Order)(Paul, Aaron) (Entered: 04/05/2019)
04/12/2019	203	*Consent MOTION for Extension of Time to File Response and Reply to 202 Motion to Complete the Administrative Record by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Duffy, Sean) *Modified to correct event and add document linkage on 4/15/2019 (RMV). (Entered: 04/12/2019)
04/15/2019	204	ORDER granting 203 Motion for Extension of Time Deadline as to 202 MOTION to Complete the Administrative Record. Response due 4/26/2019; reply due 5/3/2019. Signed by Senior Judge David G Campbell on 4/15/2019.(DGC, nvo) (Entered: 04/15/2019)
04/25/2019	205	Joint MOTION for Extension of Time to File *Protective Order* by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Glass, Bradley) (Entered: 04/25/2019)

04/25/2019	206	ORDER granting 205 Motion for Extension of Time to File [motion to complete administrative record]. Response or protective order due 5/17/2019; reply due 5/24/2019. Signed by Senior Judge David G Campbell on 4/25/2019.(DGC, nvo) (Entered: 04/25/2019)
05/03/2019	207	*Joint MOTION for Protective Order *//Joint Motion to Enter Stipulated Protective Order* by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Glass, Bradley) *Document not in compliance with LRCiv 7.1(c). Attorney noticed on 5/6/2019 (RMV). (Entered: 05/03/2019)
05/03/2019	208	NOTICE TO FILER OF DEFICIENCY re: 207 Joint MOTION for Protective Order *//Joint Motion to Enter Stipulated Protective Order* filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. Document not in compliance with LRCiv 7.1(c) - Documents shall be converted to PDF directly from a word processing program and per Administrative Policies and Procedures Manual must be text searchable. ***No further action is required***. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (RMV) (Entered: 05/06/2019)
05/07/2019	209	ORDER granting 207 Motion for Protective Order. Signed by Senior Judge David G Campbell on 5/7/2019.(DGC, nvo) (Entered: 05/07/2019)
07/15/2019	210	Joint MOTION for Schedule by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order) (Paul, Aaron) (Entered: 07/15/2019)
07/18/2019	211	ORDER granting 210 Motion re resolution of administrative record issues. Signed by Senior Judge David G Campbell on 7/18/2019.(DGC, nvo) (Entered: 07/18/2019)
07/19/2019	212	REPORT of Joint Matrix Regarding the Parties' Dispute Over Redacted Sunk Costs re: 211 by Plaintiffs Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit - Attachment A - AR374 Excerpts)(Paul, Aaron) (Entered: 07/19/2019)
08/02/2019	213	ORDER. The Court has reviewed the parties' joint matrix regarding their dispute over redacted sunk costs. Doc. 212. The Court will not at this time order Intervenors to disclose the redacted information on sunk costs. Plaintiffs have not demonstrated that sunk costs will be relevant to the Court's decision in this case. The question the Court will decide is whether the Forest Service's VER determination was arbitrary and capricious. Under Bureau of Land Management guidance, followed by the Forest Service, mineral examiners consider only non-sunk capital costs when estimating a deposit's probable economic value in making a validity determination. And, it appears, as the government defendants and Intervenors note, that the valuation decision is made by a forward-looking analysis that does not include past sunk costs. The Court

		therefore cannot conclude at this point that sunk costs will be relevant to its decision. The Court notes, however, that it has not made a decision on the proper approach to determining whether mineral deposits are valuable. This will be an issue litigated by the parties, and an issue that can be briefed and argued without Plaintiffs' knowing the amount of sunk costs in this case. If Plaintiffs convince the Court that sunk costs are relevant, and if the amount of sunk costs is necessary in determining whether Plaintiffs' position in this case is correct, the Court can at that time require Intervenors to disclose the amount of sunk costs under the protective order. Signed by Senior Judge David G Campbell on 8-2-19. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 08/02/2019)
08/09/2019	214	Joint MOTION for Schedule by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order) (Paul, Aaron) (Entered: 08/09/2019)
08/09/2019	215	NOTICE re: Lodging of Supplemental Administrative Record by United States Forest Service, Michael Williams . (Duffy, Sean) (Entered: 08/09/2019)
08/09/2019	216	*Consent MOTION to Seal Document 215 Notice (Other) by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Duffy, Sean) *Modified to reflect document has incorrect case number on 8/12/2019 (SCH). (Entered: 08/09/2019)
08/13/2019	217	* MOTION Permission for Non-Electronic Filing by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Duffy, Sean) * Document not in compliance with Local Rules; attorney noticed on 8/14/2019 (LAD). (Entered: 08/13/2019)
08/13/2019	218	* NOTICE re: Amended Notice of Lodging Supplemental Administrative Record by United States Forest Service, Michael Williams re: 215 Notice (Other) . (Duffy, Sean) * Document not in compliance with Local Rule; attorney noticed on 8/14/2019 (LAD). (Entered: 08/13/2019)
08/13/2019	219	* AMENDED Consent MOTION to Seal Document 216 Consent MOTION to Seal Document 215 Notice (Other) by United States Forest Service, Michael Williams. (Attachments: # 1 Text of Proposed Order)(Duffy, Sean) * Document not in compliance with Local Rules; attorney noticed on 8/14/2019 (LAD). (Entered: 08/13/2019)
08/13/2019	220	ORDER granting 214 Motion for schedule. Motion for summary judgment due 9/11/2019; response and cross-motion due 10/23/2019; reply and response to cross-motion due 11/14/2019. Signed by Senior Judge David G Campbell on 8/13/2019.(DGC, nvo) (Entered: 08/13/2019)
08/13/2019	223	NOTICE TO FILER OF DEFICIENCY re: 217 MOTION Permission for Non-Electronic Filing filed by Michael Williams, United States

		Forest Service, 218 Notice (Other) filed by Michael Williams, United States Forest Service, 219 Consent MOTION to Seal Document 216 Consent MOTION to Seal Document 215 Notice (Other) filed by Michael Williams, United States Forest Service. Document not in compliance with LRCiv 7.1(a)(3) - Party names must be capitalized using proper upper and lower case type. Documents 217 and 219 have been granted by 221 Order. Please note the Local Rule for future filings. ***No further action is required. It is not necessary to refile***. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (LAD) (Entered: 08/14/2019)
08/14/2019	221	ORDER - IT IS ORDERED:Federal Defendants' motion for permission for non-electronic filing (Doc. 217) is granted. Federal Defendants' unopposed motion to file under seal (Doc. 219) is granted. The Clerk of Court is directed to accept for filing under seal the CD-ROM disk provided by counsel for Federal Defendants. Signed by Senior Judge David G Campbell on 8/13/19. (SLQ) (Entered: 08/14/2019)
08/14/2019	222	* NOTICE of Attorney Withdrawal *of David J. DePippo* filed by Bradley Joseph Glass. (Glass, Bradley) * Document not in compliance with Local Rule; attorney noticed on 8/15/2019 (LAD). (Entered: 08/14/2019)
08/14/2019		Disc - As outlined in the Federal Defendants' Motion for Permission for Non-Electronic Filing (Doc. 217) has been received and will be stored in the Phoenix file room. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (NKS) (Entered: 08/14/2019)
08/14/2019	224	NOTICE TO FILER OF DEFICIENCY re: 222 Notice of Attorney Withdrawal (No Longer with Firm Only) filed by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. Document not in compliance with LRCiv 7.1(a)(3) - Party names must be capitalized using proper upper and lower case type. Please note this Local Rule for future filings. ***No further action is required. It is not necessary to refile***. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (LAD) (Entered: 08/15/2019)
08/15/2019	225	NOTICE OF ATTORNEY'S CHANGE OF ADDRESS/FIRM NAME by Sean Christian Duffy. (Duffy, Sean) (Entered: 08/15/2019)
09/11/2019	226	MOTION for Summary Judgment *(Redacted)* by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit 1 to Exhibit 5)(Paul, Aaron) (Entered: 09/11/2019)
09/11/2019	227	NOTICE of Confidential Doc. Designation Lodging *(Redacted)* pursuant to LRCiv.5.6.d. (Attachments: # 1 Exhibit A to Exhibit F) (Paul, Aaron) (Entered: 09/11/2019)
09/11/2019	228	*FILED at Doc. 249 *SEALED LODGED Proposed Motion for Summary Judgment. Document to be filed by Clerk if Motion or Stipulation to Seal is granted. Filed by Center for Biological Diversity,

		Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit 1 to Exhibit 5)(Paul, Aaron) *Modified on 5/22/2020 (MAP). (Entered: 09/11/2019)
09/11/2019	229	Consent MOTION to Seal Document *(Notice of Lodging Under Seal)* by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Paul, Aaron) (Entered: 09/11/2019)
09/11/2019	231	Consent MOTION for Leave to Make a Non-Electronic Filing by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order)(Paul, Aaron) (Entered: 09/11/2019)
09/25/2019	232	MOTION to Seal Document 226 MOTION for Summary Judgment *(Redacted) // Intervenors-Defendants' Motion to Seal* by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Glass, Bradley) (Entered: 09/25/2019)
10/23/2019	233	MOTION for Summary Judgment by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated. (Attachments: # 1 Memorandum in Support, # 2 Declaration in Support, # 3 Order (Proposed))(Glass, Bradley) (Entered: 10/23/2019)
10/23/2019	234	Cross MOTION for Summary Judgment by United States Forest Service, Michael Williams. (Attachments: # 1 Memorandum in Support, # 2 Text of Proposed Order)(Duffy, Sean) (Entered: 10/23/2019)
11/08/2019	235	Consent MOTION for Extension of Time to File Response/Reply as to 220 Order on Motion for Miscellaneous Relief , Consent MOTION for Leave to File Excess Pages by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Text of Proposed Order) (Paul, Aaron) (Entered: 11/08/2019)
11/12/2019	236	ORDER granting extension to 11/15/2019 to file combined reply in support of motion for summary judgment and response to cross-motions for summary judgment. Plaintiffs' brief shall not exceed 13 pages, exclusive of attachments. Signed by Senior Judge David G Campbell on 11/12/2019.(DGC, nvo) (Entered: 11/12/2019)
11/15/2019	237	* REPLY to Response to 226 MOTION for Summary Judgment (Redacted) filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Paul, Aaron) * Modified to correct document linkage; attorney noticed on 11/18/2019 (LAD). (Entered: 11/15/2019)
11/15/2019	238	*FILED at Doc. 250 *SEALED LODGED Proposed Reply in Support of Motion for Summary Judgment re: 227 Notice of Confidential Doc. Designation Lodging. Document to be filed by Clerk if Motion or Stipulation to Seal is granted. Filed by Center for Biological Diversity,

		Grand Canyon Trust, Sierra Club. (Paul, Aaron) *Modified on 5/22/2020 (MAP). (Entered: 11/15/2019)
04/17/2020	230	*SEALED Notice of Lodging Under Seal Filed by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit A to Exhibit F)(Paul, Aaron) *Modified to add link to Motion to Seal on 9/12/2019 (CEI). *Modified to change from lodged to filed pursuant to order 240 ; NEF regenerated on 4/17/2020 (MAP)/(SCH). (Entered: 09/11/2019)
04/17/2020	239	ORDER granting Plaintiffs' 231 Unopposed Motion for Leave to Make a Non-Electronic Filing. Plaintiffs are directed to file an index and notice of filing in accordance with the Electronic Case Filing Administrative Policies and Procedures Manual and to deliver the native Excel copy of Exhibit 1 to their Motion for Summary Judgment to the Clerk of Court for filing. Signed by Senior Judge David G Campbell on 4/17/2020. (CLB) (Entered: 04/17/2020)
04/17/2020	240	ORDER granting 229 Motion to Seal. The Clerk's Office is direct to file the lodged notice (Doc. 230) under seal, maintaining the same document number if possible. Signed by Senior Judge David G Campbell on 4/17/20. (MAP) (Entered: 04/17/2020)
04/21/2020	241	NOTICE re: Non-Electronic Filing of a CD-ROM Containing Exhibit 1 to Plaintiffs' Motion for Summary Judgment by Center for Biological Diversity, Grand Canyon Trust, Sierra Club re: 239 Order on Motion for Miscellaneous Relief . (Attachments: # 1 Index of Non-Electronic Filing)(Paul, Aaron) (Entered: 04/21/2020)
05/01/2020	242	ORDER: A Telephonic Conference is set for 5/11/2020 at 02:00 PM before Senior Judge David G Campbell. Counsel for Plaintiff shall initiate a telephone conference to include counsel for all parties and the Court. Counsel for Plaintiff shall provide the dial-in information to counsel for all parties and the Court via email no later than May 10, 2020 at 12:00 noon. Ordered by Senior Judge David G. Campbell on 5/1/2020. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (CLB) (Entered: 05/01/2020)
05/06/2020	243	ORDER: At the oral argument set for May 11, 2020, the parties shall be prepared to argue all pending motions in this case including the pending motions for summary judgment. Each side shall be allotted 30 minutes of time for argument. Ordered by Senior Judge David G. Campbell on 5/6/2020. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (CLB) (Entered: 05/06/2020)
05/08/2020	244	ORDER. During Monday's argument, the parties should address whether the harmless error rule applies to Plaintiffs' contention that the VER Determination failed to account for various environmental monitoring and protection costs. See 5 U.S.C. § 706 ("due account shall be taken of the rule of prejudicial error" in deciding whether an agency

		action should be set aside); Shinseki v. Sanders, 556 U.S. 396, 406 (2009) ("we have previously described § 706 as an administrative law harmless error rule.") (quotation marks, ellipsis, and citation omitted); Ludwig v. Astrue, 681 F.3d 1047, 1054 (9th Cir. 2012) ("Sanders establishes that administrative adjudications are subject to the same harmless error rule as generally applies to civil cases."). Signed by Senior Judge David G Campbell on 5-8-20. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (DGC) (Entered: 05/08/2020)
05/11/2020	245	MINUTE ENTRY for proceedings held before Senior Judge David G Campbell: Telephonic Oral Argument held on 5/11/2020. IT IS ORDEREDtaking under advisement 226 Motion for Summary Judgment; taking under advisement 233 Motion for Summary Judgment; taking under advisement 234 Motion for Summary Judgment. (Court Reporter Patricia Lyons.) Hearing held 2:00 PM to 3:28 PM.(CLB) (Entered: 05/11/2020)
05/12/2020	246	ORDER - IT IS ORDERED: 1. By May 18, 2020, the parties shall file new copies of the following CDs (public and sealed as necessary) containing portions of the administrative record: a. The three CDs filed on May 10, 2013. Docs. 51 , 67 . b. The CD filed on January 28, 2015. Doc. 154 . c. The CD filed on August 9, 2019. Doc. 215 . 2. The parties are granted leave to file non-electronic documents. 3. The filing party shall include an index and notice of filing for each CD. 4. The Clerk is directed to accept the CDs for filing in non-electronic format. (See document for complete details). Signed by Senior Judge David G Campbell on 5/12/2020. (WLP) (Entered: 05/12/2020)
05/15/2020	247	NOTICE re: Joint Notice of Non-Electronic Filing of the Administrative Record by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated re: 246 Order . (Glass, Bradley) (Entered: 05/15/2020)
05/15/2020		Remark: 6 Disks - as outlined in the Intervenors' Notice re: Filing Non-Electronic of the Administrative Record 247 has been received, and will be stored in the Phoenix file room. This is a TEXT ENTRY ONLY. There is no PDF document associated with this entry. (HLA) (Entered: 05/20/2020)
05/22/2020	248	ORDER denying 226 Plaintiff's Motion for Summary Judgment on Claim Four. FURTHER ORDERED Energy Fuels' Motion for Summary Judgment (Doc. 233) is granted with respect to Plaintiffs' request to enjoin activities at the Canyon Mine and on the merits of claim four, and denied with respect to the argument that Plaintiffs are entitled to no relief because the VER Determination was not legally required. Energy Fuels' motion to strike (Doc. [233-1] at 21) is denied as moot. FURTHER ORDERED That the Forest Service's Motion for Summary Judgment (Doc. 234) is granted on the merits of claim four

		and denied on the issue of standing. FURTHER ORDERED Energy Fuels' Motion to Seal (Doc. 232) is granted. The Clerk of Court shall accept for filing under seal the documents lodged on the Court's docket as Docs. 228 and 238 . The Clerk is directed enter judgment and terminate this action. Signed by Senior Judge David G Campbell on 5/22/20. (MAP) (Entered: 05/22/2020)
05/22/2020	249	SEALED (UNREDACTED) MOTION for Summary Judgment by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (Attachments: # 1 Exhibit)(MAP) (Entered: 05/22/2020)
05/22/2020	250	SEALED (UNREDACTED) REPLY to Response to Motion re: 249 SEALED MOTION for Summary Judgment by Center for Biological Diversity, Grand Canyon Trust, Sierra Club. (MAP) (Entered: 05/22/2020)
05/22/2020	251	CLERK'S JUDGMENT - That pursuant to the Court's Order filed May 22, 2020, Energy Fuels' Motion for Summary Judgment having been granted with respect to Plaintiffs' request to enjoin activities at the Canyon Mine and on the merits of claim four and that The Forest Service's Motion for Summary Judgment having been granted on the merits of claim four. This case is hereby terminated. (MAP) (Entered: 05/22/2020)
05/26/2020	252	TRANSCRIPT REQUEST by Center for Biological Diversity, Grand Canyon Trust, Sierra Club for proceedings held on 5/11/2020, Judge David G Campbell hearing judge(s). (Paul, Aaron) (Entered: 05/26/2020)
06/02/2020	253	NOTICE OF FILING OF OFFICIAL TRANSCRIPT of *TELEPHONIC ORAL ARGUMENT* proceedings held on 05/11/2020, before Judge DAVID G. CAMPBELL. [Court Reporter: Patricia Lyons, RMR, CRR, Telephone number (602) 322-7257]. The ordering party will have electronic access to the transcript immediately. All others may view the transcript at the court public terminal or it may be purchased through the Court Reporter/Transcriber by filing a Transcript Order Form on the docket before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Redaction Request due 6/23/2020. Redacted Transcript Deadline set for 7/6/2020. Release of Transcript Restriction set for 8/31/2020. (RAP) (Entered: 06/03/2020)
06/04/2020	254	TRANSCRIPT REQUEST by EFR Arizona Strip LLC, Energy Fuels Resources (USA) Incorporated for proceedings held on 05/11/2020, Judge David G Campbell hearing judge(s). (Glass, Bradley) (Entered: 06/04/2020)
07/20/2020	255	NOTICE OF APPEAL to 9th Circuit Court of Appeals re: 251 Clerks Judgment, 248 Order on Motion for Summary Judgment, Order on Motion to Seal Document by Center for Biological Diversity, Grand

		Canyon Trust, Sierra Club. Filing fee received: $ 505.00, receipt number 0970-18490899. (Paul, Aaron) (Entered: 07/20/2020)
07/21/2020	256	USCA Case Number re: 255 Notice of Appeal. Case number 20-16401, Ninth Circuit. (GMP) (Entered: 07/21/2020)
08/13/2020	257	TRANSCRIPT REQUEST **APPEAL DESIGNATION ONLY* by Center for Biological Diversity, Grand Canyon Trust, Sierra Club for proceedings held on 5/11/2020, Judge David G Campbell hearing judge(s) re: 255 Notice of Appeal. (Paul, Aaron) *Modified to reference that this request is only for appeal designation only on 8/13/2020 (RAP). (Entered: 08/13/2020)

PACER Service Center			
Transaction Receipt			
12/20/2020 13:25:27			
PACER Login:	aaronmpaul:4443061:0	**Client Code:**	
Description:	Docket Report	**Search Criteria:**	3:13-cv-08045-DGC
Billable Pages:	25	**Cost:**	2.50

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

DEC 23 2020

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The opening brief submitted on December 22, 2020 is filed.

Within 7 days of this order, appellants are ordered to file 6 copies of the brief in paper format with blue covers, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website at http://www.ca9.uscourts.gov/forms/.

The excerpts of record submitted on December 22, 2020 are filed. Within 7 days of this order, appellants are ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers.

The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Kevin Wing Gee
Deputy Clerk
Ninth Circuit Rule 27-7

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, et al. *Plaintiffs/Appellants*, v. HEATHER PROVENCIO, et al., *Federal Defendants/Appellees* and ENERGY FUELS RESOURCES (USA) INC., et al., *Intervenor-Defendants/Appellees.*	)	No. 20-16401

UNOPPOSED MOTION FOR AN EXTENSION OF TIME TO FILE ANSWERING BRIEFS OF THE DEFENDANTS/APPELLEES AND INTERVENOR-DEFENDANTS/APPELLEES

Pursuant to Fed. R. App. P. 26(b), Federal Defendants/Appellees, by their respective attorney, respectfully requests a 28-day extension of time in which to file the answering briefs of both the Federal Defendants/Appellees and the Intervenor-Defendants/Appellees, to and including April 5, 2021. The answering briefs are currently due on March 8, 2021. Counsel for Plaintiffs/Appellants has indicated that Plaintiffs/Appellants do not oppose this motion. The government is requesting this

extension for several reasons, which demonstrate good cause, diligence, and substantial need for the extension.

First, an extension of the current due date is required because counsel for the government is the lead attorney responsible for numerous other pending matters that have required and will continue to require significant amounts of time. Among other things, she was responsible for drafting (1) an answering brief in *Jones v. United States*, Fed. Cir. No. 20-2182, which was filed on February 16, 2021; and (2) an answering brief in *Dunham v. United States*, Third Cir. No. 20-2686, which was filed on February 17, 2021. She is also responsible for preparing internal memoranda and responses in *Givens v. Bureau of Trust Funds Administration*, Ninth Cir. No. 20-36064. All of the foregoing has prevented her and will continue to prevent her from working on the government's answering brief in this case.

Second, significant time is also required for review and approval of the government's filings in this appeal by the government agencies, the trial section, and the Office of the Assistant Attorney General for the Environment and Natural Resources Division. Principal drafting of the responses must occur in advance of the filing deadline in order to accommodate the review process.

Undersigned counsel accordingly will be unable to meet the current deadline for filing the government's response to the motion to dismiss and the notice of intent to unseal in this case, despite working diligently to meet that deadline.

The Federal Defendants/Appellees request that this extension also apply to the deadline for Intervenor-Defendants/Appellees to keep the briefing schedule consistent for all parties, as originally scheduled by the Court.

Undersigned counsel contacted counsel for the Plaintiff/Appellee, who has indicated that Plaintiff/Appellee does not oppose this extension request.

For the reasons set forth herein, the United States hereby requests that the Court grant this unopposed motion, making the answering briefs of both the Federal Defendants/Appellees and the Intervenor-Defendants/Appellees due on April 5, 2021.

Respectfully submitted,

s/ Thekla Hansen-Young
THEKLA HANSEN-YOUNG
U.S. Department of Justice
Environment & Natural Res. Div.
P.O. Box 7415 (Ben Franklin Station)
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February 26, 2021

CERTIFICATE OF COMPLIANCE

This motion complies with Rule 27(d) of the Federal Rules of Appellate Procedure, as the motion contains 393 words according to the count of Microsoft Word and has been prepared in a proportionally-spaced typeface using Garamond 14 pt.

s/Thekla Hansen-Young
THEKLA HANSEN-YOUNG

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

FEB 26 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The motion (Docket Entry No. 19) filed by appellees Heather Provencio and the United States Forest Service for an extension of time to file the answering brief is granted. The extension of time applies to all appellees. The appellees'

answering briefs are due April 5, 2021. The appellants' optional reply brief is due within 21 days after service of the Lengthy Extension answering brief.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Terri Haugen
Deputy Clerk
Ninth Circuit Rule 27-7

G|K
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April 1, 2021

Clerk of the Court
United States Court of Appeals
for the Ninth Circuit
The James R. Browning Courthouse
95 7th Street
San Francisco, California 94103

Re: Grand Canyon Trust, *et al.* v. Heather Provencio, *et al.*
Case No. 20-16401

Dear Clerk of the Court:

This letter serves as formal notice that Mr. Michael Kevin Kennedy, an attorney of record for Intervenor-Defendant-Appellees Energy Fuels Resources (USA), Inc. and EFR Arizona Strip LLC (together, "EFR") in the above-referenced matter, has passed away. I will continue to represent EFR in the above-referenced matter. Please let me know if you need anything further to remove Mr. Kennedy as counsel of record for EFR.

Very truly yours,

Bradley J. Glass

cc: Thekla Hansen-Young, Esq.
Marc Fink, Esq.
Roger Flynn, Esq.
Neil Levine, Esq.
Aaron M. Paul, Esq.

No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, et al.,
Plaintiffs/Appellants,

v.

HEATHER PROVENCIO, et al.,
Defendants/Appellees

and

ENERGY FUELS RESOURCES (USA) INC., et al.,
Intervenor-Defendants/Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-cv-8045 (Hon. David G. Campbell)

FEDERAL APPELLEES' ANSWERING BRIEF

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INTRODUCTION

The Grand Canyon Trust, Center for Biological Diversity, and the Sierra Club ("the Trust") challenge the operation of a 17.4-acre uranium mine ("Mine") located on the Kaibab National Forest in Arizona and operated by Defendant-Intervenors Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC ("Energy Fuels"). The Forest Service, an agency in the U.S. Department of Agriculture, approved the Mine's plan of operations in 1988.

The Mine went into standby status in the 1990s. In July 2009, the lands where the Mine is situated were temporarily segregated from entry and appropriation under the Mining Law of 1872, 30 U.S.C. §§ 22-54, when the U.S. Department of the Interior ("Interior") proposed to withdraw those lands for a 20-year period subject to valid existing rights. Interior withdrew the lands in 2012.

When Energy Fuels notified the Forest Service in 2011 that it planned to resume operations, the agency reviewed its existing analysis to ensure operations would continue to comply with environmental and other statutes, and the approved mine plan. Though no law, regulation, or policy required it to do so, the Forest Service examined the mining claims to determine whether they constituted valid existing rights that were not subject to the withdrawal. Whether a party has a valid existing right turns on whether the mining claims contain a discovery of a valuable mineral deposit. A mineral deposit meets this standard if a prudent person would justifiably expend more labor and money, with a reasonable chance of success of

developing a valuable mine. The Forest Service concluded in a report (referred to herein as the Valid Existing Rights or VER Determination) that, if mined, the uranium deposits would result in a cash flow of more than $29 million and would yield a high rate of return on the investment. The Forest Service therefore concluded that the mining claims contained a discovery of a valuable mineral deposit and so constituted valid existing rights unaffected by the withdrawal.

The Havasupai Tribe and the Trust challenged the Forest Service's conclusions. Three of the four claims raised by the Havasupai Tribe and the Trust were rejected on the merits by the district court, and this Court affirmed on appeal. *See Grand Canyon Trust v. Williams*, 98 F. Supp. 3d 1044, 1060-74 (D. Ariz. 2015), *aff'd in part by Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1163-65 (9th Cir. 2018). This appeal concerns the fourth claim, in which the Trust alleged that the Forest Service arbitrarily failed to consider environmental costs in the VER Determination. Although the district court initially rejected this claim on threshold grounds, this Court reversed and remanded for a determination on the merits. *See Grand Canyon Trust*, 98 F. Supp. 3d at 1055-60; *Havasupai Tribe*, 906 F.3d at 1165-67.

On remand, the district court granted summary judgment to the Forest Service and Energy Fuels. The district court concluded that the Forest Service was not arbitrary in its assessment of whether the mining claims constituted valid existing rights. As relevant here, the court held that it was reasonable for the Forest Service to exclude from its assessment the consideration of mining costs that were incurred

before the withdrawal was proposed in 2009. In declining to consider such costs, the Forest Service applied the standards developed by Interior in interpreting the Mining Law. Interior is charged with the administration of that law and its interpretation is owed deference. It was accordingly reasonable for the Forest Service to follow its interpretation. This Court should affirm the judgment of the district court.

STATEMENT OF JURISDICTION

(a) The district court had subject matter jurisdiction under 28 U.S.C. § 1331 because the Trust's claims arose under the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(2); the Mining Law of 1872, 30 U.S.C. §§ 22-54; and the Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1714. 1-ER-7. As explained further below pp. 20-22, however, the district court lacked jurisdiction under Article III because the Trust lacks standing.

(b) The district court's judgment was final because it disposed of all claims against all defendants. 1-ER-2-39. This Court has jurisdiction under 28 U.S.C. § 1291.

(c) The judgment was entered on May 22, 2020. 1-ER-2-3. Plaintiffs filed their notice of appeal on July 20, 2020, or 59 days later. 3-ER-506-09. The appeal is timely under Federal Rule of Appellate Procedure 4(a)(1)(B).

STATEMENT OF THE ISSUES

1. Does the Trust have standing under Article III when the Forest Service's decision was not legally required before mining operations could resume and therefore did not cause any redressable injury to the Trust?

2. Was it arbitrary for the Forest Service to exclude consideration of costs that were incurred before July 2009 when it assessed whether the mineral deposit on the mining claims was one that a prudent person would be justified in the further expenditure of resources, with a reasonable prospect of success in developing a valuable mine?

3. If the Forest Service's decision to exclude consideration of past costs was arbitrary, was such error so prejudicial that it affected the agency's determination that the mining claims constituted valid existing rights?

PERTINENT STATUTES AND REGULATIONS

All pertinent statutes and administrative decisions are set forth in the Addendum following this brief.

STATEMENT OF THE CASE

A. Statutory and regulatory background

Mining on National Forest System (and other federal) lands is governed by the Mining Law. *See* 16 U.S.C. §§ 482, 478; *United States v. Weiss*, 642 F.2d 296, 299 (9th Cir. 1981). The Mining Law contains "an express invitation to all qualified persons to explore the lands of the United States for valuable mineral deposits." *Union Oil Co. v. Smith*, 249 U.S. 337, 346 (1919); *see Andrus v. Shell Oil Co.*, 446 U.S. 657, 658 (1980). The Mining Law provides that "all valuable mineral deposits in lands belonging to the United States" that are not withdrawn "shall be free and open" "to exploration and

purchase, and the lands in which they are found to occupation and purchase," subject to applicable regulations and laws. 30 U.S.C. § 22.

The Mining Law also provides miners an opportunity to establish a property right to lands explored and occupied by "locating" mining claims. *Id.* §§ 23, 26, 35, 36; *see also United States v. Shumway*, 199 F.3d 1093, 1095 (9th Cir. 1999) (noting that mining claims are "vested possessory rights" and recognized interests in real property); *United States v. Locke*, 471 U.S. 84, 86 (1985). Miners locate a mining claim by following certain procedures, including posting notice, marking claim boundaries, recording with the county, and meeting other statutory or regulatory requirements. *Shumway*, 199 F.3d at 1099; 1-SER-196.

To secure enforceable property rights, the mining claimant must also make a discovery of a valuable mineral deposit on the subject mining claim. 30 U.S.C. § 23; *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 336 (1963). The Mining Law does not define what constitutes a discovery of a valuable mineral deposit. That question was entrusted to the Secretary of the Interior and, by delegation, the Bureau of Land Management ("BLM"), who have primary jurisdiction to administer the Mining Law on all federal lands. *Cameron v. United States*, 252 U.S. 450, 460 (1920). In this role, Interior functions in a quasi-judicial capacity in the nature of a special tribunal, s*ee Best*, 371 U.S. at 336, and through its administrative jurisprudence has developed the "prudent person" test (which the Supreme Court has upheld) to determine when a discovery has occurred. That test is summarized here and discussed at length below.

In short, a discovery is the identification of a mineral deposit that is valuable enough that a prudent person would justifiably expend *more* labor and money to develop it. *See United States v. Coleman*, 390 U.S. 599, 600-03 (1968). A mineral deposit that is able to be extracted, removed and marketed at a profit meets this standard. *Id.*; *Chrisman v. Miller*, 197 U.S. 313, 320-22 (1905). Interior generally uses the prudent person test to determine whether a discovery exists as of a certain critical date, which is referred to as the marketability date. *See* 65 Fed. Reg. 41,724, 41,725 (July 6, 2000) (setting forth the applicable marketability dates for validity determinations). When a mining claim is located on withdrawn lands, there are two marketability dates: the date of the withdrawal and the date of the mineral examination. *See id.*

When evaluating whether a mineral deposit may be extracted, removed, and marketed at a profit, Interior considers only costs that would be incurred in the future development and operation of a paying mine. Interior's jurisprudence does not require this economic analysis to consider costs that were incurred before the marketability date. These include costs that were incurred to explore for and locate a valuable mineral deposit, as well as "sunk costs"—that is, the "unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date." 3-ER-314, 325. Examples include "[e]xcavations, structures, and equipment affixed to the land and that cannot be removed, even for salvage value." 3-ER-325. Sunk costs "do not include ongoing equipment, improvement or maintenance expenses." *Id.*; *see also*

United States v. Feezor, 130 IBLA 146, 222 (1994); *United States v. Copple*, 81 IBLA 109, 129 (1984).

BLM has primary jurisdiction to determine the validity of a mining claim, *Cameron*, 252 U.S. at 460, even when miners locate claims on National Forest System lands, *see Clouser v. Espy*, 42 F.3d 1522, 1525 (9th Cir. 1994). *See also Rawls v. Sec'y of Interior*, 460 F.2d 1200, 1200-01 (9th Cir. 1972). A validity determination includes an on-the-ground mineral examination to sample and test for the presence of a valuable mineral deposit, as well as preparation of a mineral report that documents the agency's analysis under the prudent person test. *See Freeman v. U.S. Dep't of the Interior*, 83 F. Supp. 3d 173, 178-80 (D.D.C. 2015) (describing administrative process), *aff'd* 650 Fed. Appx. 6 (D.C. Cir. 2016).

The Forest Service has promulgated regulations governing mining operations' surface use. 36 C.F.R. Part 228A. These regulations require approval of plans of operations, environmental impacts analysis, and minimization of adverse impacts to the extent feasible, before significant-surface-disturbing operations may occur. *Id.* §§ 228.4, 228.5, 228.8. Plans govern activities expected to occur over substantial periods of time and accordingly contemplate that operators may suspend activities. *Id.* §§ 228.4(c)(3), 228.10.

The Forest Service is not authorized to dispose of minerals under the Mining Law. 1-SER-48-49; 16 U.S.C. § 472. By inter-agency agreement, however, it may conduct mineral exams, make validity determinations, and recommend that Interior

initiate an administrative contest proceeding to have mining claims declared invalid. 1-SER-193, 202, 229; 1-SER-178-87. The Forest Service has no authority to declare a mining claim invalid or, conversely, to confer any property rights on a mining claimant; only Interior may make final determinations concerning whether there has been a discovery of a valuable mineral deposit. *See Clouser*, 42 F.3d at 1528; 1-SER-196-97, 201, 214-16, 227-29.

Lands are generally open to the Mining Law unless withdrawn by Congress or the President. The Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. §§ 1701, *et seq.*, which established "multiple-use management" of federal lands, *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 877 (1990), authorizes Interior to withdraw federal land from the Mining Law. 43 U.S.C. § 1714. Any withdrawal by Interior, however, is "subject to valid existing rights." FLPMA, Pub. L. No. 94-579, § 701(h), 90 Stat. 2743, 2786 (1976) (codified at 43 U.S.C. § 1701 note). Mining claims containing the discovery of a valuable mineral deposit are considered valid existing rights. *See* 30 U.S.C. §§ 23, 26; *Locke*, 471 U.S. at 86.

B. Factual background

1. The initial approval of the Mine's plan of operations.

In the 1940s, uranium was discovered in association with many old copper mines in the Grand Canyon region, located in narrow, vertical geologic features known as breccia pipes. 2-ER-258. The region—containing some of the highest-grade

uranium ore in the nation—became the subject of uranium exploration and mining. 1-SER-46, 52; 2-ER-258.

In 1984, Energy Fuels' predecessor submitted to the Kaibab National Forest a plan of operations to mine uranium. 2-ER-213; 1-SER-44. Previous exploratory drilling had "confirmed the presence of a high quality deposit of uranium ore." 1-SER-133. Mining operations would require 17.4 acres of surface disturbance, with mining generally occurring at depths between 900 to 1,400 feet. 1-SER-44, 64; 2-SER-364; 2-ER-226. The Mine is located approximately six miles south of Grand Canyon National Park. 1-SER-45; 1-ER-212. The 12,362-acre area surrounding the Mine is a place of tribal cultural and religious significance. 2 -ER-260-61, 267.

The Forest Service reviewed the plan under various environmental laws, including the National Environmental Policy Act ("NEPA") and the National Historic Preservation Act ("NHPA"). 1-SER-53, 67-70. The Forest Service considered religious, cultural, and environmental impacts of the mine, including groundwater impacts (which it concluded "were extremely unlikely"). *See* 1-SER-35, 119; *see generally* 1-SER-32-114; 1-SER-115-29; 2-SER-367. The Forest Supervisor approved the plan in 1986. 1-SER-115-29. The Havasupai Tribe challenged the approval in district court, but both the district court and this Court rejected the Tribe's claims. *Havasupai Tribe v. United States*, 752 F. Supp. 1471, 1475, 1485-90, 1493-1500, 1505 (D. Ariz. 1990), *aff'd*, 943 F.2d 32, 33-34 (9th Cir. 1991).

Energy Fuels' predecessor constructed surface structures at the Mine. 2-ER-213, 226; 1-SER-133. It began sinking the mine shaft, but stopped at 50 feet when it placed the mine into standby (inactive) status due to low uranium prices. 2-ER-213; 2-SER-404. The Forest Service's approval of the plan of operations does not have an expiration date and the plan of operations has remained in effect, with the operator maintaining a reclamation bond, consistent with 36 C.F.R. Part 228A. Energy Fuels (then named Denison Mines Corporation) acquired the Mine from its predecessor in 1997. 2-ER-213.

2. The withdrawal of lands from the Mining Law.

Uranium prices increased dramatically in the mid-2000s and thousands of new mining claims were located in the region. 2-ER-259. On July 21, 2009, Interior proposed to withdraw approximately 1 million acres of public and National Forest System lands from location and entry under the Mining Law, subject to valid existing rights, for 20 years. *Id.*; 74 Fed. Reg. 35,887 (July 21, 2009). Such lands were temporarily segregated from the Mining Law while the proposal was processed. The Forest Service consented to the withdrawal of the approximately 360,000 acres of National Forest System lands. 2-ER-257, 268. On January 9, 2012, Interior issued an order withdrawing such lands. 77 Fed. Reg. 2563, 2563-66 (Jan. 18, 2012); 2-ER-257-79. The withdrawal—which was made subject to valid existing rights—expressly contemplated that operations would continue at the Mine and three other previously approved mines on the withdrawn lands. 2-ER-261-62.

Meanwhile, Energy Fuels had notified the Forest Service in 2011 that it planned to resume operations. 2-SER-351-52. As a matter of policy, the Forest Service examines the validity of mining claims before approving *new* plans of operations on lands that have been withdrawn from the Mining Law. 1-SER-196-97, 214-16, 227-29. The Mine was not a new operation, as the Forest Service approved the plan in the 1980s. The agency nevertheless took a thorough approach and decided to review its prior environmental analysis to determine whether any law or regulation required a new or amended plan of operations. 2-SER-358-403; 2-SER-404-05. The agency also conducted a mineral exam to determine whether the mining claims constituted valid existing rights and documented its findings in the VER Determination.

3. The VER Determination and review of the mine.

The Forest Service completed the VER Determination in April 2012, finding that the mining claims were valid both as of the date of the withdrawal proposal (when the lands became segregated from the Mining Law), and under then-present economic conditions, and thus constituted valid existing rights unaffected by the withdrawal. 2-ER-208-53. Two Forest Service certified mineral examiners conducted the analysis and their findings were approved by a Forest Service locatable minerals specialist. 2-ER-208-09. The mineral examiners followed the approach set forth in BLM's Handbook for Mineral Examiners, H-3890-1 ("BLM Handbook"), 2-ER-223,

and additional BLM policy guidance, 65 Fed. Reg. at 41,725-26, 2-ER-232.[1] The critical dates for determining the validity of the mining claims were July 21, 2009 (the date when the lands were segregated from location and entry under the Mining Law) and January 11, 2012 (the date of the mineral exam). 2-ER-209, 213; *see also* 65 Fed. Reg. at 41,725-26 (explaining applicable "marketability dates").

The mineral examiners made multiple trips to the Mine and visited Energy Fuels' offices, its Arizona One Mine, and its White Mesa Mill. 2-ER-12-15. The mineral examiners verified the mine boundaries, documented development activities, evaluated samples from previous exploration drilling, and obtained and tested new samples. 2-ER-213, 221-23. The examiners analyzed geological reports and maps, and agency and business records. 2-ER-213-21. They evaluated the methods and results of the proposed mining and milling operations. 2-ER-224-25. They performed an economic evaluation based on the estimated tonnage and grade of the uranium ore to be mined, capital and operating costs, commodity pricing, and a cash flow feasibility analysis. 2-ER-225-31. In doing so, the examiners relied on both information provided by Energy Fuels and their own independent evaluation, analysis, and verification of that information. 2-ER-226-28, 230.

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[1] Although BLM's guidance does not have the force and effect of law, *see Burnett Oil Co.,* 122 IBLA 330, 332 n.2 (1992), the IBLA will generally uphold its application where such guidance is reasonable, consistent with the law, and applied on an agency- or state-wide basis, *see Jesse H. Knight*, 155 IBLA 104, 122 (2001).

The mineral examiners found that both past and present drilling samples at the Mine confirmed the presence of a breccia pipe containing more than 84,000 tons of high-grade uranium ore, which was expected to result in more than 1.6 million pounds of uranium. 2-ER-212, 222-23. The mineral examiners predicted that these production estimates would likely increase when the main shaft is completed, as doing so would allow for additional infill drilling from underground drill stations. 2-ER-226.

Various surface structures necessary to support the Mine had mostly been built by Energy Fuels' predecessor. 2-ER-226; 2-SER-349. This included "the main head frame, hoist house, warehouse and shop, sediment ponds, and power lines," 2-ER-226, as well as the groundwater monitoring well. The costs of building these structures were considered "sunk costs." *Id.* The underground structures at the Mine—which were not yet completed—would include a main vertical shaft at a depth of 1,500 feet, an escape shaft, and horizontal development levels at depths between 900 and 1,500 feet. 2-ER-224, 226. The mine was estimated to produce 623,940 pounds of uranium each year, with a minimal mine life of 5 years. 2-ER-227. Materials would be trucked for processing at Energy Fuels' White Mesa Mill, with processing expected to recover 95% percent of the uranium in the ore. 2-ER-227-28.

In conducting its analysis, the Forest Service applied the Mining Law consistent with Interior's adjudicatory decisions involving mining claim validity determinations on National Forest System and other federal lands. The Forest Service therefore did not include consideration of costs that were incurred before July 21, 2009. The Forest

Service obtained capital and operating cost estimates from Energy Fuels' recent experience at the nearby Arizona One Mine, which is located north of the Grand Canyon in a similar ore deposit. 2-ER-226. The total capital cost (including a $1.69 million contingency fund and $450,000 in reclamation costs) was estimated to be $19,109,161. 2-ER-226-27 (Table 3). Estimated operating costs for each ton of ore (material from which uranium may be extracted) was $110.42 for mining, $66.00 for haulage, $141.04 for milling, and $36.56 in indirect costs. The total operating cost was $354.02 per ton of ore and $17.36 per pound of U3O8 (a type of naturally occurring uranium). 2-ER-227-28 (Tables 4 and 5). The mineral examiners independently reviewed these projected costs and found them to be reasonable. 2-ER-226.

The mineral examiners then performed a feasibility analysis using a software program specifically designed for the economic evaluation of mining projects. They concluded that the Mine would yield a net cash flow of $29,350,736 based on a U3O8 value of $56.00 per pound. 2-ER-230-31 (Table 6). The Mine would have a 78% rate of return and a one-year payback period. 2-ER-331. Using a conservative price of $42.00 per pound, the Mine would still be profitable with a 36% rate of return. *Id.* The minimum rate of return for the mining industry is about 12%. *Id.*

Based on the foregoing analysis, the VER Determination concluded that a discovery of a valuable mineral deposit existed on both applicable marketability dates: the date of segregation on July 21, 2009 as well as under economic conditions as of the date of the mineral examination on January 11, 2012. 2-ER-232. The Forest

Service subsequently completed its environmental review, in which it found that Energy Fuels had not proposed any changes in its operations and that nothing required a plan modification, further environmental analysis, or additional approval before mining could resume. 2-SER-358-65.

C. Prior proceedings

The Havasupai Tribe and the Trust jointly filed suit in March 2013. 3-ER-515. As relevant here, the Trust challenged the Forest Service's determination that the mining claims constituted valid existing rights, alleging that the Forest Service failed to consider environmental costs of mining operations. 2-ER-198-99, ¶¶ 89-92. Energy Fuels intervened. *See* 3-ER-518-19. In April 2013, Energy Fuels resumed mining, though it placed the mine into standby status again shortly thereafter. 1-SER-4, ¶ 5.

The district court entered summary judgment on April 7, 2015 in favor of the Forest Service and Energy Fuels. 2-ER-131-71. Among other things, the court found that the VER Determination was not legally required and did not approve mining; the approval occurred when the Forest Service initially approved the plan of operations in 1986. 2-ER-150-51. The court nevertheless held that the VER Determination was reviewable final agency action under the APA because Energy Fuels had agreed, as a practical matter, not to resume mining until the Forest Service determined that the subject mining claims constituted valid existing rights. *Id.* The district court determined, however, that it could not review the claim on the grounds that the Trust

sought to protect environmental interests that fall outside of the Mining Law's zone of interests. 2-ER-146-50. The Havasupai Tribe and the Trust appealed. 3-ER-535.

This Court initially affirmed on all grounds. *See Havasupai Tribe v. Provencio*, 876 F.3d 1242 (9th Cir. 2017). In October 2018, however, this Court withdrew its original decision and entered an amended order that affirmed the district court's decision in all respects except for its holding that the Trust's challenge to the VER Determination was unreviewable. *Havasupai Tribe*, 906 F.3d at 1163-65. This Court affirmed the district court's determination that the claim falls outside the Mining Law's zone of interests, but concluded that "FLPMA, and not the Mining Act, forms the legal basis of [that] claim," *id.* at 1166, and the claim that "the VER determination was in error remains a claim under the FLPMA." *Id.* at 1167. This Court remanded the case for consideration of the merits of the Trust's claim that the Forest Service's valid existing rights determination should have included the consideration of environmental costs in its profitability analysis of the mining claims. *Id.*

On remand, the Trust renewed its claim that the VER Determination was invalid under the APA because the Forest Service did not consider environmental costs in estimating the mine's value, and also added a new argument about sunk costs. After additional briefing and a telephonic hearing, the district court granted summary judgment to the Forest Service and Energy Fuels. The district court first ruled that the Trust had standing under Article III to bring its challenge. 2-ER-8-10. Because the VER Determination was not legally required before mining operations could resume,

however, the court held that the Trust would have no basis to enjoin mine operations if the VER Determination was set aside. 2-ER-10-11. The court next reviewed the VER Determination, detailing the types of costs that the Forest Service considered. 2-ER-12-20. The court held that the Forest Service need not consider certain costs identified by the Trust—such as the cost of remediating groundwater contamination—because the possibility that groundwater would become contaminated was too remote and speculative. 2-ER-21-23. With respect to the costs of environmental monitoring, elk habitat restoration, and installation of netting to protect condors, the court assumed (without concluding) that the Forest Service did not consider these environmental costs, but that any failure to do so amounted to harmless error because such costs (totaling $216,000 when adjusted for inflation) were "relatively modest" and would not make mining unprofitable. 2-ER-21-31.

After considering the agency's treatment of environmental costs, the district court held that it was also reasonable for the agency to decline to consider sunk costs. 2-ER-31-37. The decision to exclude sunk costs "was consistent with guidance from the BLM Handbook," as well as prior agency decisions applying the Mining Law. 2-ER-31. It was reasonable for the Forest Service to follow the Handbook and those decisions. 2-ER-31-34. The Trust did not present any case law that would require consideration of sunk costs. 2-ER-34-37. And finally, even if the Forest Service should have considered sunk costs, the error was harmless where consideration of such costs would not have rendered the mine unprofitable. 2-ER-37; 2-ER-26-31.

The Trust appealed. 3-ER-506.

SUMMARY OF ARGUMENT

1. The Trust lacks Article III standing to challenge the VER Determination because its asserted injury (the resumption of mining operations) is not caused by that decision and vacatur would therefore fail to redress its injury. The Forest Service approved the Mine's plan of operations in the 1980s and it is that approval—not the VER Determination—which authorized mining operations. Moreover, because the Forest Service was not required to prepare the VER Determination and has no authority to adjudicate whether the mining claims constitute valid existing rights, the Trust's injuries will not be redressed by vacatur of the VER Determination.

2. The Trust and the Forest Service agree that the prudent person test governs the inquiry of whether the mining claims constitute valid existing rights. At issue here is whether it was arbitrary or capricious under the APA for the Forest Service to exclude sunk costs from its prudent person analysis. The Forest Service's exclusion of sunk costs is not arbitrary because it is consistent with Interior's interpretation of the Mining Law. The Mining Law is silent on how to evaluate whether a claim contains a "discovery of a valuable mineral deposit." Congress explicitly delegated authority to Interior to fill in the gaps. Interior has interpreted the Mining Law to not require consideration of sunk costs. This interpretation is reasonable and does not conflict with the Mining Law. To the extent this Court reviews Interior's interpretation, it should do so under the deferential standard

outlined in *Chevron U.S.A., Inc. v. Natural Resources Defense Council,* 467 U.S. 837, 842-843 (1984). Given that Interior is the expert agency charged with administering the Mining Law, it cannot be said that the Forest Service's decision to act in accordance with Interior's decisions was arbitrary or capricious under the APA.

3. The Trust identifies three sums that it asserts represent costs that the Forest Service should have considered and contends that, if the agency had considered such costs, it would not have concluded that there was a discovery of a valuable mineral deposit. Assuming (for the sake of argument) that the Forest Service should consider sunk costs, the agency need not have considered all of the sums identified by the Trust. Some of the expenses occurred in the exploration phase in an effort to locate a valuable mineral deposit, and so those expenses would not be considered in the investment decision-making process regarding whether further expenditures required for the subsequent mining of that deposit would be justified. Additionally, some of the costs identified by the Trust represent expenses that were incurred for the same activities by different mining companies (that were predecessors in interest to Energy Fuels), and so it would be inappropriate in any event to double-count those expenses. Finally, even if the Forest Service should have considered the costs identified by the Trust, its failure to do so was not so prejudicial as to affect its determination that the mining claims constituted valid existing rights. The Forest Service's analysis shows a significant net positive cash flow. The projected cash flow is

so large that the mine would still be considered profitable even accounting for the costs identified by the Trust.

ARGUMENT

I. The Trust lacks standing to challenge the VER Determination.

To demonstrate standing under the Article III of the Constitution, a plaintiff must show it has suffered an actual injury that can be traced to the defendant's conduct and that it is likely that the injury will be redressed by a favorable decision. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992). The Trust asserts that it is injured by the continuation of mining operations. *See* Pls.' Mot. for Summary J. & Mem in Supp. 6, ECF No. 226. But, as the district court and this Court have both held, it was the Forest Service's approval of the plan of operations in the 1980s that authorized mining operations, not the VER Determination. *See* 2-ER-137-41; *Havasupai Tribe*, 906 F.3d at 1163. Interior's subsequent withdrawal in 2012 did not affect the validity of the approved plan of operations (and in fact anticipated that the Mine would continue to operate). 2-ER-267-68. The Trust's injury is therefore not traceable to the VER Determination—it stems from the original approval of the plan of operations.

Nor would the Trust's injuries be redressed if the Court were to vacate the VER Determination. No law, regulation, or policy requires the Forest Service to conduct a VER Determination for mining claims within an already-approved plan of operations, even if the land is subsequently withdrawn from the Mining Law. *See supra*

pp. 4-8, 11. Thus, if the VER Determination were vacated, the Forest Service would be under no duty to complete a new one. Even if the Forest Service voluntarily decided to do so and determined that the mining claims did not constitute valid existing rights, it is not the Forest Service, but Interior, who has plenary authority to determine the validity of the mining claims. *See supra* pp. 4-8. The Forest Service could at most request that Interior initiate a contest. But the Trust's alleged injury would remain unredressed unless and until Interior (along with any subsequent judicial review) declared the mining claims invalid, since only at that point could the Forest Service take any action to prevent mining under the plan of operations based on a lack of valid existing rights. Whether the Trust's injury would be redressed by a favorable decision here is therefore too speculative to support standing. *Defenders of Wildlife*, 504 U.S. at 560.

II. The Forest Service's VER Determination was consistent with applicable law.

The question before the Court is whether the Forest Service was arbitrary and capricious under the APA when it excluded sunk costs from its prudent person analysis in the VER Determination. The Forest Service's exclusion of sunk costs is not arbitrary because it is consistent with Interior's interpretation of the Mining Law. Interior is charged with administering the Mining Law and Interior's position is therefore entitled to deference. If anything, it would have been arbitrary for the Forest

Service to have applied the Mining Law in a manner different from Interior. This Court should reject the Trust's arguments to the contrary.

A. This Court should review the VER Determination deferentially.

Judicial review of the VER Determination is governed by the APA. Under the APA, this Court may reverse the Forest Service's decision only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). That standard is highly deferential. *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Ins. Co.,* 463 U.S. 29, 43 (1983). The Court presumes the validity of the decision, *Lands Council v. McNair*, 537 F.3d 981, 993 (9th Cir. 2008), *overruled on other grounds by*, *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7 (2008), and may not substitute its judgment for that of the Forest Service, *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 376-78 (1989).

The Trust asks (at 25-29) this Court to decide de novo the question whether sunk costs should be considered in the prudent person analysis because the Forest Service is not the agency charged with interpreting the Mining Law and because (in its view) Interior's interpretation is not entitled to deference. As the district court correctly held, this standard of review is incorrect. *See* 1-ER-32-34, 40-41. The decision under review is the VER Determination. 2-ER-199. Therefore the "question posed by Plaintiffs' claim is not whether [Interior's] decisions and BLM Handbook

are incorrect, as Plaintiffs suggest, but whether the Forest Service's reliance on these [Interior] sources in the VER Determination was arbitrary and capricious." 1-ER-32.[2]

Courts review with substantial deference the decisions of agencies in situations similar to the one here. In *CTIA-Wireless Association v. Federal Communications Commission*, 466 F.3d 105 (D.C. Cir. 2006), for example, the D.C. Circuit found that regulations promulgated by the Advisory Council on Historic Preservation (that implemented the NHPA) were owed deference under *Chevron* and that it was in turn reasonable for the Federal Communications Commission to apply a definition included in those regulations to its decision-making process. 466 F.3d at 106, 115-18. The Supreme Court similarly rejected a challenge to an agency's application of the Council on Environmental Quality's (CEQ) regulations implementing NEPA on the basis that those regulations are entitled to "substantial deference." *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354-55 (1989). The Court should therefore

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[2] It is also worth noting that the Trust's complaint focused only on the Forest Service's alleged failure to consider costs of *environmental* compliance and did not challenge the exclusion of sunk costs. Nor did the Trust raise the issue of how the Forest Service treated sunk costs in its initial motion for summary judgment. *See* Pls.' Mot. for Summary J. & Mem in Supp., ECF No. 140 (Oct. 15, 2014). It presumably did not challenge the treatment of sunk costs because those costs have little to do with the environmental interests it seeks to protect. The Trust did not raise the issue until it had a second opportunity for summary judgment briefing in 2019 and sought access to redacted information concerning sunk costs—five years after it filed its amended complaint. *See* 3-ER-529, 539. The Trust's tardiness provides an independent basis to reject the Trust's claims. *See Apache Survival Coal. v. United States*, 21 F.3d 895, 91-12 (9th Cir. 1994) (issue raised in briefing not properly considered when not included in complaint due to inexcusable delay).

ask whether it was arbitrary and capricious for the Forest Service to apply Interior's interpretation of the Mining Law under the highly deferential standard of the APA. This question is easily answered. Interior—and not the Forest Service—has been delegated authority to implement the Mining Law. It would therefore be arbitrary for the Forest Service to do anything other than to apply Interior's interpretation.

The Trust has not challenged any final agency action on the part of Interior under the APA and Interior is not named as a defendant in this lawsuit. The validity of Interior's interpretation is therefore not before this Court. *See, e.g., White v. Dep't of Homeland Sec.*, 2012 WL 4815470, at *1 (D.D.C. Oct. 10, 2012) (dismissing a suit where the plaintiff failed to name as a defendant the agency that issued the decision under review). Nevertheless, to the extent that the Court considers Interior's interpretation of the Mining Law as a part of its review of whether the VER Determination was prepared in violation of the APA, any such consideration should occur under the highly deferential second step of the two-part test set forth in *Chevron*. In step one, a court looks to whether Congress has clearly expressed its intent in a statute. If so, then an agency "must give effect to that unambiguously expressed intent." *Akootchook v. United States*, 271 F.3d 1160, 1166 (9th Cir. 2001) (citing cases). If the statute is not clear on the precise question at issue, then the second step involves an inquiry into "whether the agency's answer is based on a permissible construction of the statute." *Id.* A court should affirm so long as the interpretation is not "manifestly contrary to the statute." *Chevron*, 467 U.S. at 842. The interpretation

must also have the "force of law," which it has when it is developed after "a relatively formal administrative procedure tending to foster the fairness and deliberation that should underlie a pronouncement of such force." *United States v. Mead Corp.*, 533 U.S. 218, 226-227, 230 (2001); *see also High Sierra Hikers Ass'n v. Blackwell*, 390 F.3d 630, 638 (9th Cir. 2004) (holding that an agency's decision is entitled to *Chevron* deference if it has the force of law).

The two cases cited by the Trust (at 28) suggesting that de novo review could apply are inapposite, as both acknowledged *Chevron* deference is appropriate where an agency has interpreted a statute that it administers—as Interior has done here. *See Connors v. National Transportation Safety Board*, 844 F.3d 1143, 1145 (9th Cir. 2017); *Sauer v. Dep't of Educ.*, 668 F.3d 644, 650 (9th Cir. 2012). The Trust also contends (at 28) that the language of the APA requires the Court to decide legal issues do novo. The APA provides that "the reviewing court shall decide all relevant questions of law" "[t]o the extent necessary to decision and when presented." 5 U.S.C. § 706. The APA does not, however, require the Court to consider legal questions without any deference to an agency's interpretation. This Court should not depart from the arbitrary and capricious standard of review when reviewing the VER Determination under the APA.

B. Interior's interpretation of the Mining Law is consistent with the statute and past precedent.

The Mining Law does not define what constitutes a discovery of a valuable mineral deposit and is silent on the question whether sunk costs should be considered when evaluating whether the requirements of a discovery have been met. It simply says that "all valuable mineral deposits in lands belonging to the United States" "shall be free and open to exploration and purchase," 30 U.S.C. § 22, and provides property rights to "locators of all mining locations" so long as various requirements are met, *id.* § 26. It further specifies that "no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located." *Id.* § 23.[3] Given the statute's silence on the pertinent questions, any consideration of Interior's interpretation would be guided by the second step in *Chevron* in which this Court would defer unless the interpretation is "not one that Congress would have sanctioned." *Chevron*, 467 U.S. at 845.

Congress delegated plenary authority to Interior to determine issues pertaining to the Mining Law with the force of law. *See Best*, 371 U.S. at 336; *West v. Standard Oil Co.*, 278 U.S. 200, 219 (1929); *Cameron*, 252 U.S. at 459-60. Interior has accordingly

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[3] The Trust erroneously contends 30 U.S.C. § 22 describes how property rights may be acquired under the Mining Law. That section merely contains the statutory authorization to remove "valuable mineral deposits" and does not confer any property rights under the Mining Law. Nor is the concept of "discovery" found in that section. Rather, the applicable section of the Mining Law is 30 U.S.C. § 23 governing the location of lode claims for "other valuable deposits" upon "the discovery of the vein or lode within the limits of the claim located."

developed a substantial and longstanding body of adjudicatory decisions on what considerations go into the determination of whether a mineral deposit warrants a determination that a valid discovery has been made and a property right can be recognized. Many of these decisions were issued by the IBLA, which is part of Interior's Office of Hearings and Appeals, which in turn is a component of the Office of the Secretary of the Interior. The Office of Hearings and Appeals is authorized to hear, consider, and determine matters within the jurisdiction of Interior, 43 C.F.R. § 4.1(a), including contests involving "any cause affecting the legality of validity of any entry or settlement or mining claim," *id.* § 4.451-1. "[R]ules of law established by prior Departmental decisions," including those of the IBLA, "are binding precedent." *United States v. Jones,* 106 IBLA 230, 246 (1988); *see* 3-ER-337. Courts have accordingly deferred to statutory interpretations set forth in these adjudicatory decisions.[4]

Since 1894, Interior has held that to qualify as a "discovery of a valuable mineral deposit" sufficient to support recognition of property rights under the Mining

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[4] *See, e.g., Coleman*, 390 U.S. at 602 (deferring to Interior's interpretation of the Mining Law and discussing other cases doing the same); *Akootchook*, 271 F.3d at 1168 (deferring to an IBLA decision); *Brandt-Erichsen v. Interior*, 999 F.2d 1376, 1381 (9th Cir. 1993) ("[D]ecisions of the [IBLA] on the meaning of a [statute it is charged with administering] should be given substantial deference."); *Mount Royal Joint Venture v. Kempthorne*, 477 F.3d 745, 754-55 (D.C. Cir. 2007) (applying substantial deference to the IBLA's interpretation of FLPMA); *Hoyl v. Babbitt*, 129 F.3d 1377, 1385-86 (10th Cir. 1997) (deferring to IBLA's interpretation of a statute); *Williams v. Babbitt*, 115 F.3d 657, 660 n.3 (9th Cir. 1997) ("A statutory interpretation adopted by an agency in the course of adjudicating a dispute is entitled to *Chevron* deference so long as the agency has the power to make policy in the area.").

Law, a mineral deposit must be of such character that "a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine." *Castle v. Womble*, 19 Pub. Lands Dec. 455, 457 (1894); *see Chrisman v. Miller*, 197 U.S. 313 (1905) (adopting Interior's "prudent person" standard for discovery). In an effort to "identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is 'valuable,'" Interior refined the prudent person test to require a showing that the minerals can be extracted, removed, and marketed at a profit. *See Coleman*, 390 U.S. at 602. This showing is relevant because a "prudent man would not be justified in developing a mineral deposit if the extracted minerals were not marketable." Marketability Rule, M-36642, 69 Interior Dec. 145, 146 (1962). The Supreme Court has affirmed Interior's use of the prudent person test (including the marketability aspect) as a reasonable interpretation of the Mining Law. *Coleman*, 390 U.S. at 602.[5]

Among those factors to be considered in the prudent person analysis are the "current estimates" of the:

> (a) expected costs of the extraction, beneficiation, and other essential costs of the operation necessary to mine and sell the mineral, including capital and labor cost; (b) quantity of mineable mineral on the claims; (c) average grade or quality of mineral on the claim; and (d) price at which the mineral will be sold, and expected returns.

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[5] Portions of the Trust's brief (at 17-20, 36) appear to suggest that it is the Supreme Court that developed the marketability aspect of the prudent person test when, in fact, the Supreme Court affirmed Interior's interpretation of the Mining Law.

United States v. McKenzie, 20 IBLA 38, 45 (1975); *see also* 3-ER-314-15 (Interior Handbook listing considerations).

Neither the "[a]ctual successful exploitation of a mining claim," *Barrows v. Hickel*, 447 F.2d 80 (9th Cir. 1971), nor the "proved ability to mine the deposit at a profit" need to be shown for "further expenditure" of "labor and means" to be justified. *Adams v. United States*, 318 F.2d 861, 870 (1963); *see also United States v. Foresyth*, 100 IBLA 185, 226-27 (1987); *United States v. Anderson*, 57 IBLA 256, 261 (1981) ("The mining laws do not require that the values shown must be such as will demonstrate that a claim can be worked at a profit or that it is more probable than not that a profitable mining operation can be brought about."); *United States v. Mannix*, 50 IBLA 110, 117 (1980). Instead, "[w]hat is required is that there be, at the time [of] discovery, a market for the discovered material that is sufficiently profitable to attract the efforts of a person of ordinary prudence." *Barrows*, 447 F.2d at 83. The test developed through Interior's administrative case law asks whether—based on what is known about the mineral deposit at a particular moment in time—"a person of ordinary prudence would expend substantial sums in the expectation that a profitable mine might be developed." *Adams*, 318 F.2d at 870; *Anderson*, 57 IBLA at 260-61.

Accordingly, Interior explained in *United States v. Mannix* that when the agency evaluates whether a discovery of a valuable mineral deposit exists, it only "looks at present marketability, not past or future prospects." *See* MT-31412 at 9 (Feb. 14, 1979) (ALJ decision citing judicial and administrative decisions and stating that

"[n]one of the definitions refer to past expenditures, only to present and future potential"), *aff'd by* 50 IBLA 110, 119 (1980); *United States v. Armstrong*, 184 IBLA 180, 216 (2013) ("[E]vidence of past success in extracting and marketing a mineral from a mining claim is of limited evidentiary value—a mining claim cannot be considered valid unless the claim is at present supported by a sufficient discovery."). A claimant need not establish that all past expenses incurred in the development of a claim prior to the marketability date will be "recouped before it can be said that the mine is a profitable venture." *Mannix*, 50 IBLA at 119. The relevant question is whether "*further* expenditures" would be justified given the quantity and quality of a mineral deposit and the present marketability of those minerals. *Id.* at 119 (emphasis added). IBLA decisions have consistently applied the interpretation set forth in *Mannix*. *See United States v. Clouser*, 144 IBLA 110, 131-32 (1998); *United States v. Collord*, 128 IBLA 266, 288 n.24 (1994); *United States v. Copple*, 81 IBLA 109, 129 (May 30, 1984). BLM has also issued guidance that is consistent with these decisions. *See* 3-ER-314, 325.

The reasoning behind excluding sunk costs from the prudent person analysis is sound and consistent with the Mining Law. Miners cannot obtain any property rights until they have discovered a valuable mineral deposit. 30 U.S.C. §§ 23, 26. Miners may spend substantial sums of money to explore for and develop minerals before the deposit is sufficiently identified to constitute a discovery that would justify the government's recognition of a valid mining claim. *See, e.g., United States v. Collord*, I-20886 at 4-5 (Feb. 23, 1989), *aff'd by* 128 IBLA at 266 (discussing difference between

the presence of minerals worth exploration and a discovery); *see also Anderson*, 57 IBLA at 260-61 (same). "The money spent by prudent and reasonable men to conduct *exploration* activities" is akin to "the first best or call in a poker game." *United States v. Gunsight Mining Co.*, 5 IBLA 62, 69 (1972) (emphasis added) (explaining that pre-discovery expenditures do not constitute proof of a valid discovery); *Mannix*, MT-31412 at 9. Until a valuable mineral deposit has been discovered, "the further expenditure of labor and means would not be directed toward the development of a deposit which has been found but would be directed toward the finding of a deposit which the evidence indicates might be found and could be developed." *Barton v. Morton*, 498 F.2d 288, 289-90 (9th Cir. 1974). The prudent person test therefore "comes into play only after a mineral deposit has been discovered, not before; and it is then applied to determine whether the discovered deposit is 'valuable.'" *Id.* at 290-91.

For this reason, "[i]n determining then whether a discovery has been made, past expenditures are irrelevant, and since the future is unknowable and speculative, the determination must be made on present facts and cost factors." *Mannix*, MT-31412 at 4, 9 (declining to take into consideration the expenditures made to date in the development of the claims); *United States v. Wichner*, 35 IBLA 240, 246 (1978) ("[I]t must appear as a *present* fact that there would be a reasonable prospect of success in developing an operating mine that would yield a reasonable profit.") (emphasis added). This reasoning comports with economic decision making generally, where "sunk costs are treated as bygone and are not taken into consideration when deciding

whether to continue an investment project." *See* Peter Bondarenko, Sunk cost, Encyclopedia Britannica, available at https://www.britannica.com/topic/sunk-cost.

A (non-precedential) concurring opinion authored by Administrative Judge Burski in a subsequent IBLA decision further elaborated the reasoning underlying the exclusion of sunk costs in *Mannix*. The concurrence explained that the *Mannix* claimants had made "substantial" capital expenditures which "would never be recouped even if they successfully mined the deposit." *Collord*, 128 IBLA at 304. In "hindsight, no prudent man would have proceeded to construct the underground workings and, absent these workings, a prudent man would clearly not have been justified in further expenditure of his labor and means with a reasonable prospect of success in developing a paying mine." *Id.* The claims were therefore arguably "not valid since there was virtually no chance that a paying mine (one which would recoup all of the claimants' expenditures) would result." *Id.* The IBLA declined to invalidate the claims in *Mannix*, however, because the lands were not withdrawn from the Mining Law and "nothing would prevent the appellants from relocating new claims" that "would not be burdened with the necessity of recouping past expenditures made under prior locations." *Id.* As a matter of practicality, where "land remain[s] presently open to mineral location, where expenditures which might properly be seen as imprudent had already been incurred, a mining claimant could show the existence of a valuable mineral deposit without establishing that those already-made expenditures would be recovered." *Id.*

Judge Burski theorized that the outcome in *Mannix* would have been different, however, if the claims were located on lands that were withdrawn *and* the "expenditures relating to infrastructure development ha[d] not yet been made" before the lands were withdrawn (as was the case in *Collord*). *Id.* at 304-05. This is because claims on withdrawn lands must satisfy all requirements of the Mining Law not only as of the date of the mineral exam, but also as of the earlier date of the withdrawal. *Id.* at 268; *United States v. Collord*, I-20886 at 4-5 (Feb. 23, 1989); *see also Wichner*, 35 IBLA at 246. Combined, the *Mannix* and *Collord* decisions make clear that on lands that are withdrawn, Interior does not consider in its prudent person analysis any expenditures that were incurred prior to the date of the withdrawal. *See, e.g., Copple*, 81 IBLA at 129 (excluding costs that were incurred prior to the withdrawal).

C. The Forest Service's decision to apply Interior's interpretation was reasonable.

The Forest Service was not writing on a blank slate when it prepared the VER Determination. The Forest Service recognized that the Mining Law is comprised of the statute and the "decisions of the courts and of the Department of the Interior, which interpret and apply the statutes to specific cases." 3-ER-337. It was therefore reasonable for the Forest Service be follow these decisions and in particular to apply Interior's interpretation that sunk costs need not be considered. 2-ER-226; *see CTIA*, 466 F.3d at 115-18. The Forest Service's decision to apply Interior's interpretation is entitled to great deference under the APA. *See supra* pp. 22-25.

The Trust asserts (at 37-39) that the Forest Service erred because, in its view, Interior applies (or should apply) a different definition of profitability for claims located on withdrawn lands than for claims located on open lands, one that includes consideration of all costs incurred before the lands were withdrawn. As the discussion above (pp. 26-33) makes clear, however, Interior does not consider costs that were incurred before the relevant marketability date. This reasoning is consistent with *Mannix* and *Collord* because a prospector may relocate mining claims on open lands so that they are unburdened by prior expenditures up until the date such lands are withdrawn. There is no support in either of those decisions for the proposition advanced by the Trust that the Forest Service should have considered expenditures that were incurred before the date of the withdrawal. Indeed, Judge Burski's concurrence in *Collard* suggested that the outcome out have been different if the claimants there had incurred the expenses prior to the withdrawal. 128 IBLA at 304-05. The position advocated by the Trust would have the effect of imposing a substantively "different and more onerous standard," *Coleman*, 390 U.S. at 603, for claims located on withdrawn lands that is inconsistent with the longstanding way in which Interior has applied the prudent person test.

D. The Court should reject the Trust's arguments.

The Trust incorrectly contends that this Court should reject Interior's construction as insufficiently explained, as well as inconsistent with the statute and prior case law. Interior's longstanding decisions make plain the reasoning behind the

exclusion of sunk costs. And its interpretation does not conflict with the Mining Law nor with any of the relevant cases. This Court should reject the Trust's arguments.

1. Interior sufficiently explained its interpretation of the Mining Law.

The Trust asserts (at 29-31) that *Chevron* deference to Interior's interpretation is inappropriate because *Mannix* did not provide sufficient analysis. But the interpretation was adopted in the context of an adjudication where the agency was delegated interpretive authority, the interpretation is clear, and the reasons for it are sound. *Chevron* requires nothing more. An "administrative implementation of a particular statutory provision qualifies for *Chevron* deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority." *See Mead Corp.*, 533 U.S. at 226-227. IBLA adjudicatory proceedings meet that standard. *See supra* pp. 26-27. Moreover, the Supreme Court decision cited by the Trust (that required additional explanation for an agency's position) addressed a situation in which an agency had changed its position and additional reasons were required to explain the change, not the interpretation itself. *See Encino Motorcars, LLC v. Navarro*, 136 S.Ct. 2117, 2125 (2016). Interior has made no such change here. In any event—to the extent that any explanation is required—a "minimal level of analysis" should suffice. *Id.* The rationale provided by Interior more than meets that standard.

In *Mannix*, the IBLA explained that "the law does not require a guaranteed profit to constitute a discovery"—instead, a discovery exists where "minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the *further expenditure* of his labor and means, with a reasonable prospect of success in developing a valuable mine." 50 IBLA at 117-18 (emphasis added) (*citing Castle*, 19 Pub. Lands Dec. at 457). Evidence concerning "expected costs of the extraction, beneficiation, and other essential costs of the operation necessary to mine and sell the mineral" should "focus on *current* estimates of costs and prices." *Id.* at 118 (emphasis added) (*citing McKenzie*, 20 IBLA at 45). The IBLA continued:

> We would address the question of mining at a profit. The Government argues that all earlier expenses in development of the property must be considered, *e.g.*, the cost of constructing cabins, sheds, and an access road and the purchase of rail and ore cars, and that such expenses must be recouped before it can be said that the mine is a profitable venture. We think the Government errs in its argument and analysis. Absent a prior withdrawal, if the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met. There is no case law of which we have knowledge, nor has the Government adduced any, that compels consideration of the above mentioned development costs in determining if an ongoing operation is presently profitable. *Cf. Andrus v. Shell Oil Co.*, [446 U.S. 657 (1980)].

50 IBLA at 119.

The IBLA's rationale in eliminating the consideration of sunk costs is therefore based on the premise that a guaranteed profit is not required to constitute a discovery; *present* marketability (that is, a showing that current expected costs and the price, quality, and quantity of the identified mineral justify further expenditures) is what

matters.[6] The ALJ decision that the IBLA reviewed and affirmed provides further explanation that is detailed above at pp. 27-31. *See Mannix*, MT-31412 at 8-9; *Mannix*, 50 IBLA at 120 (affirming ALJ decision); *IMC Kalium Carlsbad, Inc. v. Interior Bd. of Land Appeals*, 206 F.3d 1003, 1009 (10th Cir. 2000) (considering the decision of the subordinate agency division that was under review by the IBLA, as well as the IBLA's decision). Further explanation is also found in *Collord*. *See supra* pp. 32-33. This explanation is more than sufficient.

2. Interior's interpretation is consistent with the text of the statute.

The Trust contends that Interior's interpretation is inconsistent with the text of the Mining Law. The Trust points out (at 16, 20-21, 33-35) that the requirement to make a discovery of a valuable mineral deposit is objective and focuses on the value of the mineral deposit at issue. From this premise, the Trust concludes that the question of marketability should assess profitability over the entire life of a mining operation. As further support, the Trust contends (at 17-18) that the term "profit" requires an assessment of all past costs. There are several flaws in this reasoning.

This Court should reject the Trust's contention that Interior's interpretation is inconsistent with the text of the Mining Law because, as explained above, p. 26, there

[6] Contrary to the Trust's contentions (at 31-33), *Andrus* supports the IBLA's position by affirming that it is appropriate to evaluate the present marketability of a mineral deposit. *See* 446 U.S. at 672-73 n.11; *see supra* pp. 28-29.

is no language in the statute that requires consideration of sunk costs when assessing whether a discovery exists. This should end this Court's inquiry under *Chevron*.

Instead of any statutory language, the Trust points to the prudent person test, which derives from Interior's jurisprudence. But the prudent person test asks whether—at the relevant date—a "person of ordinary prudence would be justified in the *further* expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine." *Coleman*, 390 U.S. at 602 (citing *Castle*, 19 Pub. Land. Dec. at 457) (emphasis added). The phrase "further expenditure" makes clear that the test does not focus on costs that were incurred prior to the marketability date. The Trust claims that an objective analysis of profitability should include a look at whether a mineral deposit (rather than any particular mining operation) can be profitably mined, but the objectivity identified by the Trust comes into play by asking whether an *ordinary* person would be justified in making further expenditures, not by asking whether any particular person would be willing to make such expenditures. *United States v. Whitney*, 51 IBLA 73, 84 (1980) ("Appellants' willingness to make a small profit is not sufficient to meet the prudent man test. The prudent man test is an objective not a subjective standard."); *see also United States v. Garcia*, 184 IBLA 255, 270 (2013) (same). The concept of an objectively-applied test therefore has no bearing on whether sunk costs should be taken into account.

The Trust contends (at 17-18, 35-37) that the phrase "further expenditures" does not imply that past costs should be ignored because the prudent person test asks

whether further expenditures would be justified in developing a profitable mine, and that the term "profit" necessarily requires the inclusion of all past and future costs associated with the mineral deposit. While it might be true that the question whether a business is profitable over its entire life would turn on an evaluation of all of the expenses incurred over the life of the business, there is nothing in the prudent person test that requires an evaluation of profitability over the entire life of a mineral deposit (or even a particular mine) from initial prospecting and exploration activities (to delineate the deposit) to the actual development and mining of that deposit. Interior's longstanding decisions make plain that it uses the concept of "profit" in a particular way—to capture whether "at the time [of] discovery," there is "a market for the discovered material that is sufficiently profitable to attract the efforts of a person of ordinary prudence." *Barrows*, 447 F.2d at 83; *see supra* pp. 26-33. We can find no published decision in which Interior has required a showing of profitability over the entire history of a mineral deposit in order to establish that a particular mining claim is valid. *See Mannix*, 50 IBLA at 119. To the contrary, Interior (and the courts) have expressly held that claimants need not show "that a claim can be worked at a profit or that it is more probable than not that a profitable mining operation can be brought about." *Anderson*, 57 IBLA at 261; *see supra* p. 29.

The Trust contends (at 18-20) that *Coleman* requires consideration of past costs. But the Trust points to no language in *Coleman* (or in any other case, for that matter)

that requires the consideration of past costs before a property right in a mining claim can be recognized. The Supreme Court simply stated that

> the facts of this case—the thousands of dollars and hours spent building a home on 720 acres in a highly scenic national forest located two hours from Los Angeles, the lack of an economically feasible market for the stone, and the immense quantities of identical stone found in the area outside the claims—might well be thought to raise a substantial question as to respondent Coleman's real intention.

390 U.S. at 603. This language in no way circumscribed Interior from refining its analysis to exclude the consideration of sunk costs.

Moreover, review of Interior's decision in *Coleman* makes clear that Interior did not consider the claimant's capital expenditures as part of its prudent person analysis; rather, that inquiry was related to the contest charge that the claimant had failed to satisfy the statutory requirement that a claimant complete at least $500 worth of improvements on each mining claim for which he is seeking a patent. *See United States v. Coleman*, A-28557 at 2-4, 6-8 (Mar. 27, 1962); 30 U.S.C. § 29.[7] This requirement has nothing to do with the prudent person test. *Compare* 30 U.S.C. § 29 *with* 30 U.S.C. §§ 23, 26; 2 Am. L. of Mining §§ 25.14[2][e], 35.11[4] ("The expenditure of time, effort, and money in operations on a claim is material to the claimant's subjective good faith but not to the objective determination of whether a discovery was made.").

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[7] The contest was partially based on charges that "the land in the claims [was] non mineral; that minerals had not been found in sufficient quantities to constitute a valid discovery; and that $500 had not been expended in improvements on [certain] claims." *Coleman*, A-28557 at 2.

In applying the prudent person test, Interior considered the fact that the minerals were of widespread occurrence, the paucity of sales, the lack of profit, and the limited potential market. *Coleman*, A-28557 at 5, 8-10. Interior's discussion of operating costs did not include sunk costs. *Id.* at 8-9.[8] Neither the Supreme Court's nor Interior's decision in *Coleman* requires consideration of sunk costs.

It is also worth noting that *Coleman* involved a very different situation than the one present here. There, Interior rejected an application for a 720-acre patent based on the purported discovery of a very common type of mineral and it appeared as though the claimant—who had few sales and could not make a profit from his so-called mining operations—sought to obtain title to the "highly scenic" National Forest System lands for purposes other than mining. *Coleman*, 390 U.S. at 600, 603. By contrast, there is no evidence in the record suggesting that Energy Fuels is attempting to use the 17.4-acre mine site for any purpose other than mining uranium. *See, e.g.,* 2-SER-349. Nor is Energy Fuels attempting to acquire a patent.[9] The concerns animating *Coleman* (and echoed by the Trust, at 22-23) simply are not present here.

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[8] The decision references the amortization of the costs of acquiring heavy equipment, but money spent acquiring equipment is not considered a sunk cost. *See* 3-ER-314, 325; *Armstrong*, 184 IBLA at 216-19.

[9] Because the lands at the Mine are still in federal ownership, Energy Fuels must maintain its discovery in order to continue to assert a valid existing right. The Forest Service or BLM can conduct a mineral exam (and, if warranted, initiate a contest hearing) at any time. Moreover, the VER determination does not insulate Energy Fuels from the requirement to pay annual maintenance fees, or the automatic forfeiture that would result if it failed to do so. *See* 30 U.S.C. §§ 28f, 28i.

3. Interior's interpretation is consistent with the purpose of the Mining Law.

The Trust theorizes (at 23-24, 34-35) that Interior's interpretation is contrary to the purpose of the Mining Law in that it makes it too easy for claimants to obtain title to public land for purposes other than mining. In addition to being irrelevant to this case, which does not involve patenting, this concern is largely hypothetical, as Congress has for decades imposed a moratorium on processing patent applications. *See, e.g., R.T. Vanderbilt Co. v. Babbitt*, 113 F.3d 1061, 1064 (9th Cir. 1997); Pub. L. 116-94 § 404(a) (Dec. 20, 2019). In any event, it is the interpretation advanced by the Trust that is inconsistent with the purpose of the Mining Law. The Mining Law encourages prospecting for minerals and Interior has acknowledged that much of that effort will ultimately yield no profit. *See supra* pp. 30-31. The view advanced by the Trust could discourage prospecting in areas where valuable minerals are hard to locate or extract. If various miners attempted to locate minerals in a particular area without success, others would have little incentive to try if the cost of the previous efforts would be included in determining whether they had discovered a valuable mineral deposit. The test advanced by the Trust would also be exceedingly impractical to apply. Contrary to the Trust's assertion (at 23), the government does not keep an "accounting ledger" for mineral deposits. For more than 100 years miners prospected and explored without needing to obtain authorization or even notify the government, and even today are not required to provide the government with documentation of any expenses they

have incurred (at least unless or until a mineral examination is conducted). Consequently, neither the Forest Service nor Interior could ever truly know how much money had been spent on previous efforts to locate and develop a particular mineral deposit if that money was spent by someone other than the current claimant. The Trust may wish for Interior to take a different approach, but the purpose of the Mining Law is not disserved by looking at present marketability to determine whether a property right should be recognized. Congress has entrusted Interior with the authority to ensure that the rights of the public are preserved before title to federal lands passes under the Mining Law. *See supra* pp. 6-7, 26-27.

The Trust also contends (at 21-23, 31-33) that Interior's interpretation improperly rewards speculators who imprudently fund mining work hoping for a future bonanza. But—as explained above—it is precisely the purpose of the Mining Law to encourage the exploration of minerals, including exploration that is speculative. *See supra* pp. 4-5, 31; *see also* U.S. Dep't of Agriculture, Forest Service, *Anatomy of a Mine from Prospect to Production*, INT-GTR-35 at 2 (Feb. 1995), *available at* https://www.srs.fs.usda.gov/pubs/7509 ("Only a very small percentage of prospects develop into producing mines."). To address the concerns identified by the Trust, Interior has developed the prudent person test so that it may distinguish situations in which a speculator has identified merely the potential that a mineral deposit might "at some future date" become valuable from those in which a valuable mineral deposit has already been discovered. *Barton*, 498 F.2d at 290; *Barrows*, 447 F.2d at 83; *Garcia*,

184 IBLA at 270; *see supra* pp. 30-32. The government may also initiate contest proceedings and eject those who seek to abuse the public lands, irrespective of how much money has been invested in the search for a valuable mineral deposit. *See, e.g., Coleman*, 390 U.S. at 600-03.

* * * *

In sum, it was not arbitrary for the Forest Service to apply Interior's interpretation when conducting its prudent person analysis. Interior has primary jurisdiction to interpret the Mining Law and it did so here in adjudicative decisions that have the force and effect of law. Interior's interpretation is consistent with the Mining Law. When analyzing the mining claims under the prudent person test, the Forest Service would therefore have no reason to depart from Interior's precedent. The Court should affirm the Forest Service's decision to exclude sunk costs from its analysis as reasonable.

III. Any (hypothetical) error on the part of the Forest Service is harmless.

A court should affirm an agency's action when it finds that error on the agency's part is harmless. 5 U.S.C. § 706; *Shinseki v. Sanders*, 556 U.S. 396, 406 (2009). Harmless error occurs when the error has "no bearing on the procedure used or the substance of [the] decision reached." *Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631

F.3d 1072, 1092 (9th Cir. 2011).[10] The Trust contends (at 39-56) that the Forest Service's decision not to consider sunk costs was prejudicial in that consideration of such costs might have led the agency to conclude that the mining claims did not contain a discovery and that a contest should be initiated. The Trust, however, has not met its burden of showing that the alleged error was prejudicial. *Sanders*, 556 U.S. at 409. Assuming (for the sake of argument) that the Forest Service should have considered sunk costs, its failure to do was harmless.

A. The mineral deposit in the mining claims is highly valuable and is expected to yield a substantial profit.

As explained above, p. 14, the Forest Service determined that the mineral deposit contained in the claims underlying the Mine would yield a net sum cash flow of $29,350,736 (if the uranium were sold at the conservative estimate of $56.00 per pound). 2-ER-231. The net sum cash flow "is the stream of income generated by the project as a function of time" and shows whether "the proposed mining operation would result in a profit or loss." 2-ER-231. This sum was derived by assessing the revenue from the production and sale of uranium "within the limits of the claim[s] located" on a yearly basis, and then deducting the cash operation costs of mining,

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[10] The Trust contends (at 50-56) that the district court's harmless error analysis was flawed in that it placed too high a burden on the Trust. The decision shows, however, that the district court applied the correct standard. *See* 1-ER-26-31, 37. In any event, the Court need not consider the question whether the district court applied too strict a standard because review of whether an error is harmless is de novo. *See Alaska Wilderness Recreation & Tourism Ass'n v. Morrison*, 67 F.3d 723, 727 (9th Cir. 1995)

milling, transportation, and administration. 2-ER-231. Other costs (including various taxes and capital investments) were also deducted. 2-ER-231. Among others, these costs included a $1.69 million contingency for unknown expenses. *See* 2-ER-227.

The Forest Service further discounted the net sum cash flow at three different rates to determine the net present value of the cash flow—that is, the present value of cash inflows and outflows from mining operations over a period of time. 2-ER-231. At a discount rate of 10%, the net present value was $22,250,758; at a discount rate of 15%, the net present value was $19,336,119; and at a 20% discount rate, the net present value was $16,755,429. 2-ER-231. Finally, the Forest Service balanced the net present value of expenditures against the net present value of receipts to identify the internal rate of return on the investment. 2-ER-231. The internal rate of return is used as another measure of the economic viability of the project. 2-ER-231. At a price of $56.00 per pound, the internal rate of return for the mining operation was 78%. 2-ER-231. Even at a lower price of $42.00, the Forest Service found that mining would still be profitable with an internal rate of return of 36%. 2-ER-231.

These estimates were conservative in several respects. The mineral examiners used a conservative estimate of the amount of ore that would be produced; additional ore was expected to be found once the mine shaft was completed. 2-ER-224-25. And in estimating the price per pound for uranium, the mineral examiners declined to use the highest price that they could have reasonably relied upon. The mineral examiners calculated an average price for uranium using the 36-month period preceding the

marketability dates. 2-ER-228. When applied to the June 2009 marketability date, this method produced an average uranium price of $70.79 per pound. *Id.* When applied to the January 2012 marketability date, it produced an average price of $49.69 per pound. *Id.* Energy Fuels' long-term contracts between January 2009 and January 2012 varied between $61 and $57 per pound. Its short-term prices were $52 per pound. *Id.* Instead of relying on the highest price per pound, the examiners calculated an average of the price per pound of Energy Fuels' contracts—$56 per pound—and used it in the analysis. The takeaway from the foregoing discussion is that the mineral deposit within the mining claims would result in a very profitable mine and that there is significant room to include additional expenses without changing the determination that the mining claims contained a discovery of a valuable mineral deposit and thus constituted valid existing rights exempt from the withdrawal.

B. The expenses cited by the Trust would not change the determination that the mining claims constitute valid existing rights.

The Trust cites (at 39-56) to three expenses that it asserts would have affected the Forest Service's conclusion. A review of each shows that the Trust has not met its burden to show that the consideration of sunk costs would have had any bearing on the Forest Service's determination.

The Trust first cites (at 40-44, 51-52) to an October 1987 affidavit filed by Energy Fuels' predecessor in the previous litigation stating that $8.2 million would be spent in "exploration and site preparation activities" through 1987. 3-ER-353. The

Trust asserts that, with inflation, the amount would equal $16.1 million in 2012. As an initial matter, the Forest Service looked at validity as of July 2009, when the lands at issue were segregated by publication of the withdrawal proposal. Therefore, for purposes of the argument, the correct sum adjusted for inflation through July 2009 would have been $15.3 million.[11]

There are other problems with the Trust's reliance on this affidavit. First, the affidavit does not establish what portion of the $8.2 million sum was actually spent. 3-ER-351, 353. And there is no way for the Forest Service to know with any certainty because claimants are not required to provide ongoing receipts or accounting for funds spent on exploration. *See supra* pp. 42-43. Second, the affidavit was not meant to be used in a mineral exam to determine whether valid existing rights exist. It accordingly includes expenses that are not typically considered in the prudent person analysis. Of the $8.2 million in expenses, approximately $4 million was apparently incurred between 1978 and 1985, during the "exploration phase" of the Mine. 2-ER-349. Exploration costs are not considered in assessing whether there has been a discovery of a valuable mineral deposit because those costs are incurred in order to *identify* a mineral deposit—before the prudent person test comes into play. *See supra* pp. 30-31; *see also* 2-ER-324-27 (nowhere identifying pre-discovery costs to include in the prudent person and marketability analysis). The affidavit further explained that

[11] See Bureau of Labor Statistics, CPI Inflation Calculator (Apr. 5, 2021) available at https://www.bls.gov/data/inflation_calculator.htm.

$600,000 had been spent on permitting the mine (including developing the plan of operations), and anticipated that $3.5 million would be spent in connection with site preparation activities in 1987. 3-ER-351. The affidavit therefore can be understood to state that Energy Fuels' predecessors spent *at most* $4.1 million in costs that could be included as sunk costs in the Forest Service's analysis. Adjusted for inflation through July 2009, this amounts to $7.65 million. Deducting $7.65 million from the anticipated $29.35 million net sum of cash flow projected by the Forest Service would still yet a net sum of cash flow of $21.7 million.

The Trust contends (at 47-50) that the Forest Service's financial model would not have simply deducted the costs from the net sum of cash flow and that this warrants remand. It is true that mere subtraction of sunk costs from the net sum cash flow oversimplifies the agency's analysis. Nevertheless, this exercise demonstrates that consideration of the costs identified by the Trust would not change the agency's determination. Even assuming the Forest Service applied further discount rates to the net sum cash flow of $21.7 million, the pre-discounted sum is so substantial that it is clear that the mining operations would still be profitable (and the mining claims would still be found to be valid existing rights exempt from the withdrawal). The sum exceeds by several million dollars the low end of the lowest 2012 value that the Forest Service assigned to future cash flows ($16.8 million) and still concluded would be profitable. *See* 2-ER-231. With such a substantial anticipated profit, there is no

support for the Trust's assertion that the methods used by the Forest Service to account for the time value of money would change the agency's determination.

The Trust also asks (at 44-45, 53-54) this Court to consider a 2013 declaration stating that Energy Fuels "spent in excess of $6 million acquiring, developing, permitting, and operating" the Mine (since 1997) and that its predecessors spent more than that. 2-ER-206-07. This declaration is extra-record and therefore outside of the Court's scope of review. *See San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 992 (9th Cir. 2014). It was also prepared for litigation purposes—not for use in a mineral exam—and therefore does not delineate how much of the $6 million would be attributable to exploration (or how much of the $6 million was spent after the relevant marketability dates). Most important, considering both the aforementioned costs identified in the 1987 affidvait *and* the $6 million identified in the 2013 declaration (as the Trust asks) would effectively double-count money that two different companies spent on the same activities. This is because the cost of "acquiring" the Mine necessarily included the costs of acquiring the existing capital improvements. Those capital improvements would be accounted for in the $4.1 million (in 1987 dollars) identified in the 1987 affidavit. Even if it were appropriate to consider sunk costs, the Trust presents no reason why it would be appropriate to count the same costs twice. If anything, this approach would be inconsistent with the prudent person test's focus on objectively evaluating the costs that an ordinary person would spend to develop a paying mine. *See supra* pp. 38-39.

Regardless, assuming the Court were to consider the $6 million that Energy Fuels spent and assuming (most favorably to the Trust) that Energy Fuels spent all $6 million in 1997, this amount would be equivalent to $8.1 million in July 2009. Deducting $8.1 million from the anticipated $29.35 million net sum of cash flow projected by the Forest Service would still yet a net sum of cash flow of $21.25 million. Again, this figure is still several million dollars higher than the lowest 2012 value that the Forest Service assigned to future cash flows.

Finally, the Trust contends (at 45-47) that the exclusion of sunk costs from the analysis becomes more prejudicial when considering the district court's assumption that the Forest Service did not consider approximately $261,000 in environmental expenses (adjusted for inflation) related to monitoring and wildlife conservation measures, 1-ER-21-24, 29-30. As an initial matter, the Forest Service did include these costs in its analysis. While it is true that the agency did not specifically identify individual costs of groundwater monitoring and wildlife conservation measures, the Trust points to no law that required the agency to have done so. BLM's Handbook, which the Forest Service followed, requires the consideration of environmental compliance costs. 2-ER-325. Those costs were included in the agency's consideration of operating costs and costs related to permitting and surface facilities. *See* 2-ER-226-28; 3-SER-772-78. In any event, considering an additional $216,000 (or even $1 million—as the Trust suggests, p. 46) in costs would not affect the agency's determination. Deducting $1 million from the net sum cash flow of $21.25 million

would still yield a net sum cash flow of $20.25 million. This is still almost three million dollars more than the lowest 2012 value assigned by the agency to future cash flows.

As the district court correctly found, the Trust has not shown that consideration of sunk costs would have any bearing on the Forest Service's conclusion that a person of ordinary prudence would be justified in the further expenditure of resources, with a reasonable prospect of success in developing a valuable mine.

CONCLUSION

For the foregoing reasons, the judgment of the district court should be affirmed.

Respectfully submitted,

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April 5, 2021
DJ: 90-1-4-13931

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ADDENDUM

Mining Law, 30 U.S.C. § 22, 23, 26 (2012) 1a

Marketability Rule, M-36642, 69 Interior Dec. 145, 146 (1962) 4a

United States v. Coleman, A-28557 (Mar. 27, 1962) 7a

United States v. Collord, I-20886 (Feb. 23, 1989) 18a

United States v. Mannix, MT-31412 (Feb. 14, 1979) 44a

committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a committee established by the Congress, its duration is otherwise provided by law. Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law. See section 14 of Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

CHAPTER 2—MINERAL LANDS AND REGULATIONS IN GENERAL

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§ 21. Mineral lands reserved

In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law.

(R.S. § 2318.)

CODIFICATION

R.S. § 2318 derived from act July 4, 1866, ch. 166, § 5, 14 Stat. 86.

§ 21a. National mining and minerals policy; "minerals" defined; execution of policy under other authorized programs

The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs, (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources, and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

For the purpose of this section "minerals" shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium.

It shall be the responsibility of the Secretary of the Interior to carry out this policy when exercising his authority under such programs as may be authorized by law other than this section.

(Pub. L. 91–631, title I, § 101, formerly § 2, Dec. 31, 1970, 84 Stat. 1876; Pub. L. 104–66, title I, § 1081(b), Dec. 21, 1995, 109 Stat. 721; renumbered title I, § 101, Pub. L. 104–325, § 2(1), (2), Oct. 19, 1996, 110 Stat. 3994.)

AMENDMENTS

1995—Pub. L. 104–66 in last par. struck out at end "For this purpose the Secretary of the Interior shall include in his annual report to the Congress a report on the state of the domestic mining, minerals, and mineral reclamation industries, including a statement of the trend in utilization and depletion of these resources, together with such recommendations for legislative programs as may be necessary to implement the policy of this section."

SHORT TITLE

Pub. L. 91–631, § 1, Dec. 31, 1970, 84 Stat. 1876, provided: "That this Act [enacting this section] may be cited as the 'Mining and Minerals Policy Act of 1970'."

§ 22. Lands open to purchase by citizens

Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

(R.S. § 2319.)

CODIFICATION

R.S. § 2319 derived from act May 10, 1872, ch. 152, § 1, 17 Stat. 91.

Words "Except as otherwise provided," were editorially supplied on authority of act Feb. 25, 1920, ch. 85, 41 Stat. 437, popularly known as the Mineral Lands Leasing Act, which is classified to chapter 3A (§ 181 et seq.) of this title.

SHORT TITLE

Sections 22 to 24, 26 to 28, 29, 30, 33 to 35, 37, 39 to 43, and 47 of this title are based on sections of the Revised Statutes which are derived from act May 10, 1872, ch. 152, 17 Stat. 91, popularly known as the "General Mining Act of 1872" and as the "Mining Law of 1872".

§ 23. Length of claims on veins or lodes

Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, located prior to May 10, 1872, shall be governed as to length along the vein or lode by the customs, regulations, and laws in force at the date of their location. A mining claim located after the 10th day of May 1872, whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface, nor shall any claim be limited by any mining regulation to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the 10th day of May 1872 render such limitation necessary. The end lines of each claim shall be parallel to each other.

(R.S. § 2320.)

CODIFICATION

R.S. § 2320 derived from act May 10, 1872, ch. 152, § 2, 17 Stat. 91.

§ 24. Proof of citizenship

Proof of citizenship, under sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title and section 661 of title 43, may consist, in the case of an individual, of his own affidavit thereof; in the case of an association of persons unincorporated, of the affidavit of their authorized agent, made on his own knowledge, or upon information and belief; and in the case of a corporation organized under the laws of the United States, or of any State or Territory thereof, by the filing of a certified copy of their charter or certificate of incorporation.

(R.S. § 2321.)

REFERENCES IN TEXT

Sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title and section 661 of title 43, referred to in text, were in the original "this chapter", meaning chapter 6 of title 32 of the Revised Statutes, consisting of R.S. §§ 2318 to 2352.

CODIFICATION

R.S. § 2321 derived from act May 10, 1872, ch. 152, § 7, 17 Stat. 94.

§ 25. Affidavit of citizenship

Applicants for mineral patents, if residing beyond the limits of the district wherein the claim

is situated, may make any oath or affidavit required for proof of citizenship before the clerk of any court of record or before any notary public of any State or Territory.

(Apr. 26, 1882, ch. 106, §2, 22 Stat. 49.)

§26. Locators' rights of possession and enjoyment

The locators of all mining locations made on any mineral vein, lode, or ledge, situated on the public domain, their heirs and assigns, where no adverse claim existed on the 10th day of May 1872 so long as they comply with the laws of the United States, and with State, territorial, and local regulations not in conflict with the laws of the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations. But their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges. Nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim to enter upon the surface of a claim owned or possessed by another.

(R.S. §2322.)

CODIFICATION

R.S. §2322 derived from act May 10, 1872, ch. 152, §3, 17 Stat. 91.

§27. Mining tunnels; right to possession of veins on line with; abandonment of right

Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel, to the same extent as if discovered from the surface; and locations on the line of such tunnel of veins or lodes not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

(R.S. §2323.)

CODIFICATION

R.S. §2323 derived from act May 10, 1872, ch. 152, §4, 17 Stat. 92.

SHORT TITLE

This section is popularly known as the Tunnel Site Act.

§28. Mining district regulations by miners: location, recordation, and amount of work; marking of location on ground; records; annual labor or improvements on claims pending issue of patent; co-owner's succession in interest upon delinquency in contributing proportion of expenditures; tunnel as lode expenditure

The miners of each mining district may make regulations not in conflict with the laws of the United States, or with the laws of the State or Territory in which the district is situated, governing the location, manner of recording, amount of work necessary to hold possession of a mining claim, subject to the following requirements: The location must be distinctly marked on the ground so that its boundaries can be readily traced. All records of mining claims made after May 10, 1872, shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. On each claim located after the 10th day of May 1872, that is granted a waiver under section 28f of this title, and until a patent has been issued therefor, not less than $100 worth of labor shall be performed or improvements made during each year. On all claims located prior to the 10th day of May 1872, $10 worth of labor shall be performed or improvements made each year, for each one hundred feet in length along the vein until a patent has been issued therefor; but where such claims are held in common, such expenditure may be made upon any one claim; and upon a failure to comply with these conditions, the claim or mine upon which such failure occurred shall be open to relocation in the same manner as if no location of the same had ever been made, provided that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such location. Upon the failure of any one of several coowners to contribute his proportion of the expenditures required hereby, the coowners who have performed the labor or made the improvements may, at the expiration of the year, give such delinquent co-owner personal notice in writing or notice by publication in the newspaper published nearest the claim, for at least once a week for ninety days, and if at the expiration of ninety days after such notice in writing or by publication such delinquent should fail or refuse to contribute his proportion of the expenditure required by this section, his interest in the claim shall become the property of his co-owners who have made the required expenditures. The period within which the work required to be done annually on all unpatented mineral claims located since May 10, 1872, including such claims in the Territory of Alaska, shall commence at 12:01 ante meridian on the first day of September succeeding the date of location of such claim.

Where a person or company has or may run a tunnel for the purposes of developing a lode or lodes, owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, whether located prior to or since May 10, 1872;

UNITED STATES DEPARTMENT OF THE INTERIOR

Stewart L. Udall, *Secretary*

Frank J. Barry, *Solicitor*

DECISIONS OF THE UNITED STATES DEPARTMENT OF THE INTERIOR

Edited by
E. M. Kimball
Vera E. Burgin

VOLUME 69

JANUARY–DECEMBER 1962

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1963

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. - Price $1.75

Therefore, pursuant to authority delegated to the Solicitor by the Secretary of the Interior [sec. 210.2.2A (3) (a), Departmental Manual, 24 F.R. 1348], the action of the Superintendent, disapproving the will dated October 12, 1953, and the codicil thereto dated August 3, 1954, is affirmed, and the appeal is dismissed.

EDWARD W. FISHER,
Deputy Solicitor.

MARKETABILITY RULE

Mining Claims: Determination of Validity

When a nonmetallic mineral is not of extremely wide occurrence and when a general demand for that mineral exists, it may be enough, instead of showing an actually existing market for the products of that particular mine, to show that a general market for the substance exists of a type which a reasonably prudent man would be justified in regarding as one in which he could dispose of those products.

M-36642 *September 20, 1962*

To: ASSISTANT SECRETARY, PUBLIC LAND MANAGEMENT.

SUBJECT: REVIEW OF THE "MARKETABILITY RULE" AS APPLIED TO THE LAW OF DISCOVERY.

Your memorandum to the Secretary requesting a review of this rule has been referred to this office for reply.

After giving careful consideration to this subject, it is our conclusion that there is no basis for making any change in the test which the Department applies to mining claims in determining whether there has been a valid discovery. However, we believe that, since our decisions may have been misunderstood and an undue rigidity may have been ascribed to them, we should explain the position taken.

The test which we apply, the prudent man test, is based upon the provision in R.S. 2319 (30 U.S.C. sec. 22) that only "valuable mineral deposits" may be located. A valuable mineral deposit, it has been held, is one the discovery of which would justify a man of ordinary prudence in the further expenditure of time and money with a reasonable prospect of success in the effort to develop a paying mine.

Castle v. *Womble*, 19 L.D. 455 (1894); *Chrisman* v. *Miller*, 197 U.S. 313 (1905).

The marketability rule about which you have particularly asked our views is merely one aspect of this test. The Department and the courts have, we believe, rightly held that a prudent man would not be justified in developing a mineral deposit if the extracted minerals were not marketable. This marketability test is in reality applied to all minerals, although it is often mistakenly said to be applied solely to nonmetallic minerals of wide occurrence. Many minerals are deemed intrinsically valuable.

An intrinsically valuable mineral by its very nature is deemed marketable, and therefore merely showing the nature of the mineral usually meets the test of marketability. On the other hand, where we are concerned with a nonmetalic mineral found in a great many places, application of the prudent man test requires that a market for the mineral be shown by the locator. The extreme example is probably sand and gravel, which are found in every State. There is a demand for sand and gravel, but in many areas the available deposits far exceed the market. In such cases we must insist that the locator show that there is a market actually existing for his minerals. To validate any sand and gravel claim proof of present marketability must be clearly shown.

Other cases fall between the two extremes of the intrinsically valuable mineral on the one hand and sand and gravel on the other hand. Each case must be judged on its own merits. When a nonmetallic mineral is not of extremely wide occurrence and when a general demand for that mineral exists, it may be enough, instead of showing an actually existing market for the products of that particular mine, to show that a general market for the substance exists of a type which a reasonably prudent man would be justified in regarding as one in which he could dispose of those products.

There are two points which we wish to stress. The first is that the marketability test is only one aspect of the prudent man test, albeit a very important aspect since in the absence of marketability no prudent man would seem justified in the expenditure of time and money. The second is that each case must be judged on its own facts. Too rigid application of rules mistakenly interpreted from departmental decisions could lead to incorrect decisions in the field.

FRANK J. BARRY,
Solicitor.

UNITED STATES
V.
ALFRED COLEMAN

A-28557 Decided MAR 27 1962

Mining Claims: Common Varieties of Minerals--Mining Claims: Discovery--Mining Claims: Determination of Validity

To satisfy the requirement for a discovery on a building stone claim located before July 23, 1955, it must be shown that the exposed materials, a common variety of stone, appearing within the limits of a claim could have been extracted, removed, and marketed at a profit prior to that date, and where such a showing is not made the mining claim is properly declared null and void.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

A-28557

United States v. Alfred Coleman	: Contest No. 6833 (Los Angeles); mineral patent application, Los Angeles 0137951. : Placer mining claims held valid in part and null and void in part. : Affirmed in part; reversed in part.

APPEAL FROM THE BUREAU OF LAND MANAGEMENT

Alfred Coleman has appealed to the Secretary of the Interior from a decision of the Acting Director of the Bureau of Land Management dated June 22, 1960, which modified a hearing examiner's conclusion holding null and void 13 of the 18 placer mining claims and holding the remaining 5 claims to be valid. The Acting Director held an additional claim and 20 acres of another, null and void, thus sustaining the validity of only 3 claims and part of a fourth claim.

The claims, which comprise 720 acres situated in the dry bed of Baldwin Lake and on an adjoining steep mountain, are in the San Bernardino National Forest in California. They were located for quartzite which outcrops on all the claims and is thought to extend 1000 feet below the surface. The claims, designated as the Baldwin Lake Quarry Claims Nos. 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20, were located and relocated in the

period 1949-1955. Application for patent was filed in January 1956, and on February 25, 1958, a contest was commenced on charges that the land in the claims is nonmineral; that minerals had not been found in sufficient quantities to constitute a valid discovery; and that $500 had not been expended in improvements on claims 7, 9, 11, 12, 13, 14, 15, 16, 17, 18 and 19. A hearing was held on September 16, 1958.

At the hearing, Coleman testified that he had devoted all of his time and effort to development of the claims during the 10 years since the location. He said, however, he felt that proper development would require removal of rock from the top of the mountain downward and, therefore, he had devoted his efforts to the construction of a home which would permit him to live on one of the claims, to the development of sewage disposal facilities and a water supply for domestic use and for quarrying and processing operations at a later time, and to the building of roads to provide access to the higher claims. He used weathered rock fragments in the construction of his house and in fencing the area of the spring and for fill in the dwelling area. He sold an estimated 1000 tons over the 10-year period, but did not attempt to commence active quarrying operations although he installed some rock processing equipment. He said that he needed title to all of the claims to be able to provide a complete range of colors of ornamental rock for construction use and as security for loans that he might need

in the future, as well as for proper development of the claims. He said he did not want to attempt extensive sales until he was fully equipped to offer a wide selection of colors and certain delivery. Shortly before the hearing, he entered into a lease permitting his lessee to process and dispose of sand, gravel and other severed rock products not including building stone. The lessee testified that he installed his own equipment and that he sold in excess of $4000 worth of sand, gravel, lateral rock for septic tank leaching fields and fill material in the first 2½ months of operations under the lease.

Coleman did not controvert the charge that less than $500 worth of work had been done on many of the claims, but he contended that the requirements of the mining laws had been met by the placing on some of the claims of extensive improvements which are of value to all of them. On cross examination, he gave what he termed as wild estimates of the value of the improvements placed on and of the materials removed from all of the claims. His total valuation for improvements on the 18 claims was $17,200; for materials removed $15,990. He admitted that the improvements on 11 of the claims did not exceed $150 in value. He claimed $1500 on 3 claims, $4000 for roadwork on one claim; and $6500 for his combined home, garage and shop on one of the claims. On the remaining 2 claims, he gave values of $200 and $750. He also admitted no removals of rock or rock products from 6 of the claims; removals valued at $60 from one claim;

from $100 to $120 from 3 claims; $240, $250 and $350 from 3 others; $1350, $1500 (from each of 2 claims) and $2000 from 4 more; and $8400 from one over the 10-year period.

The government's witnesses testified that there are large quantities of quartzite of various colors on the claims and in the area of 28,000 acres of which the claims are a part; that such rock can be used for construction purposes; that there is not a great demand for it because it is very heavy and, therefore, expensive to handle; that it splits unpredictably so that there is a great deal of waste which can be utilized for gravel only with considerable expense for crushing because of its hardness; and that it cannot be split into thin layers for facing and surfacing, which greatly increases the weight of the quantity of material required for covering a given area over the requirements for other accessible rock. Coleman's estimate of sales amounting to $12,000 over a 10-year period was not questioned, nor his report of sales amounting to $1025 in 1957, but a government's witness stated that he felt that the roads on the claims evidenced lesser values than Coleman claimed. He concluded that the possible demand for rock from the claims and the evident increasing difficulty of producing disposable rock as the more usable fractions are removed could not justify a prudent man in spending time and money with a reasonable chance of success in developing a valuable enterprise.

The hearing examiner summarized all of the evidence presented at the hearing, noting the very widespread occurrence of the stone claimed as a discovery, the limited potential market and the paucity of the claimant's sales. He concluded, however, that the Colemans[1/] had "established a limited market for the types of building stone found upon their claims" and had in good faith developed claims numbered 1, 4, 5, 8 and 10. He, therefore, declared these 5 claims validated by discovery and the 13 other claims null and void. On appeal, the Acting Director noted that Coleman's sales have not afforded him any recompense for his continuous labor over a 10-year period, but concluded that there is a market for a limited amount of building stone from 3 claims and a portion of one other claim that are most fully developed, and from which the bulk of his sales have been made, so that continued sales at the rate shown for the first 10 years of operations will produce a profit over and above the value of Coleman's labor in removing the stone from these claims. Accordingly, he approved the examiner's judgment as to a valid discovery on claims numbered 1, 5, 8 and the portion of No. 10 described as the $N\frac{1}{2}SE\frac{1}{4}NW\frac{1}{4}$ of section 7, T. 2N., R. 2 E., S. B. M. He added claim No. 4 and the west one-half of claim No. 10 to the list of null and void claims.

1/ The contest was brought against Mr. and Mrs. Coleman but Mrs. Coleman died while the appeal was pending before the Director.

In its successive appeals from the validation of some of the claims, the Forest Service has contended that there has been no discovery of a valuable mineral deposit on any of them because of Coleman's inability to sell anything removed from the claims at a price which includes the reasonable value of his labor. It points out that because the claims are located in a national forest, the evidence of their validity should be clear and unequivocal, citing the Department's decision in United States v. Duvall, 65 I. D. 458, 661 (1958).

In his appeals, Coleman contends that the charges against his claims of nonmineral land and no discovery have no validity in view of the 720 acres of solid rock fully exposed to view and that his evidence of improvements shows clearly that sufficient expenditures have been made on some of the claims for the benefit of all of the claims. He urges that the charges be dropped and that the land office conclude the patent proceedings without further delay.

It is well-established that a mining claimant is entitled to a patent to his mining claim if he has made a discovery of a valuable mineral deposit within the limits of the claim (30 U. S. C., 1958 ed., secs. 23, 35). The act of August 4, 1892 (30 U. S. C., 1958 ed., sec. 161), expressly authorizes the location of mining claims for building stone. Therefore, it was essential in this contest that Coleman show that he has made a discovery of building stone within the limits of his claims. This Department held early

in the history of proceedings under the mining laws that a validating discovery is shown by reasonable evidence of a finding of minerals of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine (Castle v. Womble, 19 L. D. 455 (1894)), and this standard has been sanctioned by the courts. Chrisman v. Miller, 197 U. S. 313 (1905); Cameron v. United States, 252 U. S. 450 (1920); Foster v. Seaton, 271 F. 2d 836 (D. C. Cir. 1959). When the mineral claimed as a discovery is one of wide occurrence the Department has held that the characterization of a deposit of such material as a valuable mineral is dependent upon a showing that it can be extracted, removed and marketed at a profit. Layman et al. v. Ellis, 52 I. D. 714 (1929); United States v. Barngrover et al., 57 I. D. 533 (1942); see also Ickes v. Underwood, 141 F. 2d 546, 549 (D. C. Cir. 1944). To justify his possession of public land, the mineral locator must show that by reason of accessibility, bona fides in development, proximity to market, existence of present demand and other factors, a deposit of materials such as building stone or sand and gravel is of such value that it can be processed, removed and disposed of at a profit. Solicitor's opinion, 54 I. D. 294, 296 (1933); United States v. Strauss et al., 59 I. D. 129 (1945); United States v. Foster et al., 65 I. D. 1 (1958), aff'd Foster et al. v. Seaton, supra. See also United States v. Estate of Hanny, 63 I. D. 369,

373 (1956); United States v. Black, 64 I. D. 93, 96 (1957); United States v. Fife et al., A-28386 (September 19, 1960).

Furthermore, since the Congress withdrew common varieties of building stone, sand and gravel from location under the mining laws on July 23, 1955 (30 U. S. C., 1958 ed., sec. 611), it was incumbent upon Coleman to show that all the requirements for discovery of a valuable mineral deposit, including a showing that these materials could have been extracted, removed, and marketed at a profit, had been met by that date. United States v. Fife, et al., (supra).

In view of the immense quantities of identical stone found in the area outside the claims, the stone must be considered a "common variety" within the meaning of the act.

It is very clear that Coleman did not make the showing required as to the undeveloped claims which the Acting Director declared to be null and void. Whether expenditures for improvements on other claims may or may not be credited to these claims is immaterial because it is abundantly clear that there was no marketing of any products from these claims in 1955 or even in 1958 when the hearing was held. Coleman presented evidence of sales from the four claims upon which the bulk of his improvements were placed. However, he admitted that he did not make any profit on his rock sales. He testified to estimated removals of rock, not all of which was sold, valued at $15,990. He also testified to labor on the claims (more than 3000 days from 12 to 18 hours in length at

$3.50 per hour) of the value of at least $157,500. (Tr. 116, 117.)[2/] It is not clear that his estimate of the value of his labor included the costs of obtaining and operating the equipment by which it was accomplished; in the absence of an explanation it is reasonable to assume that $3.50 per hour was not intended to cover the use of trucks, bulldozer and blasting equipment. But even if it were possible to amortize the costs of acquiring his heavy equipment, the great disparity between his own estimate of the value of the mineral actually marketed from the claims and the costs of doing so indicates the absence of any element of profit.

The only issue in dispute at the hearing on September 16, 1958, was the existence of a market for profitable sales before July 23, 1955. The testimony of the government's mineral examiner, describing an examination of the claims in Coleman's company and of his sales records, and that of a producer and distributor of stone products, describing the market for rock and stone in southern California, are sufficient to constitute a prima facie showing of invalidity. The burden was upon Coleman to show by a preponderance of the evidence that each of his claims was validated by a discovery of a valuable mineral deposit within its boundaries. Foster v. Seaton, supra. He was required to show that by reason of all pertinent factors, including the existence of a present demand before July 23,

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2/ This reference is to the pages of the transcript of the testimony offered at the hearing.

1955, the deposit upon which his claim of discovery was based could be mined, removed and disposed of at a profit. See United States v. Philip Jungert, A-28199 (April 14, 1960); United States v. Jacobo Armenta et al., A-28248 (June 22, 1960). I am unable to find evidence which supports such conclusion as to any of the claims.

Therefore, pursuant to the authority delegated to the Solicitor by the Secretary of the Interior (sec. 210.2.2A(4)(a), Departmental Manual; 24 F. R. 1348), the decision of the Acting Director is affirmed in so far as that decision held 14½ of Coleman's Baldwin Lake quarry mining claims null and void and reversed in so far as it held 3½ of his claims validated by discovery. All of the Baldwin Lake quarry placer mining claims are hereby held to be null and void.

Edward W. Fisher

DEPUTY Solicitor

United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS
HEARINGS DIVISION
6432 FEDERAL BUILDING
SALT LAKE CITY, UTAH 84138-1194
(PHONE: 801-524-5344)

February 23, 1989

UNITED STATES OF AMERICA, Contestant v. JAMES COLLORD and MARJORIE COLLORD, Contestees — — — — — — IDAHO CONSERVATION LEAGUE, INC., Intervenor-Protestant	:	Contest Number I-20886 Involving the Golden Bear Nos. 1 and 2 lode mining claims and the Lost Dutchman and Golden Bear Millsites, situated in Sections 5, 7, and 8, T. 21 N., R. 11 E., Boise Meridian, Valley County, Idaho, within the Payette National Forest.

DECISION

Appearances: Erol R. Benson, Esq., Office of the General Counsel, U.S. Department of Agriculture, Ogden, Utah, for contestant;

Jeffrey C. Fereday, Esq., Givens, McDevitt, Pursley, Webb & Buser, Boise, Idaho, for contestees.

James C. Weaver, Esq., Law Offices of Steven J. Millemann, McCall, Idaho, for intervenor-protestant.

Before: Administrative Law Judge Sweitzer

This proceeding involves the validity of two lode mining claims and two associated millsite claims located under the General Mining Law of 1872, as amended, 30 U.S.C. § 22 et seq. within the Payette National Forest, Valley County, Idaho. The area including these claims was designated as part of the Frank Church--River of No Return Wilderness Area pursuant to Section 3 of The Central Idaho Wilderness Act of 1980, Pub. L. No. 96-312, as amended,

94 Stat. 498, and withdrawn from mineral entry as of midnight December 31, 1983, pursuant to Section 4(d)(3) of the Wilderness Act of 1964, 78 Stat. 890, 894-895. Contestees' application for patent to these claims is pending.

The United States of America, acting by and through the Idaho State Office, Bureau of Land Management, U.S. Department of the Interior, at the request and on behalf of the U.S. Forest Service, Department of Agriculture, initiated this proceeding by contest complaint dated February 25, 1987, pursuant to 43 CFR 4.451. The complaint alleges:

a. Minerals have not been found within the limits of Golden Bear No. 1 and Golden Bear No. 2 lode claims in sufficient quantity and quality to constitute a valid discovery within the meaning of the mining laws.

b. The Golden Bear No. 1 and Golden Bear No. 2 lode claims do not exhibit a discovery of a valuable mineral deposit as of the January 1, 1983[1] closure date of the Frank Church--River of No Return Wilderness and as of the June 20, 1985, mineral examination date.

c. The Lost Dutchman Millsite and Golden Bear Millsite have no reduction mill or reduction works thereon.

d. The Lost Dutchman Millsite and the Golden Bear Millsite are not needed, used, or occupied by the claimants for mining, milling, processing, beneficiation purposes, or other operations in connection with any valid mining claim.

e. Neither the Lost Dutchman Millsite nor the Golden Bear Millsite contains a custom mill or reducing works.

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[1] The date properly should be January 1, 1984, in accordance with the provisions of Section 4(d)(3) of the Wilderness Act of 1964. See, e.g., Tr. 307, 315-316; see also, Tr. 698. Contestees do not appear to have been prejudiced in the presentation of their case by the erroneous date.

Background

James Collord located the subject lode mining and millsite claims on September 1, 1979, within the Payette National Forest. At the time Mr. Collord located the claims they were situate in an area of the Forest designated as "primitive." Subsequently the area has been redesignated "wilderness." Under both classifications access has been restricted and proposals to construct a road to the claims (over a distance of some 10 miles) have been rejected.

Contestees applied for patent to the claims in May 1984. On January 12, 1987, the Idaho Conservation League, Inc., filed a protest against issuance of patent to the claims. Subsequently, the Wilderness Society also filed a protest against the Collords' patent application on January 15, 1987, as did the Colombia River Inter-Tribal Fish Commission on February 23, 1987.

Meanwhile, based upon examinations of the claims conducted by its forest mineral examiners, the U.S. Department of Agriculture recommended by letter dated February 18, 1987, that the claims not be cleared for patent and that validity contests should be initiated against them. The validity contest complaint issued February 25, 1987.

Although none of the protestants was an initial party to the contest, each was mailed a courtesy copy of the complaint. Only the Idaho Conservation League (ICL) sought and was granted permission to intervene.[2]

Hearing was held pursuant to notice in Boise, Idaho, on June 20-22, 1988, and July 13-15, 1988, inclusive. At the close of the hearing, the participants were granted an opportunity to file written briefs. Both parties have done so; ICL has merely indicated its support for contestant's position. Subsequently, contestees proposed several corrections to the transcript, which were approved by my Order dated September 7, 1988. Thereafter, contestees also sought permission to file proposed findings of fact and

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[2] ICL petitioned for permission to intervene as a party to the contest on April 27, 1987. During the extensive briefing of the issues, ICL clarified that it did not seek to intervene as a contestant but rather as a protestant. My Order dated July 2, 1987, granted limited intervention, sufficient to participate in the proceedings, but without deciding if such intervention would afford ICL standing to appeal any ruling contrary to its perceived interests. (See also Tr. 1265.)

conclusions of law after the time set for filing briefs had run. My Order dated October 6, 1988, afforded all parties an opportunity to file proposed findings of fact and conclusion of law. Only contestees did so. In the interests of clarity and brevity, I decline to address each proposed finding and conclusion separately. United States v. Corns, 53 IBLA 5 (1981). Where appropriate, portions of the parties' briefs and proposed findings may be incorporated herein verbatim without attribution.

Applicable Law

A mining claimant acquires no vested rights to a mining claim vis-a-vis the United States unless and until the claim is shown to be supported by a discovery of a valuable mineral deposit within the boundaries of the claim. 30 U.S.C. § 23; United States v. Coleman, 390 U.S. 599 (1968). The mining claimant must establish a discovery for each mining claim he seeks to validate. United States v. Williamson, 45 IBLA 264, 87 I.D. 34 (1980). In the lexicon of mining law, a "discovery" is the exposure of a locatable mineral deposit that contains commercially valuable mineralization in such quantity and of such quality as to warrant the further expenditure of labor and means by a person of ordinary prudence in the reasonable expectation of developing a profitable mining operation. Chrisman v. Miller, 197 U.S. 313 (1905); Castle v. Womble, 19 L.D. 455 (1894). This so-called "prudent man test" has been refined by the so-called "marketability test" (See, e.g., Solicitor's Opinion, 54 I.D. 294 (1933)) which requires that the commercial value of the mineral deposit presently exposed exceed the costs of extracting, processing, transporting and marketing the deposit. The "marketability test" has also been approved by the highest court. United States v. Coleman, 390 U.S. 599 (1968).

The "prudent man test" is objective, not subjective. Although a particular mining claimant may be willing to work a claim for a meager return, it does not follow that a person of ordinary prudence would be justified in so doing. United States v. Johnson, 59 IBLA 207 (1981); United States v. Slater, 34 IBLA 31 (1978); United States v. Barrows, 76 I.D. 299 (1969), aff'd sub nom., Barrows v. Hickel, 447 F.2d 80 (9th Cir. 1971).

A sharp distinction is drawn between the discovery of a valuable mineral deposit and the mere detection of a valuable mineral or mineralization that may warrant further prospecting or exploration with the hope of finding a valuable deposit. Clearly, a discovery has not been made under the mining law simply because the facts might warrant

the continued search for such a deposit or further efforts to ascertain whether the extent and quality of mineralization might be sufficient to justify mining. Barton v. Morton, 498 F.2d 288 (9th Cir. 1974); United States v. Wood, 51 IBLA 301, 87 I.D. 628 (1980).

Where land is withdrawn from location under the mining laws subsequent to the location of a mining claim, in order for the claim to be valid, all requirements of the mining laws, including discovery of a valuable mineral deposit, must have been met as of the date of the withdrawal (and also as of the date of the hearing).[3] The rule was set out with some elaboration in United States v. Wichner, 35 IBLA 240 (1978):

> The cases are legion which firmly establish the principle that where a mining claim occupies land which has been subsequently withdrawn from the operation of the mining laws the validity of the claim must be tested by the value of the mineral deposit as of the date of the withdrawal, as well as of the date of the hearing. * * * If the claim was not supported at the dates of the segregation and withdrawal by a qualifying discovery of a valuable mineral deposit, the land within its boundaries would not be excepted from it and the claim could not thereafter become valid even though the value of the deposit increased due to a change in the market.[4]

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[3] The Board recognized in U.S. v. Whittaker (On Reconsideration), 102 IBLA 162 (1988) that in a patent contest, such as this, the inquiry properly focuses on the date of withdrawal and the date of issuance of final certificate, if any. If no final certificate has issued, the inquiry properly focuses on the dates set forth in the text accompanying this note.

[4] This statement of the law has since been refined to allow for historic price and cost factors as in the cyclic fluctuations in the value of gold. In re Pacific Coast Molybdenum, 75 IBLA 16, 90 I.D. 352, 359-361 (1983). Furthermore, the "prudent man" test does not require a guarantee of success, but only a reasonable prospect of developing a market and paying mine. United States v. Foresyth, 100 IBLA 185, 227, 94 I.D. 453 (1987). Nevertheless, it remains true that a qualifying discovery must be made prior to the date of withdrawal.

Id. at 243; see also United States v. Pool, 74 IBLA 37, 41 (1983), citing Cameron v. United States, 252 U.S. 450 (1920). The effect of a withdrawal of public land is to preclude any further acquisition of rights by private parties in such lands. See United States v. Heirs of John D. Stack, A-28157 (March 28, 1960).

When the Government contests the validity of a mining claim on the basis that there is no discovery of a valuable mineral deposit, it bears only the initial burden of establishing a prima facie case that such a discovery has not been made within the boundaries of the claim. United States v. Zweifel, 508 F.2d 1150, 1157 (10th Cir.), cert. denied sub nom., Roberts v. United States, 423 U.S. 829, reh'g denied, 423 U.S. 1008 (1975); United States v. Springer, 491 F.2d 239 (9th Cir.), cert. denied, 419 U.S. 834 (1974); United States v. Jones, 67 IBLA 225 (1982). The Government establishes a prima facie case for lack of discovery when a qualified mineral examiner testifies to the effect that he or she has examined the claim(s) and concludes in light of the "prudent man" and "marketability" tests that the mineral values are insufficient to support the discovery of a valuable mineral deposit as of any or all pertinent time(s). United States v. Husman, 81 IBLA 271, 275 (1984); United States v. Imperial Gold, 64 IBLA 241 (1982); United States v. Hooker, 48 IBLA 22 (1980).

"Prima facie" has been declared to mean that the case is adequate to support the Government's contest of the claim and that no further proof is needed to nullify the claim. If the Government shows that even one essential criterion of the test of validity was not met, it has established a prima facie case. United States v. Taylor, 19 IBLA 9, 28, 82 I.D. 68, 75 (1975).

In examining a mining claim, a Government mineral examiner is obliged neither to explore or sample beyond the mining claimant's workings nor to perform sufficient work to reach a definite conclusion as to whether or not a valuable mineral deposit exists somewhere within the limits of the mining claim. If a valuable mineral deposit does exist, it is incumbent upon the claimant to discover it. The function of the Government mineral examiner is merely to verify, if feasible, whether the claimant has, in fact, made a discovery of a valuable mineral deposit. Hallenbeck v. Kleppe, 590 F.2d 852 (10th Cir. 1979); United States v. Chappell, 72 IBLA 88 (1983). Where a claimant fails to keep his discovery points open and safely available for sampling by the Government's examiner, or declines to accompany the examiner on the claim, he assumes the risk that the Government examiner will be unable to verify the asserted discovery of a valuable mineral deposit. United States v.

Russell, 40 IBLA 309 (1979), aff'd sub nom., Russell v. Peterson, 498 F. Supp. 8 (D. Ore. 1980); United States v. Knecht, 39 IBLA 8 (1979); United States v. Bechthold, 25 IBLA 77 (1976).

After the Government has established its prima facie case, the mining claimant, who seeks the benefits of the mining law, then bears the ultimate burden of establishing by a preponderance of the evidence that the claimant's claim does meet the requirements of the provisions of the mining law that have been placed in issue by the evidence. McCall v. Andrus, 628 F.2d 1185 (9th Cir. 1980), cert. denied sub nom., McCall v. Watt, 450 U.S. 996 (1981); Hallenbeck v. Kleppe, 590 F.2d 852 (10th Cir. 1979); United States v. Springer, 491 F.2d 239 (9th Cir.), cert. denied, 419 U.S. 834 (1974); United States v. Porter, 37 IBLA 313 (1978); United States v. Hooker, 48 IBLA 22 (1980). The reason is that:

> While, on the face of it, it may appear that the United States, when it initiates a contest of the validity of a mining location, is "the proponent of a rule or order," this is not the law. Many public land laws, including the mining laws, give a person a right to initiate a claim to the public lands by his ex parte act of entry. If he thereafter complies with all requirements of the law, his initial entry may ripen into an enforceable claim to title as against the United States. The entryman is the true proponent of the rule or order * * *.

United States v. Springer, 491 F.2d at 242 (citations omitted); see also 5 U.S.C. § 556(d).

Provided that there has been an exposure of a valuable mineral on the claim, geologic inference may be used to establish that the extent of mineralization on the claim is sufficient to meet the "prudent man" test and thereby prove that the claimant has made a discovery of a valuable mineral deposit on the claim. The Board reconciled and clarified its earlier statements of the rule in United States v. Feezor, 74 IBLA 56, 90 I.D. 262 (1983), modified in other respects by U.S. v. Feezor (On Reconsideration), 81 IBLA 94 (1984).

The Board distilled the rule in United States v. Dresselhaus:

> [Geologic inference] can be used to show the extent of the deposit. The claimant must be able to demonstrate two important physical facts in

> order to use geologic inference. The first is the existence of mineralization on the claim of sufficient quality to warrant development of a mine. The second requirement is structural evidence on the claim which would justify the inference of a known ore body of sufficient quantity to justify a prudent man in expending labor and means with a reasonable prospect of success in developing a paying mine. See United States v. Feezor [supra] and cases cited therein.

United States v. Dresselhaus, 81 IBLA 252, 268 (1984) (emphasis added). Thus, even if the mineral deposit on which the validity of the claim is based has been exposed, geologic inference alone cannot establish continuity of values at depth. Geologic inference may be used, however, in conjunction with other evidence (e.g,. physical structure) to establish those values. Feezor, 74 IBLA at 78, 79.

There are two classes of millsites which can be located and patented under the millsite statute, 30 U.S.C. § 42. The first class is a millsite which must be used or occupied by the proprietor of a lode or placer claim for mining, milling or other operations in connection with such proprietor's specific claim or claims. The second class is a millsite which has upon it a quartz mill or reduction works, not necessarily associated with any particular mining claims. To establish the validity of a millsite of the first class, the owner must hold a valid mining claim in association with the millsite and the millsite must be used or occupied distinctly and explicitly for mining and milling purposes in connection with the valid mining claim with which it is associated. To establish the validity of a millsite of the second class, there must be a quartz mill or reduction works located on the lands. United States v. Dietemann, 26 IBLA 356 (1976). The owner of the quartz mill or reduction works need not be the owner or proprietor of an associated mining claim. United States v. Cuneo, 15 IBLA 304, 81 I.D. 262 (1974); Alaska Copper Company, 32 L.D. 128 (1903).

Contestant's complaint charges that contestee has not met the requirements of either class of millsites under the statute. Contestee's amended answer admits there is no quartz mill or reduction works on either millsite claim. Therefore, the validity of the millsite must be determined by whether it meets the requirements of the first class of millsites, as set forth above.

When the Government contests the validity of a millsite of the first class, the contest complaint implicitly raises

the issue of the validity of any mining claims associated with the millsite. United States v. Paden, 33 IBLA 380 (1978). In this proceeding the question of validity is also raised explicitly by the contest complaint.

The contestees' anticipation, even if warranted, that if and when a sufficiently valuable mineral deposit is found within an associated lode mining claim, the millsite claim will then be used for mining or milling purposes does not satisfy the requirements of the law.

> The act clearly contemplates that * * * [at the time of contest proceedings], the land in question is used or occupied for mining or milling purposes. The act does not contemplate the performance of conditions subsequent, or the future compliance with law. No mill site entry should be allowed unless it is shown that the conditions of the law have been complied with.

Hudson Mining Company, 14 L.D. 544 (1892). "[A] vague intention to use the land at some future time does not satisfy the requirements of the statute." United States v. Werry, 14 IBLA 242, 81 I.D. 44, 49 (1974).

Even if an associated mining claim is found to be valid, the millsite will nevertheless be invalid if it is found that it is not being used or occupied distinctly and explicitly for mining and milling purposes. Alaska Copper Company, 32 L.D. 128 (1903). In that case the Acting Secretary asserted:

> A mill site is required to be used or occupied distinctly and explicitly for mining or milling purposes in connection with the lode claim with which it is associated. This express requirement plainly contemplates a function or utility intimately associated with the removal, handling, or treatment of the ore from the vein or lode. Some step in or directly connected with the process of mining or some feature of milling must be performed upon, or some recognized agency of operative mining or milling must occupy the mill site * * * to come within the purview of the statute.

Id. at 131 (emphasis in original).

With respect to a validity contest against a millsite claim, the Government also has the initial burden to present sufficient evidence to establish a prima facie case of invalidity. After the Government has made such a prima

facie case of invalidity, the claimant has the burden of overcoming the contestant's prima facie case by presenting sufficient evidence to show by a preponderance that the claimant's claim does satisfy the requirements of the mining laws that have been placed in issue and that the claim is valid. United States v. Paden, 33 IBLA 380, 383-384 (1978); United States v. Swanson, 14 IBLA 158, 180, 81 I.D. 14 (1974).

Discussion

There is no dispute that the several samplings conducted on the Golden Bear claims have yielded fairly consist high values of gold on the surface (see, e.g., Exhs. 6, 49A, H, I, and K). There is little doubt that the vein extends longitudinally some 1,100 or more feet through the lode claims. Contestee believes the vein is continuous; contestant believes the vein may be broken at the so-called "unnamed drainage" (see Tr. 206-210). Mr. Collord himself testified that "most of the vein length has to be extrapolated" (Tr. 648).

In any case, there is no doubt that contestees have found a valuable mineral on each of the two lode claims. The question to be answered is whether they have discovered a valuable mineral deposit. The answer depends upon an analysis of what ore reserves may be shown to be present.

The U.S. Geological Survey and the Bureau of Mines use the following definitions in classifying reserves:

> Measured.--Reserves or resources for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, and drill holes and for which the grade is computed from the results of detailed sampling. The sites for inspection, sampling, and measurement are spaced so closely and the geologic character is so well defined that size, shape, and mineral content are well established. The computed tonnage and grade are judged to be accurate within limits which are stated, and no such limit is judged to be different from the computed tonnage or grade by more than 20 percent.
>
> Indicated.--Reserves or resources for which tonnage and grade are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on geologic evidence. The sites available for inspection, measurement, and

> sampling are too widely or otherwise inappropriately spaced to permit the mineral bodies to be outlined completely or the grade established throughout.
>
> Demonstrated.--A collective term for the sum of measured and indicated reserves or resources.
>
> Inferred.--Reserves or resources for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements. The estimates are based on an assumed continuity or repetition, of which there is geologic evidence; this evidence may include comparison with deposits of similar type. Bodies that are completely concealed may be included if there is specific geologic evidence of their presence. Estimates of inferred reserves or resources should include a statement of specific limits within which the inferred material may lie.

Principles of the Mineral Resources Classification System, Geological Survey Bulletin 1450-A at A3-A4, quoted in United States v. Feezor, 74 IBLA at 84; see also Exh. P at p. 472.[5]

Both measured reserves and indicated reserves may be used to establish sufficient quantity and quality of a mineral deposit to constitute a discovery. United States v. Hooker, 48 IBLA 22, 35-36 (1980). Subsequently the Board also ruled that:

> To the extent that such an estimate [of inferred reserves] is based on assumed continuity or repetition for which there is geologic evidence, we feel such a[n inferred] reserve base can properly be considered [as evidence of a discovery * * * but] an "inferred" reserve whose existence is dependent solely on geologic inference cannot serve as a predicate for finding quantity and quality sufficient to support a discovery.

United States v. Feezor, 74 IBLA at 85 (emphasis in original).

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[5] See also proposed Exh. Q at pp. 486-488, but contestant did not offer "Exh. Q" into evidence; Tr. 1218-1219, 1226-1227.

Both Mr. Collord and the Forest Service have calculated reserves on the claim based on the rule of thumb that the depth of the vein is estimated to be approximately one-half the length of the vein (see, e.g., Tr. 1130; Exhs. 16, 49 at p. 4, 73 and 73A at 21). Their estimates of recoverability and profitability have varied depending on other assumptions made. Nevertheless, all estimates of ore reserves have been made without any real evidence of depth.

For example, Exhibit 66A, which was prepared by E.J. Collord during the hiatus in the hearing of this contest, concludes, inter alia: "There are no underground workings to sample which would have provided third dimension data points. * * * Ore reserve calculations have been completed based on the surface sample values and diversions * * *." (Id. at 18; see also Tr. 1135). Mr. E.J. Collord has a master's degree in geology and substantial experience in mining. He testified that estimates of the ore reserves on the claim are reliable and they are properly categorized as "probable."

CROSS-EXAMINATION

BY MR. WEAVER:

Q. Do you recognize that?

* * * * * * *

THE WITNESS: [E.J. Collord] Yes, it's titled, "Mining Geology by Hugh Exton McKinstry, Professor of Geology, Harvard University, copyright 1948.

Q. MR. WEAVER: Well, do you know if there's a later edition to that volume or not?

A. No, I do not. * * *.

Q. Right. Could you turn to Page 372?

A. I'm there.

Q. Okay. At the -- near the bottom of the page there's a paragraph heading entitled "Empirical Rules for Depth Extension"?

* * * * * * *

A. Would you like me to read it?

Q. Go ahead.

A. "Certain rules have been used in mine valuation as a basis for calculations that involve probable extension of an individual oreshoot in depth. It is common practice, in estimating the amount of ore that may be counted on with reasonable safety, to assume that the ore will extend downward for a distance of at least equal to half the horizontal length of the shoot as exposed on the bottom level. This assumption has some support from actual experience and is a safe guide in the sense that if applied to the large number of ore bodies in different districts it will not lead to an overestimate. However, it can be badly wrong in individual cases and it can lead to seriously incorrect conclusions if used for the purpose of predicting the maximum amount of ore that exists." * * *

* * * * * * *

Q. BY MR. WEAVER: My next question is, do you agree with that statement you just read?

A. Generally, yes.

Q. Okay. In what case do you disagree with it, if any?

A. The practice of geology and practice of ore reserve estimation is essentially an art and it is dependent upon individual experience levels, individual knowledge of ore body throughout time, and is personal experience.

The ore reserves have been classified at various times in various ways and essentially ore reserves are essentially a spectrum from something that's unknown, or not only speculative to something you have high confidence in, and upon that continuum, you have to apply your knowledge of a particular deposit. And you also have to look at who you are and who is looking at it and for what purpose. That is a broader definition of my estimate of all ore reserve estimation.

Q. Now, in the case of the Golden Bear, you state at Page 4 of your Exhibit 66A your Golden Bear project evaluation feasibility study -- excuse me, at Page 5 you state that, "The reserves on the Golden Bear would best be classified as

probable as there are no underground workings in which to sample the vein at reasonable depth." You make that statement after having quoted, I take it, from a Forest Service publication called "Anatomy of a Mine" in which the definitions are quoted for "Proven or Measured" reserves "Probable or Indicated" reserves and "Possible or Inferred" reserves.

My first question regarding that statement in your report is, why do you consider the Golden Bear reserves as best classified as probable using those three definitions?

* * * * * * *

[MR. E.J. COLLORD:] I chose the category of probable for Golden Bear reserves because I felt there was sufficient data, admittedly only surface data, and there is sufficient geologic evidence the vein was continuous. There is sufficient geologic evidence, the wall rock suggested, that the vein was continuous. There was also sufficient evidence that this was a mesothermal vein, which, by character, has great potential for continuity, both horizontally and vertically. And based on that, and the amount of sampling that was done, I would conclude that that probable category, admitting that the ore reserve essentially ranges from category of possible through proven, and you can establish, if you wish, a personal opinion on where you are in the probable or proven or possible range.

So, again, it is an individual judgment. It is an individual professional judgment, and by my professional judgment I placed it in the probable categories at this stage. Admittedly underground workings, less so drill holes, would provide additional information, no question about that. And I think if the situation had been different there would be a tunnel on that vein.

Q. That would be my next question. You have told me that there are no samples whatsoever at depth, at least at any depth greater than the bottom of a sample hole currently exist. No samples whatsoever of that vein other than those at depth?

A. That is correct.

* * * * * * *

Q. Throughout your testimony you, and I believe Mr. Kemp who -- correct me if I'm wrong, used the word "inferred" throughout in reference to your estimate of depth of this vein, is that accurate?

A. Infer is a general term, yes.

Q. Okay. Does the fact that the definition of possible under the Anatomy of a Mine definition, has in parenthesis the word "inferred" give you any cause to believe that reasonable minds, be it reasonable geologic minds, might differ as to whether or not the depth of Golden Bear vein is inferred or -- or possible or probable?

A. Absolutely. Every professional is entitled to his opinion based on his experience and his observation, no question about that. * * *.

Tr. 1129-1135.

Forest Service mineral examiner Carol Thurmond disagreed:

Q. BY MR. BENSON: Based upon your review of the ore deposit, testimony you've heard and the definitions which you find in the publication before you, will you tell us in which category you would place the Golden Bear vein as far as ore blocking is concerned?

A. [BY MS. THURMOND:] Based on that, and on the description in this Contestant's Exhibits P, I would say that the Golden Bear vein would be classified as inferred ore. This is from the description on Page 472.

Q. Are you able to classify it under any of the categories shown on Page 470?

A. Yes. Based on the categories shown on Page 470 or for positive ore which is the same as ore blocked out, second category probable ore and third category is possible ore, and I feel like the Golden Bear vein fits that description more closely than the other two.

Q. Which description is that description?

A. The description for possible ore. This is, "Ore exposed on only one side, its other dimensions being a matter of reasonable projection. Some engineers use an arbitrary extension of the 50 to 100 feet. Others assume extension for half the exposed dimension."

This is similar to the description which I -- or the term I used a few months ago from Page 472. I said I considered the vein on Golden Bear to be inferred ore. The description for inferred ore is that, "Ore for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit for which there are few, if any, samples or measurements. The estimates are based on an assumed continuity or representation for which there is geologic evidence; this evidence may include comparison deposits of similar type." Then it goes on to discuss bodies that are concealed.

I feel like the following paragraph is important also and it says, "This classification leaves room for considerable deduction from geological background. It is well suited to its intended purpose, the estimation of the reserves of a district or nation. It is less satisfactory for valuing a single mine."

Tr. 1217-1218.

Based on the absence of any significant sampling below the surface and the absence of any regularly spaced sampling program along the entire length of the vein, I find that the estimate of ore reserves is properly classified as "inferred" according to the U.S. Geological Survey definition set forth above.

The next question to be addressed is whether or not there is sufficient geologic evidence to support the inference of values and quantity at depth. That is to say, is the inference sufficiently reliable to show a discovery of a valuable mineral deposit?

At the hearing, testimony from Mr. James Collord indicated that at one time there may have been some underground work on the vein:

Q. BY MR. WEAVER: Mr. Collord, I'm going to hand you one of your Exhibits now, it's Contestees' Exhibit No. 9. It's admitted into evidence, and ask you a couple of questions about

it. It is a letter from you to Earl Dodds dated January 19th, 1982, is that right?

A. [BY JAMES COLLORD:] January 19th, 1982 is correct.

Q. Okay. The last paragraph if I read it correctly, you're telling Earl Dodds that the Golden Bear would really make a, I think you meant, "real good small gold mine if these values continued down dip to the 300 foot level;" is that correct?

A. That's correct. That's what I have here.

Q. Okay. Did you know, as of January 19th, 1982, whether the values continued down to the 300 foot levels?

A. Yes, I did.

Q. How did you know that?

A. Because there's another vein. There's another opening on it lower on the hill, it's caved now.

Q. Okay. Let's talk about that for a minute.

A. All right.

Q. I didn't realize that there had been any underground work at all.

A. I'm assuming it's a Golden Bear vein.

Q. When did you first discover that?

A. 1932 when they worked on it.

Q. Did you -- tell me what the nature of it is. Is it a drift going into the vein?

A. Yes, it is, right on the vein.

Q. And how deep is it from the surface of the vein?

A. They started on a chunk of float there, and this was Roy Elliott, White Horse Heart, Fisk,

and Ernest Elliott and they hauled this ore by pack train up to -- by a five stamp mill, and my assumption is that it's on strike, but I -- the claims were not mine, they belonged to Whitmore and, therefore, I couldn't open it or look at it.

Q. Okay. We're still talking Golden Bear here?

A. Right, Golden Bear vein, sir.

Q. Right. Where did this drift go into the mountain?

A. About halfway up.

Q. Could we look at the map here of the vein?

A. No, I can't show you on the map.

A. Or the photograph?

THE COURT: Mr. Weaver, one thing you'll want to ascertain, maybe you already have to your satisfaction, is what he's speaking of [a]s the Golden Bear vein is, in fact, on one or both of the Golden Bear claims. Maybe you're already satisfied to that.

MR. WEAVER: No, I'm not. This is the first time I've heard that there's been any underground workings at all on there and I'm trying to find out.

THE WITNESS: I told you this was an assumption on my part.

Q. BY MR. WEAVER: An assumption?

A. Underground, right.

Q. Did you ever talk to the people who constructed the drift as to what they found?

A. I worked in it.

Q. And what did you see in there?

A. I saw two feet of 11 ounce ore.

Q. And when did you see it?

A. 1932.

Q. And you don't remember where the drift is?

A. I do remember where the drift is. I said the drift is caved, totally.

Q. Okay. But what I'm asking you, I guess, is if I might approach these aerial photographs --

A. Yes, you can't see where it's caved. I tell you the drift is caved completely.

* * * * * * *

Q. BY MR. WEAVER: Jim, you've just indicated, and I have marked on the map [Exh. 77B] that the opening of this drift is off the claim, but just north -- excuse me -- yeah, just north of the green road marking on this map, and I have marked a spot where the drift opens with a small X with a circle around it. Is that where the drift was?

A. I would assume that's close. That's within 150 feet.

Q. Okay. Now, the strike of the vein comes down the middle of the Golden Bear No. 2, crosses into Golden Bear No. 1, continues in exactly the same strike in a straight line down to that mark as far as you know?

A. That's pure assumption.

Q. But that's what you're guessing?

A. Yes, on strike.

THE COURT: Where you've been just touching, you started at Golden Bear 2, which is the northernmost of the two claims, and then what did you do?

MR. WEAVER: Then I came down right through the middle of Golden Bear No. 1, cross -- excuse me, right down the middle of Golden Bear No. 2, crossed in the Golden Bear No. 1 and continued in exactly the same line down off the claim, Golden Bear No. 1 straight down to the small X with a circle around it. Now, Mr. Collord's told us that

he believes the strike runs that direction, it's an assumption, but that's what he believes.

Q. BY MR. WEAVER: Now, Mr. Collord, from the drift opening that we've marked on this Contestees' Exhibit No 77[B], how many feet along your assumed strike distance does this drift go?

A. Less than 50 feet.

Q. Does the drift go onto the claim at all? Do you know?

A. No, I would say not. No, that would be 300, 400 feet, and it's not in a line.

* * * * * * *

Q. Okay. did you, at the time that you went into that drift -- let me back up. You helped build it, is that what you told me?

A. No, I went down there and worked. * * *

Q. To your knowledge did anybody ever take a sample out of there?

A. Oh, yes, in '32 there were several samples, pack strings with samples went out of there. * * *.

* * * * * * *

Q. Did you ever find out what the result of that milling was?

A. The results of the milling was dismal. It was terrible because there was not free milling, and they were putting the product through the screen, which, as I remember, it was about a 40 mesh screen, they were using amalgamation plates and it will not amalgamate.

Q. Did you ever tell anybody before today from the Forest Service about the existence of that drift and --

A. Earl Dodds knew where the drift was.

THE COURT: Wait until he's through.

MR. WEAVER: That's okay, I'll go ahead and ask the question and then you can answer, Jim.

Q. BY MR. WEAVER: Did you tell anybody from the Forest Service about the existence of this drift and what has been found out about it by others?

A. I assumed it was common knowledge. Dan LaVan (sp), then Ranger in the Big Creek District, knew it real well. And Neal Routsen, who was alternate Ranger, knew it, and Earl Dodds in later years. He came in there in 1952, he knew it. I thought everybody in the Forest Service knew it.

Q. Did Morris Hubbard know about it?

A. I think I told Morris about it?

Q. How about --

A. I'm not sure of that, Jim. I'm not real sure because it's -- the tunnel was caved, but I must have because I think I told everybody on the hill about it.

Q. Did Wayne Kemp know about it?

A. No, sir, Wayne Kemp went down to look at the Golden Bear vein that I had located after the claims were put on them.

Q. Is this vein that we're talking about exposed there in drift, part of the Golden Bear claim -- part of the Golden Bear vein?

A. That's pure assumption on my part.

* * * * * * *

Q. I referred to the last paragraph, and my question had been that started all this, you were telling Earl Dodds in this letter that this would really make a good real small gold mine if these values continued down dipped to 300 foot level, and I asked you if you knew if they continued down to the 300 foot level and you said yes, is that right?

A. That is correct. Again that again is my assumption.

Tr. 789-799.

Because no evidence of the asserted drift remains, and because it is conceded to be outside the boundaries of the claims (assuming it existed), it cannot be used as evidence to support the inference of depth. United States v. Feezor, 74 IBLA at 77; United States v. Russell, supra.

In 1982, Mr. Collard proposed plans for "prospecting the claims."

* * * * * * *

> My plan is to drive a crosscut from the end of the proposed road asked for in the permit to intersect the GB vein at a depth of 300 feet below the outcrop. If the vein is found at this depth and the values found on the surface obtain at this point, certainly an operation could be expected to follow. I would expect the values at this depth to be in a sulphide ore, and the actual treatment of this type ore would have to be evaluated before a mill could be established. I would also expect to drift along the strike of the vein, if found, for some length; probably in the range of 500 feet. * * *. I would not expect any great body of ore * * *.
>
> I would, at this time, be very reluctant to name tonnages * * *. The first thing, in my plans, would be to find the ore at this proposed depth. If the vein is in place here, and carries the values that occur on the surface, enough total revenue would show to let us do some hard planning * * *.

Exhs. 12; ICL-A.

In 1983, Hall and Deitz opined in their report of the claims:

> Before a proper evaluation of the claims can be completed, it will be necessary to test the tenor of ore and width of vein at depth by diamond drilling. The entire vein structure should be mapped and sampled in detail.
>
> * * * * * * *
>
> While the Golden Bear claims have impressive gold values and the potential to be a small underground gold mine, the property is at a very early stage of development.

Exh. 24 at p. 7 (emphasis added).

In 1984, Mr. Collord again proposed further exploration.

> The four hundred fifty (450) feet long portion yielding the best grade and averaging 2.1 feet in width would contain approximately seventy two (72) tons per foot of depth. If the ore grade mineralization extended to a depth of three hundred (300) feet, down dip, a total of 21,600 tons of ore is probable. This would contain 13,600 ounces of gold.
>
> Additional exploration potential exists along the remainder of the strike length of the Golden Bear vein. No assumption of grade can be made for this additional 1600 feet of vein. This end of the vein is poorly exposed, and covered with talus at the surface. * * *
>
> * * * * * * *
>
> A four-hole diamond drill hole program would be necessary to adequately test the best portion of the vein, i.e.; the 450 feet thoroughly chip sampled. * * *
>
> * * * * * * *
>
> [Alternatively, a] drift could be started on the vein where it is exposed in Little Ramey Creek. The tunnel would be designed to drift on the vein for a distance of 300 - 500 feet. This would provide a very accurate test of the continuity and grade. * * *

Exh. 30.

In his report of the claims based on sampling conducted in 1986, Kemp asserted that "the down dip continuation of the Golden Bear vein can only be estimated given its present exposure * * *. [R]eserve estimates based on outcrop and shallow sampling above should be considered cautiously because there is very little control in the down dip direction."

Exh. 59 at p. 8 (revised as of July 11, 1988).

Geologic evidence sufficient to support the inference of continuity of values and the extent of the vein at depth is lacking. Contestees' projections of ore reserves are therefore inherently unreliable and cannot serve as evidence

of a discovery. United States v. Feezor, 74 IBLA at 85. The claims cannot be determined to be valid.

Inasmuch as the lode claims are not valid, the associated millsites must also fail because there is no valid mining claim with which they are associated. United States v. Paden, 33 IBLA 380 (1978). Furthermore, even assuming that the associated lode claims were valid, the millsites would still not satisfy the requirements of the law. As the Board stated in United States v. Werry:

> The only noticeable activity of any description on the lode claims was the gathering of samples which is not "mining activity" as envisioned by the drafters of the statute. None of the mines were being operated so it is apparent that the millsite claims were not used for mining or milling purposes in connection with the lode claims. United States v. S.M.P. Mining Company, 67 I.D. 141 (1960); United States v. Skidmore, 10 IBLA 322 1973).

United States v. Werry, 14 IBLA 242, 81 I.D. 44, 48-49 (1974).

Conclusion

Although the evidence adduced clearly indicates a valuable prospect, it is wholly inadequate to show that a discovery of a valuable mineral deposit has been made on either claim at the present time or prior to withdrawal. As Administrative Judge Stuebing once put it:

> Legend has it that banks have loaned large sums to the holders of strong poker hands, based upon the calculated and reasonable probability that such hands will prevail. By contrast, no prudent investor would be likely to enter an economic partnership with the holder of a pair of deuces with a reasonable expectation that the luck of the draw would convert that meager showing into a winning hand, although it is entirely conceivable that that might occur. The money spent by prudent and reasonable men to conduct exploration activities cannot be referred to as proof of the prudence and reasonableness of an effort to develop a mine thereafter. That money may be likened to the ante and first bet or call in a poker game. It is money spent in an effort to gain the essential information on which to formulate an informed judgement as to whether

> additional investment is more likely to yield a profit or be lost. The development of a mine on any or all of the contested claims in the hope that the excavations might encounter commercially valuable ore bodies, as yet unknown, and thereby justify the risk, would be the act of a gambler and not that of a reasonable, prudent man.

United States v. Gunsight Mining Co., 5 IBLA 62, 69 (1972).

Thus, although the evidence developed to date indicates valuable mineralization sufficient to warrant the further expenditure of time and money in an effort to determine whether the development of a mine would be warranted, the evidence adduced is not sufficient to show the discovery of a valuable mineral deposit. Barton v. Morton, 498 F.2d 288 (9th Cir. 1974); United States v. Wood, 51 IBLA 307, 87 I.D. 628 (1980).

The Golden Bear Nos. 1 and 2 lode mining claims are hereby declared to be invalid for lack of a discovery of a valuable mineral deposit. The Lost Dutchman and Golden Bear Millsites are hereby declared to be invalid because they are not associated with any valid mining claims and are not presently being used for mining or milling purposes within the meaning of the law. The pending patent applications for each claim should be and are hereby denied.

Harvey C. Sweitzer
Administrative Law Judge

Appeal Information

Any party adversely affected by this decision has the right of appeal to the Interior Board of Land Appeals. The appeal must comply strictly with the regulations in 43 CFR Part 4 (see enclosed information pertaining to appeals procedures).

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United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS

Hearings Division
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(Phone: 801-524-5344)

February 14, 1979

UNITED STATES OF AMERICA,	:	MONTANA 31412
Contestant	:	Involving the mineral locations of the Peggy Ann I and Peggy Ann II lode mining claims, Mineral Survey 10940, situated in the E1/2, Section 24, T. 13 N., R. 7 W., Montana Principal Meridian, Helena National Forest, Lewis and Clark County, Montana.
v.	:	
CORNELIUS E. MANNIX,	:	
Contestee	:	

DECISION

Appearances: Lawrence M. Jakub, Esq., and Mark D. Lodine, Esq., Office of the General Counsel, U. S. Department of Agriculture, Missoula, Montana, for Contestant;

Paul T. Keller, Esq., Helena, Montana, for Contestee.

Before: Administrative Law Judge Rampton.

The claims in issue are located within the Helena National Forest approximately 40 miles from Helena, Montana.

There are extensive workings on the claims which are fairly old, dating back to the thirties or before. These workings

were found by the mining claimant in the fall of 1951 while he was on a hunting trip. The location for the Peggy Ann I claim was made on May 31, 1952; an amended location was filed June 14, 1974; and a second amended location was recorded on July 13, 1974. The Peggy Ann II lode claim was located by Mr. Mannix on September 17, 1973.

Since recording the original location certificate for the Peggy Ann I claim, the contestee and members of his immediate family have expended about $48,000 on improvements to the buildings which were on the land at the time of filing, construction of new buildings, cleaning out and retimbering of the underground workings previously excavated, placement of lights in the underground workings, replacement of 1600 feet of mine track, and advancement of the face of the underground workings approximately 70 feet. Included in the $48,000 expenditure is approximately $15,000 for mining equipment and supplies.

The Government initially became aware of the contestee's presence on the Peggy Ann I claim in the mid-1950's and the claim was examined on two occasions in 1957 for the purpose of determining its validity. Apparently, at that time, the Forest Service decided not to contest the claim but recommended that periodic checks be made of the claimant's progress.

In 1970, the claim was reexamined by the Forest Service and, as a result of the examination, it was recommended that contest action be initiated and a complaint was filed (Montana Contest 1840) on January 19, 1973. A scheduled hearing was continued indefinitely due to the death of the contestee's consultant.

The claim was again examined on September 25, 1973. Prior to this, however, the contestee had filed the second claim, the Peggy Ann II, on August 17, 1973, and had requested from the Bureau of Land Management an order for a mineral survey. This order was issued on October 26, 1973, and when a contest was scheduled for hearing, the Forest Service requested the contest action be withdrawn temporarily in light of contestee's desire to obtain a mineral survey, apply for patent, and ship a bulk sample to a smelter to determine values. Pursuant to this request, Montana Contest 1840 was dismissed.

The mineral survey MS 10940 was approved by the BLM on January 28, 1975, and the contestee filed mineral patent application M-31412 with the BLM on June 13, 1975. A final certificate was issued on November 12, 1975.

The present contest was initiated by filing a complaint dated May 2, 1977, in which the United States alleged:

1. No discovery of a valuable mineral deposit sufficient to support a mining location has been made upon or within the limits of the Peggy Ann I and Peggy Ann II claims.

2. The lands within the limits of the Peggy Ann I and Peggy Ann II claims are nonmineral in character.

3. The Peggy Ann I and Peggy Ann II claims have not been properly located, and mineral survey 10940 is improperly executed in that the actual lode line is located more than 300 feet from the SE sideline of both claims.

Two geologists, Robert Newman and James Whipple, testified for the Government. Both of them had examined the claims on several occasions: Newman on June 1-3, 1976, June 1 and June 13, 1978. Whipple examined the claims on September 25, 1973, in company with John Stentz, a Forest Service mineral examiner who has since retired, June 1-3, 1976, and June 13, 1978. Each testified in detail how the various examinations had been conducted, the extent of their examinations, the sampling methods used, location of samples taken, and the assay results of those samples. In addition, Mr. Newman presented testimony relative to the economic feasibility of operating the claims, which was agreed to by Mr. Whipple. They described the vein exposed by the workings as a single quartz vein extending almost entirely along the existing workings, offset numerous times by small shears or faults. At the face of the working the vein enters two or three feet of heavy fault gouge and Helena limestone. It cannot be determined without further exploration whether the vein terminates in the limestone or is merely displaced.

As a result of their examinations, each was of the opinion that a person of ordinary prudence would not be justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine on either of the claims. (Tr. 36, 73). This testimony, supported by the various assay reports submitted into evidence, was sufficient to establish the Government's prima facie case. United States v. Webb, 16 IBLA 345, 346 (1974).

Upon the establishment of the Government's prima facie case, the burden of proof shifted to the contestee to show by a preponderance of the evidence that the claims were in fact valid. Foster v. Seaton, 271 F.2d 836, 838 (D. C. Cir. 1959).

The contestee called two expert witnesses, Mr. Willis M. Johns, a mining engineer and geologist who visited the property on July 30, 1977, and again on August 22, 1977, and Mr. John F. Byrd, an independent mine operator, who has worked in the mines within the vicinity of the Peggy Ann claims since he was 12 years old and who has helped the Mannixes mine and ship the first shipment of ore that was sent to the East Helena Smelter.

Mr. Johns is the Chief of the Economic Geology Division of the Montana Bureau of Mines at Montana Tech. He has a B.S. and an M.S. in geology and has worked in various mines in Montana, Idaho and Arizona and has performed considerable sampling and testing for private organizations since his employment with the Montana Bureau of Mines. As a result of the sampling done by him, Mr. Johns identified within the workings a body of ore which he called Block 1 and stated that this ore could be removed at a profit. Eight samples were taken from across the vein in this block which averaged .37 oz. gold and 7.47 oz. silver. (Tr. 105). He computed that there were approximately 372 tons of ore in place within the block. (Tr. 115). After checking with the smelter in Helena, he computed the smelter charge at $10 per ton. Deducting two hundredths in gold which the smelter requires from the .37, and assuming 95% recovery, he reached a gold content of $63.55 per ton. On the basis of a 7.47 oz. showing of silver per ton and deducting 1 oz., which the smelter requires, he calculated a value for the silver content of $33.68 per ton. Although the vein contains copper and lead, the values were too low and no money would be paid by the smelter for these minerals. He calculated the crushing and delivery charges at $5 a ton, for a net smelter payment of $82.23 a ton. (Tr. 117). Haulage charges to the smelter at a rate of 20 cents a mile for a distance of 40 miles is $8 a ton. Powder, fuse, primers, electric power, assaying, and equipment rental came to $10.30 a ton, for a total mining and trucking cost of $18.30 per ton. The operator would receive a net of $63.83 per ton. The profit for 372 tons of ore would amount to $23,744. (Tr. 119).

Further, based upon his examination, but using geological inference only, it is his opinion that the block of ore probably extends below the adit level.

In determining that a commercial venture could be successful, he did not consider the expenditures made to date in the development of the claims.

Mr. Byrd, who helped the Mannixes mine and ship the first bulk sample which went to the East Helena Smelter, stated that the purpose was to find out the average quality of the ore. The

ore was taken on the upper level and from his experience in the mines in that area, where there is a lead with a pitch to it and depth, there is usually a secondary enrichment. Better than 50% of the time, the lead or vein will widen out. In his opinion, a 100-foot shaft should be sunk within Block 1 and as the shaft is sunk and the mine is developed, the paying ore should be saved.

Both men were in agreement that selective mining methods would have to be used as the values along the vein vary. Mr. Byrd stated that qualitative samples could be taken by crushing and panning and has helped the contestee and his sons in learning that method.

One other expert witness testified for the contestee. Mr. Dale E. Scholz, who has a B.S. in geological engineering with a mining option and who visited the claims when they were being examined by the Forest Service personnel, testifed as to a method of heap leaching of oxide gold. Under this method, the ore is placed on a impervious pad, sprayed with a diluted cyanide solution which dissolves the gold and silver. It is then processed to remove the clays and slimes and then into a de-aeration tower to remove the dissolved oxygen. Zinc dust is added, which replaces the gold and silver which precipitates and is collected into the filter presses. The overall recovery, he stated, is nearly 100% and the process works well with a small mine of 50 or 60 tons on each pad. Since the experts agree that the vein is highly shattered quartz with no clays, he stated the process would work very well in recovering gold and silver from the Peggy Ann claims and is cheaper than shipping the ore to a smelter. The transportation and smelter charges are therefore eliminated and the total cost of the materials used would be in the neighborhood of 80 cents per ton.

The testimony of Mr. Scholz as to the heap leaching process fails to shed much light on a determination of the validity of the claims. No testimony was given as to the cost of construction of the pads or the cost of the equipment necessary to use this process. Mr. Johns' economic analysis as to the profitability of mining the claims did not take into consideration the possible use of this process as compared to the cost of shipping and smelting at the East Helena Smelter, and as it stands, the evidence as to the feasibility of this method is too sketchy to make findings of fact on the economic viability of heap leaching on the ores from the claims in issue. The issue as to the validity of the claims then narrows down to whether the block of ore as defined and described by Mr. Johns constitutes a valid discovery on each claim.

All of the experts agree that the block straddles the two claims. The dividing line between the claims is at the raise from which Block 1 extends on both sides. All of the experts agreed that the others' sampling was performed properly and none questioned the qualifications of those who took the samples. There was some disagreement as to the average width of the exposed vein with Mr. Newman estimating it as an average of 6 inches while Mr. Johns estimated the average width to be 12 inches. The values shown in the assays of the samples taken, however, varied widely.

Mr. Newman stated that samples 1, 2, 3, 4, 5 and 8, taken by him, were within or along the edge of Block 1 and the average value of these samples would be $8.38 per ton gold and $18.54 per ton silver, totalling $26.92. The samples taken in the 1973 Forest Service examination by Mr. John C. Stentz, a retired Forest Service mineral examiner, and in which Mr. Whipple participated, averaged total gold and silver values of $46.34 per ton. Mr. Johns' samples within the block averaged $97.23 per ton. When questioned as to the reasons for the significant variations in the values obtained by the samples, Mr. Newman stated that it could occur in the sample collecting procedure, in the assaying process, contamination of the samples intentionally or unintentionally after they were taken, and finally, and the most obvious, the natural variation in the metal content along the vein, either in a horizontal or vertical direction. (Tr. 269-70). Since none of the experts could fault the others' methods and since there is no way to determine from the evidence presented whether there was a variation in the assaying process or contamination of the samples, I can only find that the vein does vary considerably throughout its width in metal content and that, therefore, as Mr. Johns stated, the ore can be mined successfully, if at all, only through a careful selective process.

In his economic analysis, Mr. Newman used a smelter treatment charge of at least $20 a ton and, as basis for this estimate, referred to the bulk sample shipped to the smelter by the Mannixes in 1973, for which smelter charges of $20 per ton was deducted from the total payment. The evidence shows, however, that only a portion of the bulk sample was taken from Block 1. Mr. Johns' estimate of $10 per ton smelter charges was based on the high siliceous content of the samples taken by him and contact with Mr. Stan Lane at the East Helena Smelter, who informed him that the smelter charges would be $10 a ton.

Both Mr. Newman and Mr. Johns were in agreement as to a shipping charge of $6 to $8 per ton to the smelter. Where they disagreed completely was in the cost of extraction. Mr. Newman estimated the cost of mining at $70 per ton with direct labor

costs of $2,520 per month of a miner at $8 per hour and a helper at $7 per hour, or union scale. There would also be costs of explosives, primers, fuses, bits, timber, assaying and sampling. He also said that contract miners will take a job based on a unit of advance or a certain amount per foot and it now runs anywhere from $100 to $150 per foot of advance, with the contractors supplying all of the material needed.

Mr. Johns took a different approach and assumed that because of the high labor costs, the narrowness of the vein, and the necessity for careful selective mining, that the Mannix family would mine the ore themselves. He calculated that working on weekends or eight days per month underground at 7-1/2 tons per day production, they would produce 60 tons a month and the block would last for six months. He did not calculate the amount per hour received by the Mannixes for their work. However, if his figures are correct, and Mr. Mannix and his two sons worked a total of 144 eight-hour days, or a total of 1,152 hours with a net return of $23,744, their wages for their labor would be approximately $20 per hour. Even were one to assume that Mr. Johns' average values were high, that his smelter charges were low, that the selective mining process would not be entirely successful, and that the net profit might be halved, the Mannixes would be receiving as wages for their effort an hourly wage considerably higher than union scale.

I am inclined to accept Mr. John's economic analysis for two reasons. First, he has considerably more experience than the two Government experts in the practicalities and economics of mining. Second, his samples were taken entirely within Block 1, while not all of Mr. Newman's were taken within the block itself. The evidence does not show with preciseness where the Whipple-Stentz samples were taken, but it appears that the three samples showing the highest values, gold 0.5, .32 and .20 and silver 4.0, 16.7, and 2.2, were taken at the upper adit and along the raise and within Block 1. These samples are comparatively equal in values shown to the eight John's samples which averaged in content gold .367 and silver 7.47. The two Whipple-Stenz samples which showed much lower values were taken outside the block at the far end of the adit. (Tr. 69-70; Govt. Ex. 18).

Admittedly, Mr. John's analysis contains variables, and the Mannixes are not guaranteed a profit. They must mine selectively and with a minimum of dilution, but if they are successful and eliminate the lower value ore, their profit would be higher than as above calculated. In any event, the law does not require a guaranteed profit to constitute a

discovery. The prudent man rule first enumerated by the Department to define a discovery in Castle v. Womble, 19 L.D. 457 (1894), states that a discovery exists where:

> ... minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine,...

The many factors currently considered in determining the validity of a mining claim under the prudent man rule were enumerated recently by the Interior Board of Land Appeals:

> In order to meet [the prudent man test, the claimant] will have to show there is a likelihood that the minerals on the claims can be mined, removed and disposed of at a profit. Among the factors he must show for each claim by the probative evidence are:
>
> (a) Expected costs of the extraction, beneficiation, and other essential costs of the operation necessary to mine and sell the mineral, including capital and labor costs;
>
> (b) quantity of mineable mineral on the claims;
>
> (c) average grade or quality of mineral on the claim; and
>
> (d) price at whch the mineral will be sold and expected returns.
>
> The above evidence should focus on current estimates of costs and prices. United States v. Howard S. McKenzie, 20 IBLA 38, 45 (April 17, 1975).

The total evidence presented in the present case covers the cost of extraction, transportation, smelting charges, qualtity of mineable mineral, average grade or quality of mineral and the price at which the mineral can be sold. Taken as a whole, the evidence indicates a reasonable expectation of mining the ore contained upon the two claims at a profit.

In Barrows v. Hickel, 447 F.2d 80 (9th Cir. 1971), the court said:

> Actual successful exploitation of a mining claim is not required to satisfy the "prudent-man test."

The same court in Adams v. United States, 318 F.2d 861 (1963), stated:

> But value, in the sense of proved ability to mine the deposit at a profit need not be shown.

And the Department held in the case of United States v. Gould, A-30990 (May 7, 1969):

> The Department does not require a mining claimant to prove a discovery by showing that he is actually engaged in a profitable mining operation or even that profitable operations are assured, ...

The prudent man test, as refined by the "marketability test," has been stated in the case of Barrows v. Hickel, supra, as follows:

> What is required is that there be at the time of discovery, a market for the discovered material that is sufficiently profitable to attract the efforts of a person of ordinary prudence.

The finding that there is on the claims in question mineral which can be marketed at a profit does not take into consideration the $48,000 expended to date on labor, materials, and improvements by the contestee. However, all of the case law involving definitions of what constitutes a discovery of a valuable mineral sufficient to satisfy the requirements of the Mining Act of May 10, 1872, as amended, refer to present marketability, not past or future prospects. Had Mr. Mannix known before the monies and labor were expended that he could not recover his expenses, he would not then have been considered prudent. As it stands today, he would not be prudent were he to abandon the claims and leave the ore now blocked out.

None of the definitions refer to past expenditures, only to present and future potential. In determining then whether a discovery has been made, past expenditures are irrelevant, and since the future is unknowable and speculative, the determination must be made on present facts and cost factors.

The Government cites a series of cases holding that lack of development of the claims over several years with little or no attempted development or operations raises a presumption against discovery. Presumptions can, however, be rebutted. Mr. Mannix, the contestee, testified that he had never removed the ore in Block 1 because to him it is better than money in the bank. If he takes it out he would be exploring with no reserve, and at present he and his family are capable of earning money for further exploration.

Mr. Mannix then is holding the mineable ore in reserve and has done so while he has acquired modern tools and a working knowledge of panning so that the mine can be intelligently explored further and mined successfully. He, like thousands of mining locators on public domain, has a dream, a dream that excavation of a few feet more of vein material will show ore containing richer values. That dream has sustained him and his family for many years and provided the incentive to expend much hard labor and considerable sums of money. He is not retaining the claims as a recreation or homesite. Unlike the vast majority of mining locators, Mr. Mannix has ore in place which he can if he wishes remove and sell with a reasonable expectation of receiving more money for the ore than it would cost to mine and ship. Further, based on geological inference, he has the possibility, yet unproven, of finding beneath the present block, ore of higher values, and by further exploration at the face of the workings, regaining the fault-shifted vein. Whatever anyone who reviews the evidence in this case may feel about the prudence of Mr. Mannix' past actions is not in issue. His prudence must be judged on what he can do at present based on the results of sampling done by qualified experts. There is a valuable deposit present on both claims, which he can either keep in reserve for his retirement and as a legacy to his family, or mine to defray the costs of further exploration.

The final issue raised in the pleadings is whether the location is improper. Mr. Newman testified that the side lines of the claims, as surveyed in mineral survey 10940, are not equidistant from the trace of the vein on the surface. The distance to one of the side lines is approximately 370-380 feet and to the other 220-230 feet. (Govt. Ex. 1). Both Mr. Newman and Mr. Johns agreed that, while the underground vein conformed relatively well to the center line of the claims, the vein structure dips into the earth at an angle other than perpendicular.

The Act of May 10, 1872, states that no claim shall extend more than 300 feet on each side of the middle of the vein at the surface. It also provides that no claim shall be limited

by any mining regulation to less than 25 feet on each side of the middle of the vein at the surface. As a lode location is limited to 300 feet on each side of the vein, Mr. Mannix has two choices. He can, if there are no intervening rights, amend his location. If he does not amend, he can hold or gain title only to land narrower in width than the permitted 600-feet maximum claim. In the case of the Peggy Ann claims, the maximum permitted west side line would be 230 feet from the trace of the vein at the surface and an east side line 300 feet from the vein, for a maximum width of 530 feet. For practical purposes, however, this would not affect the mining claimant's activities, for he can follow extralaterally the outcropping at the surface wherever it may lead so long as it is continuous. Cheesman v. Shreve, 40 Fed. 793; Iron Co. v. Cheesman, 116 U.S. 531.

For the reasons stated, except for the allegation as to the improperly located side lines and executed mineral survey, I conclude that the charges of no discovery and nonmineral character of the land are not supported by the evidence. As to these allegations, the complaint is dismissed.

John R. Rampton, Jr.
Administrative Law Judge

APPEAL INFORMATION

The parties adversely affected by this decision have the right of appeal to the Interior Board of Land Appeals. The appeal must be in strict compliance with the regulations in 43 CFR Part 4. (See enclosed information pertaining to appeals procedures.)

If an appeal is taken by the contestant, the adverse party can be served by service upon Paul T. Keller. Esq., at the address listed on page 12.

If an appeal is taken by the contestee, the adverse party can be served by service upon the Office of the General Counsel at the address listed on page 12.

Enclosure: Information Pertaining to Appeals Procedures

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No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, et al.,
Plaintiffs/Appellants,

v.

HEATHER PROVENCIO, et al.,
Defendants/Appellees

and

ENERGY FUELS RESOURCES (USA) INC., et al.,
Intervenor-Defendants/Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-cv-8045 (Hon. David G. Campbell)

DEFENDANT-APPELLEES' SUPPLEMENTAL EXCERPTS OF RECORD INDEX VOLUME

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No. 20-16401

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DEFENDANT-APPELLEES' SUPPLEMENTAL EXCERPTS OF RECORD
VOLUME 1 OF 3 (SER 1-230)

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA
PRESCOTT DIVISION

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERISTY; SIERRA CLUB; and HAVASUPAI TRIBE, Plaintiffs. v. MICHAEL WILLIAMS, Forest Supervisor, Kaibab National Forest; and UNITED STATES FOREST SERVICE, an agency in the United States Department of Agriculture, Defendants	Case No. 3:13-cv-08045-DCG

DECLARATION OF ELIZABETH "LIZ" SCHUPPERT

1. I am currently employed by the United States Department of Agriculture, Forest Service, as a Forester and have held this position on the Kaibab National Forest for 10 years. In total, I have worked for the Forest Service for 34 years in the specialties of vegetation management, recreation, lands and minerals. In my current capacity, I act as technical expert on recreation, lands and minerals issues for the Kaibab National Forest. This includes responsibility for mineral exploration and mining. My educational

background consists of a Bachelor of Science degree in Forest Management from Oregon State University.

2. I have reviewed Plaintiffs' March 3, 2013 Complaint for Declaratory and Injunctive Relief, their April 11, 2013 Motion for Preliminary Injunction, and their April 24, 2013 Corrected Motion for Preliminary Injunction. I am familiar with the Canyon Mine operations, which are the subject of this litigation, and provide the following clarification.

3. Canyon Mine is currently operating under the Plan of Operation (PoO), which was approved in 1986 ROD by the Forest Service (1988 AR, Doc #6, pp. 915-929). All Canyon Mine surface structures were constructed, and the shaft was sunk to a depth of approximately 50 feet, prior to the Canyon Mine being put in standby status in 1992. The PoO has remained in effect during the standby status, and continues to remain in effect. During standby status, Forest Service employees met periodically with mining company representatives to review the condition of the facilities, in addition to the mining companies providing their own reviews over the years.

4. Throughout the period when the Canyon Mine was in standby status, there were reviews of the reclamation bond, and adjustments to the amount were made by the Forest Service. In 1986, the initial bond was for $100,000. In 1998, the bond was increased to $125,000. Both bonds dealt with the reclamation costs for surface facilities, only. In 2009, the bond increased to $320,045 to include subsurface facilities. On March 13, 2013, Energy Fuels Resources (EFR), the owner/operator of the Canyon Mine, replaced

the former reclamation performance bond with the Forest Service with a bond for $461,245.00 (2013 AR, Doc # 667, p. 012390) to ensure all reclamation activities will occur when mining is completed. Reclamation bond adjustments are a routine process during the life of the project and do not change the PoO in any way.

5. On April 6, 2013, EFR began sinking the existing shaft below the standby status depth (approximately 50 feet).

6. The waste rock generated by the deepening of the shaft is being temporarily stockpiled in a specific area on site, which has been constructed for it. This specific area, or waste rock pad, and storage of waste rock on site were approved in the PoO. The waste rock pad has a packed earthen base and has earthen berms surrounding it. No waste rock is being removed off the site. Upon completion of mining, this waste rock will be placed back in the shaft during reclamation of the site. No new or different authorization is needed for this activity because it is already covered in the PoO, nor has any additional authorization been issued.

Pursuant to 28 U.S.C. §1746, I certify under penalty of perjury that the foregoing is true and correct.

Executed this 8th day of May 2013.

Elizabeth Schuppert

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UNITED STATES DISTRICT COURT

DISTRICT OF ARIZONA

Grand Canyon Trust, *et al.*, Plaintiffs, v. Heather Provencio, *et al.*, Defendants, Energy Fuels Resources (USA) Inc., *et al.*, Intervenors-Defendants.	No. CV-13-8045-PCT-DGC **INTERVENORS-DEFENDANTS' MOTION TO SEAL** (Assigned to The Honorable David G. Campbell)

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MOTION TO SEAL

Pursuant to LRCiv 5.6(d), Intervenors-Defendants Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (collectively, "Energy Fuels") hereby move the Court to seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its supporting exhibits (Doc. 226-1) for the following reasons: (1) there is a compelling reason to seal the documents because they contain and cite to Energy Fuel's confidential information that is exempt from public disclosure under the Freedom of Information Act ("FOIA"), applicable United States Forest Service ("Forest Service") regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, applicable guidance for mineral examiners, and the U.S. Supreme Court's recent ruling in *Food Marketing Institute v. Argus Leaders Media,* 139 S. Ct. 2356 (2019); and (2) Energy Fuels intends to move to strike the exhibits to

Plaintiffs' Motion for Summary Judgment pursuant to LRCiv. 7.2(m)(2) and the documents should remain sealed until the Court rules on that motion.

SUPPORTING MEMORANDUM

There is a single remaining question before this Court: Did the Forest Service's valid existing rights determination ("VER Determination") (A.R. 010482-010527) for the Canyon Mine fail to consider certain specified costs, therefore, rendering it arbitrary, capricious, and not in accordance with the law. *See* Amended Complaint, Fourth Claim, Doc. 115 at pages 27-28. In challenging the VER Determination, Plaintiffs allege that the Forest Service failed to consider certain specified costs in determining whether the Canyon Mine contains a valid mineral deposit. To support this allegation, Plaintiffs assert that Energy Fuels' confidential cost information submitted to the Forest Service failed to include certain environmental reclamation and monitoring costs. Further, Plaintiffs allege that the Forest Service did not consider these costs when completing its own independent verification of the Canyon Mine's relevant cost information. To support this allegation, Plaintiffs now seek to publicly file and cite to Energy Fuels' confidential cost information and introduce claims and issues outside the scope of the Fourth Claim of Plaintiffs' Amended Complaint. For the reasons set forth below, Energy Fuels moves the Court to seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its exhibits (Doc. 226-1).

A. FACTUAL BACKGROUND

1. The Withdrawal

In January 2012, the Secretary of the Department of the Interior ("DOI"), pursuant the Federal Land Policy and Management Act ("FLPMA"), 42 U.S.C. § 1714(A), withdraw approximately 633,547 acres of public lands and 360,002 acres of National Forest System lands for up to 20 years from location and entry under the Mining Law of 1872 (the "Withdrawal"). 77 Fed. Reg. 2317-01 (Jan. 17, 2012); A.R. 10308-31. The Withdrawal, which included the location of the Canyon Mine, had been proposed by DOI in 2009. 74 Fed. Reg. 35,887-01 (July 21, 2009). The DOI undertook extensive study and preparation of an Environmental Impact Statement ("EIS") before finalizing the

Withdrawal. The EIS noted the existence of the Canyon Mine and stated its assumption that the Mine would continue operations. A.R. 8657.

2. <u>The VER Determination</u>

In August 2011, Energy Fuels notified the Forest Service that it intended to resume operation at the Canyon Mine under its Plan of Operations that was approved in 1986. A.R. 8547. In response, the Forest Service, while acknowledging it was not required, decided to complete the VER Determination to supplement the record. The purpose of the VER Determination was to confirm that Energy Fuels had valid rights to the uranium mineral deposits. Although Energy Fuels asserted that it had valid rights to the uranium mineral deposits, a valid Plan of Operations, and that it did not believe any additional government approvals were required before the mine reopened (A.R. 008611-12), Energy Fuels agreed to withhold shaft sinking until the VER Determination was complete. *See* Doc. 123-2 at 2-3. The VER Determination was completed on April 18, 2012 and found that Energy Fuels had valid existing rights at the Canyon Mine. A.R. 10483-528.

The VER Determination detailed how the Forest Service's certified mineral examiners completed their work. Specifically, their investigation included the following:

> We conducted a field examination of the subject claims during October 24-27, 2011. Part of the field work included verifying claim boundaries, documenting development activities at the claims, and observing drill core stored on-site. Our investigation also included reviews of land and mineral status documents including Master Title Plats (MTP), BLM Mining Claim Recordation files, and county recorded documents. We analyzed geological reports and maps from the USGS and the Arizona Geologic Survey, and others to obtain information regarding the geology and mineralization of the area. We reviewed case file documents from the FS Southwestern Regional Office and Kaibab NF offices. We also reviewed [Energy Fuels'] records and data for the Canyon Mine and claims at their offices in Fredonia, AZ.

A.R. 010487-89. The mineral examiners confirmed that they completed the VER Determination consistent with U.S. Department of the Interior Bureau of Land Management's H-3890-Handbook for Mineral Examiners ("Handbook"). *See*

A.R. 007349-65. Plaintiffs have not challenged the methodology used by the Forest Service's mineral examiners or the Handbook. Instead, they allege that Energy Fuels' confidential cost information submitted to the Forest Service failed to include certain environmental reclamation and monitoring costs and that the Forest Service's independent verification also failed to consider these costs.

3. The Confidential Information

While completing the VER Determination, the Forest Service requested that Energy Fuels submit confidential cost information for both the Canyon Mine and the Arizona 1 Mine, which is a similar ore deposit with similar capital and operating costs, so that it could review, assess, and verify the cost information for the mines. On November 17, 2011, Energy Fuels transmitted certain mineral and financial information to the Forest Service. *See* A.R. 012426-012428 (2013 Supplement). This information included a drillhole database, geologic information, graphics and photographs, a technical report, and internal cost estimates for the Arizona 1 and Canyon Mines. *Id.* Energy Fuels identified and clearly marked the information as confidential information. Specifically, Energy Fuels stated "**NOTICE OF CONFIDENTIAL BUSINESS INFORMATION SUBMITTED UNDER 7 C.F.R. PART 1, SUBPART 1**" at the top of the letter and stated:

> Pursuant to the provisions of 7 C.F.R. Part 1, Subpart A, which are applicable to U.S. Department of Agriculture agencies, [Energy Fuels] hereby designates the transmitted documents and information listed above as confidential business information. The documents and information qualify as confidential business information because they are not publicly available, and disclosure of the information therein likely would cause substantial harm to [Energy Fuels'] competitive position. The documents and information have been provided for the exclusive use of the U.S. Forest Service on the express understanding that the information therein will be treated as confidential. Accordingly, the entirety of the documents and information should be treated as confidential by the U.S. Forest Service, as should any part thereof.
>
> Pursuant to 7 C.F.R., Part 1, Subpart A, the U.S. Forest Service should maintain the enclosed documents and information as confidential, and exempt them from public records or disclosure laws, including but not limited to the

> Freedom of Information Act. If a request is made for public review of the documents or information, the U.S. Forest Service must notify [Energy Fuels] and provide the company with a reasonable time in which to object to their disclosure, or seek an injunction preventing disclosure.

A.R. 012426-27 (2013 Supplement). Additionally, Energy Fuels included a cover sheet for the documents that stated:

> **CONFIDENTIAL BUSINESS INFORMATION**
>
> The mineral and financial information contained herein is not publicly available and is being provided to the United States Forest Service ("USFS") for its exclusive use on the express understanding that it will be treated as confidential. [Energy Fuels] is submitting the confidential information to USFS pursuant to the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and the rules and procedures promulgated thereunder.
>
> Under the confidentiality provisions of 7 C.F.R, Part 1, Subpart A, USFS is obligated to hold the documents and information as confidential and prevent public review until a determination is made as to whether the information is confidential. In the event USFS is inclined to deny the request to keep the information contained herein confidential, USFS must notify [Energy Fuels] so that it may have a reasonable time in which to object to its disclosure, or seek an injunction preventing disclosure. This information should not be reproduced in whole or in part for any purpose or furnished to any other person until [Energy Fuels] has had a reasonable time in which to object to the disclosure of any specified portion of the information or seek an injunction to prevent disclosure.

A.R. 012428 (2013 Supplement). Pursuant to Energy Fuels' request, the Forest Service handled, stored, and treated the documents as confidential as required by FOIA, applicable Forest Service regulations, and guidance for mineral examiners.

On February 27, 2012, Energy Fuels provided three redacted uranium sales agreements to the Forest Service and asked that those agreements be maintained as confidential. A.R. 012436 (2013 Supplement). On March 28, 2012, Energy Fuels provided an Excel spreadsheet that contained an internal economic analysis of the Canyon Mine to the Forest Service. A.R. 012396-400 (2019 Supplement). Energy Fuels identified and clearly marked the information as confidential. Notably, the transmittal letter stated "**NOTICE OF CONFIDENTIAL BUSINESS INFORMATION**

SUBMITTED UNDER 7 C.F.R. PART 1, SUBPART A AND PURSUANT TO EXEMPTION 4 OF THE FREEDOM OF INFORMATION ACT" at the top and asserted:

> The information contained in this letter and in the spreadsheets, market report and price memorandum attached is being provided to the United States Forest Service ("USFS") for its exclusive use on the express understanding that it will be treated as confidential. [Energy Fuels] is submitting the confidential information to USFS pursuant to the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and the rules and procedures promulgated thereunder, and Exemption 4 of the Freedom of Information Act, 5 U.S.C. § 552.
>
> Under the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and Exemption 4 of the Freedom of Information Act, USFS is obligated to hold the documents as confidential and prevent pubic review until a determination is made as to whether the information is confidential. In the event USFS is inclined to deny the request to keep the information contained herein confidential, USFS must notify [Energy Fuels] so that it may have a reasonable time in which to object to its disclosure, or seek an injunction preventing disclosure. This information should not be reproduced in whole or in part for any purpose or furnished to any other person until [Energy Fuels] has had a reasonable time in which to object to the disclosure of any specified portion of the information or seek an injunction to prevent disclosure.

A.R. 012396-97 (2019 Supplement).

Finally, Energy Fuels provided the Forest Service with an internal memorandum regarding its view of the appropriate uranium price for the VER Determination. A.R. 012401 (2019 Supplement). On April 26, 2012, the Forest Service returned the paper copies of Energy Fuels' confidential information and permanently removed and deleted electronic copies of the confidential information from its files. A.R. 012443-45 (2013 Supplement).

4. **Appendix C to the VER Determination**

The Forest Service's mineral examiners marked and treated the VER Determination as confidential because it included citations to Energy Fuels' confidential information. They also attached certain Energy Fuels' confidential information to the VER Determination as Appendix C: Cost Information (Company Confidential Cost

Information); Appendix E: Assay Data (Company Confidential Information); and Appendix F: Apex Cost Models (Company Confidential Information). A.R. 010485. This approach is consistent with the guidance in the U.S. Department of the Interior Bureau of Land Management's H-3890-3 Validity Mineral Reports, which supplements the Handbook. A.R. 006767-006816. This guidance provides:

> E. Confidential Information. Confidential information used in the mineral report cannot be released without the written consent of the owner of such information. (See 18 U.S.C. 1905).
>
> 1. Claimant Responsibility. Confidential information must be marked by the claimant in a manner that meets the requirements at 43 CFR 2.13. The handling and storage of confidential information is covered in BLM Manual Section 1278 – Access to External Information, and 3060.06 – Mineral Reports – Preparation and Review.
>
> 2. Treatment of Confidential Data in the Mineral Report. Confidential information must be summarized in the proper portion of the mineral report. The confidential data and analysis or discussion that refers directly to such data must be attached to the report as a stand-alone, detachable appendix. Confidential information provided by a claimant in support of the discovery may fall into any one or more of the following categories:
>
> a. Sales and marketing contracts;
> b. Labor contracts;
> c. Individual drill hole logs and assays;
> d. Subsurface geology and structure derived solely from the claimant's drilling and analysis;
> e. Reserve Data. Ore reserve calculations, grades, and tonnages derived solely from the claimant's data; and
> f. Capital Costs. Company-supplied capital costs not published or not supplied to a government agency for an environmental permit.

A.R. 006779. Throughout the VER Determination and this litigation, the Forest Service treated, handled, and used Energy Fuels' confidential information consistent with FOIA, the applicable Forest Service regulations, and the guidance for mineral examiners. Consistent with the guidance, the Forest Service's mineral examiners attached certain information to the VER Determination as Appendix C: Cost Information (Company Confidential Cost Information). Plaintiffs now seek to publicly file and cite to those documents as well as to two modified versions of Energy Fuels' Excel spreadsheet.

5. FOIA Exemption 4

Plaintiff Center for Biological Diversity ("CBD") has submitted numerous FOIA requests to the Forest Service to obtain documents and information relating to the Withdrawal, Energy Fuels, the Canyon Mine, and the VER Determination. Specifically, CBD submitted a FOIA request, Case Number 11-1912-R, to the Forest Service on July 14, 2011. A.R. 008524-25. On July 24, 2012, the Forest Service provided a partial response to the FOIA request, but withheld Energy Fuels' confidential information pursuant to FOIA Exemption 4 and allowed Energy Fuels an opportunity to demonstrate that the confidential information was exempt from disclosure, which it later did. A.R. 010481, 011330-31, & 011332-33. On July 10, 2012, CBD submitted an additional FOIA request, Case Number 12-1921-R, to the Forest Service seeking documents relating to the Canyon Mine. A.R. 011316-20. The Forest Service requested clarification on the FOIA request (A.R. 011386 & 011392-93) and then provided a response on September 6, 2012. A.R. 011418-19. CBD submitted an additional FOIA request, Case No. 13-0218-R, to the Forest Service on October 26, 2012. A.R. 011839-43 & A.R. 011846-47. The Forest Service again requested clarification regarding that FOIA request and responded. A.R. 011881-82. Ultimately, in response to each of these FOIA requests, the Forest Service concluded that Energy Fuels' confidential information was exempt from disclosure under FOIA Exemption 4 and did not produce the information to CBD, which did not challenge that determination under the process set forth in FOIA and Forest Service's regulations.

6. Protective Order

When the original administrative record was filed with this Court in this matter, the Forest Service did not file Appendix C: Cost Information (Company Confidential Cost Information) and Plaintiffs did not seek to supplement the administrative record. After this matter was remanded by the Ninth Circuit, Plaintiffs filed a Motion to Complete the Administrative Record (Doc. 202). To resolve the Motion, the parties negotiated and agreed to a Protective Order that both resolved Plaintiffs' Motion and protected Energy

Fuels' confidential information from public disclosure. The Protective Order also created a process: (1) to allow the Forest Service and Energy Fuels to produce, with limited redactions, the documents sought by Plaintiffs via their Motion to Complete the Administrative Record; (2) for the parties to then seek to resolve any remaining disputes regarding the redactions; and (3) for the Forest Service to then file the documents with the Court under the safeguards of the Protective Order as part of the administrative record in this matter. Ultimately, the Court entered the Protective Order; the parties worked through their remaining disputes regarding Energy Fuel's confidential information, including a dispute about the relevance of "sunk costs"; and the Forest Service filed the documents at issue as part of the administrative record with the safeguards of the Protective Order.

7. Discussions with Plaintiffs

Prior to filing their Motion for Summary Judgment (Doc. 226) and its supporting exhibits (Doc. 226-1), Plaintiffs asked Energy Fuels to consent to Plaintiffs publicly disclosing and citing to Energy Fuels' confidential information that comprised Appendix C of the VER Determination. Energy Fuels refused because it maintains the information as confidential; the information is not publicly available; its release will harm Energy Fuels' competitive position; Energy Fuels clearly marked and submitted the information as confidential information under FOIA Exemption 4; Energy Fuels only agreed to provide the confidential information after the parties negotiated and agreed to the Protective Order; the confidential information is exempt from public disclosure under FOIA, applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, applicable guidance for mineral examiners, and the U.S. Supreme Court's recent ruling in *Food Marketing Institute v. Argus Leaders Media,* 139 S. Ct. 2356 (2019); and there is a compelling reason to seal and protect Energy Fuels' confidential information. For these reasons, Energy Fuels requests that the Court seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its exhibits (Doc. 226-1).

B. LEGAL ARGUMENT

1. Legal Standard

It has long been recognized that the public has a general right of access "to inspect and copy . . . judicial records and documents." *GoDaddy.com LLC v. RPost Commc'ns Ltd.*, 2016 WL 1158851, *2 (D. Ariz. Mar. 24, 2016) *modified on rehearing by* 2016 WL 1274120 (quoting *Nixon v. Warner Commc'ns, Inc.*, 435 U.S. 589, 597 (1978)). In the Ninth Circuit, when a court permits a litigant to seal information attached to a dispositive motion from the public purview "it must base its decision on a compelling reason and articulate the factual basis for its ruling, without relying on hypothesis or conjecture." *Kamakana v. City & Cnty. of Honolulu*, 447 F.3d 1172, 1178-79 (9th Circ. 2006). Thus, the moving party must provide the Court with particular reasons as to why the material merits sealing treatment. *See, e.g., id.* at 1184 ("Simply mentioning a general category of privilege, without any further elaboration or any specific linkage with the documents, does not satisfy the burden."); LRCiv 5.6(b) ("Any motion . . . to file a document under seal must set forth a clear statement of the facts and legal authority justifying the filing of the document under seal[.]"). In the business context, a "trade secret may consist of any formula, pattern, device, or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it." *GoDaddy.com LLC v. RPost Commc'ns Ltd.*, 2016 WL 1158851, *2 (quoting Restatement (First) of Torts §§ 757, cmt. B (1939)).

2. Energy Fuels' confidential information should not be publicly disclosed because FOIA Exemption 4, applicable Forest Service regulations, guidance for mineral examiners, and the U.S. Supreme Court's recent ruling in *Food Marketing Institute* provide a compelling reason to keep the confidential information sealed.

Plaintiffs seek to file and cite Energy Fuels' confidential information, which was attached to the VER Determination as Appendix C: Cost Information (Company Confidential Cost Information) and which was provided to Plaintiffs and filed with the Court pursuant to the terms of the Protective Order. As noted above, Energy Fuels'

confidential information in Appendix C constitutes confidential information because Energy Fuels maintains the information as private and confidential; it is not publicly available; and Energy Fuels provided the information to the Forest Service under an assurance of privacy under FOIA and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, which is demonstrated by Energy Fuels' transmittal and clear marking on such correspondence that designated Appendix C as confidential. Notwithstanding its belief that all of Appendix C constitutes confidential information, Energy Fuels negotiated with Plaintiffs, agreed to the Protective Order entered by the Court, and produced, with limited redactions of irrelevant information, the documents sought by Plaintiffs in their Motion to Complete the Administrative Record (Doc. 202). Pursuant to the terms of the Protective Order, Energy Fuels produced Appendix C and redacted certain information both due to its nature as confidential information and because it is not relevant to Plaintiffs' Fourth Claim. Plaintiffs took the confidential information, converted Energy Fuels' cost information filed as part of the administrative record into another format, and manipulated the formulas in Energy Fuels' spreadsheet by incorporating new and unsupported assumptions in an attempt to make it appear that the Canyon Mine will not be profitable. This goes beyond mere disclosure of Energy Fuels' confidential information, which Energy Fuels asserts is inappropriate, as Plaintiffs manipulated Energy Fuels' confidential information to create a completely new document that appears to be Energy Fuels' document, which it is not. Plaintiffs now seek to file this new document and cite to it publicly.

Energy Fuels does not believe that the authorities cited by Plaintiffs warrant disclosure of Energy Fuel's confidential information. Instead, the U.S. Supreme Court's recent ruling in *Food Marketing Institute v. Argus Leader Media*, 139 S. Ct. 2356 (2019) confirms that there is a compelling reason to seal the documents at issue. In the case, a private party brought an action under FOIA against the U.S. Department of Agriculture ("USDA"), seeking the names and addresses of all retail stores that participate in the national food-stamp program (*i.e.*, the Supplemental Nutrition Assistance Program or

"SNAP") and each store's annual SNAP redemption data for five years. Stores must submit certain financial data to receive financial compensation under the SNAP program and many stores submit their financial data under a claim that the data is confidential. The USDA refused to disclose the store's SNAP data, citing FOIA Exemption 4, which protects "trade secrets and commercial or financial information obtained from a person as privileged or confidential." 5 U.S.C. § 552(b)(4). The rationale behind Exemption 4 is that private parties, such as Energy Fuels in this instance, should be able to communicate confidential information to federal regulators, such as the Forest Service, without inadvertently making that confidential information public, waiving confidentiality, or allowing the disclosure of the information to third parties who otherwise would not have access to the information.

In evaluating the private party's FOIA claim, the district court applied the "substantial competitive harm test," which provides that commercial information that a person must provide to the government cannot be deemed confidential unless disclosure is likely to cause substantial harm to the competitive position of the person from whom the information was obtained. In *Food Marketing Institute*, the district court found that disclosure of the information would cause competitive harm but not substantial competitive harm and ordered disclosure. The Eighth Circuit affirmed the district court. The U.S. Supreme Court reversed and unanimously agreed that the existing FOIA Exemption 4 standard applied by the district court and Eighth Circuit were too stringent. The U.S. Supreme Court's majority decision, written by Justice Gorsich, held that information is "confidential" within the meaning of FOIA Exemption 4 "at least" where it is "[1] both customarily and actually treated as private by its owner and [2] provided to the government under an assurance of privacy." The Court left open the possibility that satisfying the first condition may be sufficient. The Court specifically rejected the "substantial competitive harm test."

While this is not a FOIA case, the holding and rationale of *Food Marketing Institute* apply equally to the sealing of Energy Fuels' confidential information and

provides a compelling reason to maintain that information as confidential. Energy Fuels customarily and actually treats its internal financial information, including the information in Appendix C of the VER Determination and its internal budgets and financial plans, as private and confidential. That information is not publicly available. When the information was requested by the Forest Service's mineral examiners, Energy Fuels transmitted and clearly marked the information as confidential pursuant to FOIA Exemption 4 and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6. Energy Fuels reasonably relied on the Forest Service to treat the information as confidential and to not release it to third parties such as Plaintiffs, which it did.

The fact that Plaintiffs have filed a lawsuit under federal statutes other than FOIA and now seek to disclose Energy Fuels' confidential information as part of a dispositive motion does not change the *Food Marketing Institute* holding as it applies to the submission of confidential information submitted to a federal agency with the full expectation and reliance that it will be treated as confidential and not disclosed, as is the case here before or during litigation. *See* Fed. Rule of Evidence 501 (acknowledging that the confidentiality and privilege afforded by the federal FOIA statute and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228, apply to this litigation).

While Energy Fuels agreed to disclose some of the relevant confidential information that relates to Plaintiffs' Fourth Claim in good faith to move this matter forward, Energy Fuels only agreed to do so with the assurance from Plaintiffs that it could redact irrelevant commercial and financial information, such as its specific internal budgeting and cost information, and that the information would not be publicly filed. Energy Fuels does not believe Plaintiffs need to publicly cite to its confidential information to brief its Fourth Claim in full and does not believe that there is any legitimate reason for Plaintiffs to disclose that information. This is especially true since the entire text of the VER Determination is available for Plaintiffs to cite and use in their argument. Additionally, the disclosure of Energy Fuel's spreadsheet of costs, even with

the entirely redacted line-item numbers, will disclose the manner in which Energy Fuels analyzes the economics of its breccia pipe mines, including the organization of costs categories and cost line items, all of which is proprietary to Energy Fuels, as the only recent miner of similar deposits in the United States, and would therefore result in substantial competitive harm to Energy Fuels if disclosed to its competitors. Plaintiffs also could use Energy Fuels' own internal financial information against Energy Fuels in the future, which is likely to cause substantial harm to the competitive position of Energy Fuels (the person from whom the information was obtained), thus fulfilling the second element of the "substantial competitive harm" test deemed too stringent a test to apply by the U.S. Supreme Court. If Energy Fuels is able to fulfill both elements of an overly stringent test, clearly, it meets the less stringent test's requirements. Accordingly, Energy Fuels believes its right to confidentiality in this case is substantial and clear and, consistent with *Food Marketing Institute*, Energy Fuels requests that the Court seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its exhibits (Doc. 226-1).

3. <u>Disclosure of the confidential information will harm Energy Fuels' competitive position</u>.

Energy Fuels is the only uranium mining company that has successfully mined breccia pipe uranium mines on the federal lands subject to the Withdrawal. It also owns and operates the White Mesa Mill, which is the only operating domestic uranium mill in the United States. As a result of these unique mining experiences and assets, Energy Fuels has developed valuable, confidential, proprietary information relating to the mining of breccia pipe uranium mines and milling of uranium bearing ores. This confidential information includes mining methods, cost estimates and budgets, economic analyses, and operational information relating to Energy Fuels' Arizona 1 and Canyon Mines. The information was developed through Energy Fuels' past operations and experience and is proprietary and extremely valuable. As a result, Energy Fuels maintains the information as confidential and it has not been publicly released to date. Appendix C to the VER Determination contains some of Energy Fuels' confidential cost information relating to

the Canyon Mine. If publicly filed with the Court as proposed by Plaintiffs, competing uranium mining companies could obtain and use the information to their competitive advantage and to Energy Fuels' competitive disadvantage. Additionally, if publicly available, Plaintiffs could potentially distribute and use Energy Fuels' confidential information to harm Energy Fuels' competitive position. Energy Fuels' confidential information is proprietary and commercially valuable, which provides a compelling reason for the Court to continue to maintain the information in the administrative record under seal and seal the additional documents filed by Plaintiffs.

4. <u>The confidential information at issue is not publicly available.</u>

Plaintiffs allege that the information that they cite in their Motion for Summary Judgment (Doc. 226) and its exhibits (Doc. 226-1) is publicly available. While it is true that a few of the numbers and totals from Energy Fuels' cost estimates were made publicly available in the text of the VER Determination, Energy Fuels' detailed, comprehensive cost estimates and Excel spreadsheet have never been disclosed or made publicly available. As mentioned above, the disclosure of the cost estimates and Excel spreadsheet, even with the entirely redacted line-item numbers, will disclose the manner in which Energy Fuels analyzes the economics of its breccia pipe mines, including the organization of cost categories and cost line items, all of which is proprietary to Energy Fuels, as the only recent miner of similar deposits in the United States, and would therefore result in substantial competitive harm to Energy Fuels if disclosed to its competitors. As noted above, the administrative record before the Court confirms that the confidential information at issue has not been released publicly and the disclosure of a few of the numbers and totals in the cost estimates does not warrant the full public disclosure of Energy Fuels' confidential information.

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5. Energy Fuels intends to move to strike the exhibits attached to Plaintiffs' Motion for Summary Judgment pursuant to LRCiv. 7.2(m)(2) and those documents should remain sealed until the Court rules on that motion.

Finally, to support their Motion for Summary Judgment, Plaintiffs submitted five exhibits to the Court. As Plaintiffs argued when moving to strike Energy Fuels' Declaration of Harold Roberts (Doc. 151 at pp. 9-10), Plaintiffs brought this matter pursuant to the Administrative Procedures Act, 5 U.S.C. § 706(2), and the Court cannot consider declarations and information that is not part of the Forest Service's administrative record. *See, e.g., Camp v. Pitts*, 411 U.S. 138, 142 (1973); *Thompson v. U.S. Dept. of Labor*, 885 F.2d 551, 555 (9th Circ. 1989). Further, Plaintiffs' exhibits contain facts and information and advance arguments that are outside of the scope of the Plaintiffs' Fourth Claim, which is limited to whether or not the VER Determination included certain specified categories of environmental and reclamation costs and the impact of any omission of those costs on the ultimate conclusions in the VER Determination. Using its exhibits, Plaintiffs attempt to challenge the entire VER Determination, including the uranium price used, which was not previously asserted or argued as part of Plaintiffs' Fourth Claim.

In addition to this argument, Energy Fuels will move to strike Plaintiffs' two modified versions of documents already in the administrative record because Plaintiffs did not move to supplement the administrative record; those modified versions of the documents in the administrative record do not accurately represent the documents that were before the Forest Service; and they improperly ask the Court to consider uranium prices after the VER Determination was completed. It is worth noting that Energy Fuels would not have consented to the limited disclosure of its confidential information had it known of Plaintiffs' intent to manipulate formulas and incorporate new and unsupported assumptions for the purpose of supplementing the administrative record with unsubstantiated exhibits – an act considered by Energy Fuels to be in contravention of Plaintiffs' purported good faith efforts to move the case forward. Finally, Energy Fuels

will move to strike Plaintiffs' exhibits because they also contain facts and information that occurred after the VER Determination was completed, which are irrelevant to and outside the scope of Plaintiffs' Fourth Claim.

Pursuant to LRCiv. 7.2(m)(2), Energy Fuels must raise its motion to strike in response to Plaintiffs' Motion to Summary Judgment, which it intends to do. Accordingly, Energy Fuels requests that the Court seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and the supporting exhibits (Doc. 226-1) until the Court rules on its motion to strike.

C. CONCLUSION

Pursuant to LRCiv 5.6(d), Energy Fuels requests that the Court seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its supporting exhibits (Doc. 226-1).

RESPECTFULLY SUBMITTED this 25th day of September, 2019.

GALLAGHER & KENNEDY, P.A.

By: */s/ Bradley J. Glass*

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CERTIFICATE OF SERVICE

I hereby certify that on September 25, 2019, I electronically transmitted a PDF version of this document to the Clerk of the Court, using the CM/ECF System for filing and for transmittal of a Notice of Electronic Filing to the CM/ECF registrants and via U.S. mail to:

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7552519v2/21569-0005

UNITED STATES DISTRICT COURT

DISTRICT OF ARIZONA

Grand Canyon Trust, *et al.*, Plaintiffs, v. Heather Provencio, Forest Supervisor, Kaibab National Forest, *et al.*, Defendants, and Energy Fuels Resources (USA) Inc., *et al.*, Intervenors-Defendants.	No. CV-13-8045-PCT-DGC **PROPOSED ORDER GRANTING INTERVENORS-DEFENDANTS' MOTION TO SEAL** (Assigned to the Honorable David G. Campbell)

Pending before the Court is Intervenors-Defendants Motion to Seal Plaintiffs' Motion for Summary Judgment (Doc. 226) and its exhibits (Doc. 226-1).

IT IS ORDERED that the Motion is granted. The Court of the Clerk is directed to seal Documents 226 and 226-1.

By: _____
David G. Campbell
Senior United States District Judge

7552550v1/21569-0005

DOCUMENT #3

United States
Department of
Agriculture

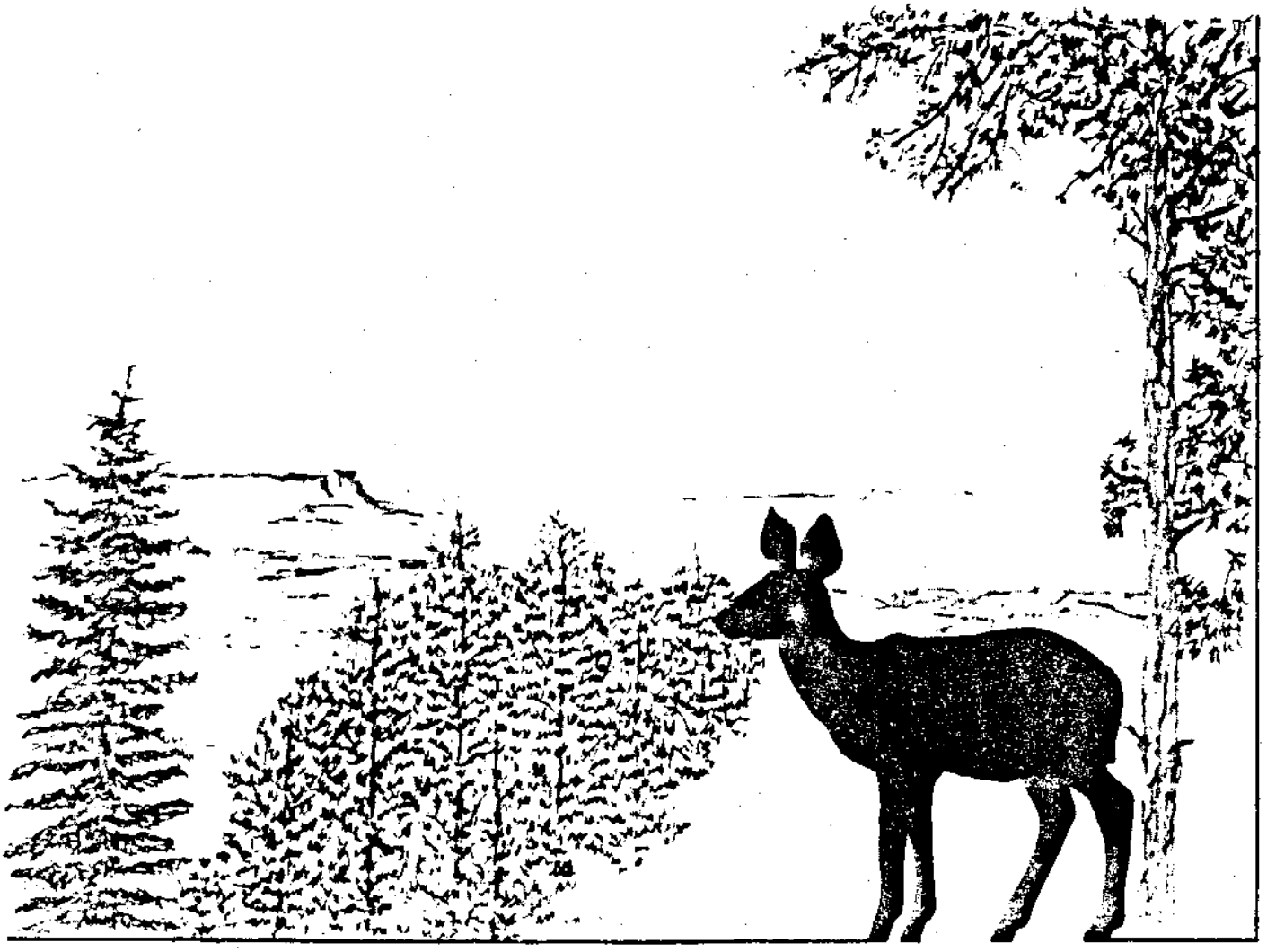
Forest Service

Southwestern
Region

Kaibab National
Forest

August 1986

Final Environmental Impact Statement Canyon Uranium Mine



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SER-024

ENVIRONMENTAL IMPACT STATEMENT
CANYON URANIUM MINING PROPOSAL
COCONINO COUNTY, ARIZONA

Transmitted to EPA and Public: DRAFT Feb. 28, 1986 FINAL SEP 29 1986

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ABSTRACT

This EIS is in response to an initial application in October 1984 by Energy Fuels Nuclear, Inc. to develop a uranium mine south of the Grand Canyon on the Tusayan Ranger District of the Kaibab National Forest. Three alternatives to the proposed development are presented and analyzed along with a No Action Alternative to continue the current management activities in the area. This EIS meets the requirements of the National Environmental Policy Act (NEPA).

Appendices A through F to the Draft EIS were printed separately and are available for loan at public libraries or local Forest Service offices.

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SUMMARY

1. PURPOSE OF AND NEED FOR ACTION

In October 1984, Energy Fuels Nuclear, Inc. (EFN) submitted to the U.S.D.A. Forest Service, Kaibab National Forest, a Plan of Operations to mine uranium on unpatented mining claims on the Tusayan Ranger District. The proposed mine is located in Coconino County Arizona, approximately 6 miles south of Tusayan. The discovery of this ore body was made during an earlier exploratory drilling program approved by the Forest.

The proposed Canyon Mine would involve disturbance of approximately 17 acres for the mine shaft and surface facilities, plus some new or improved roads within the Forest, depending on which ore transportation route is ultimately selected. The ore would be hauled to the licensed mill at Blanding, Utah.

The federal action considered in this document is the approval by the Forest Supervisor, Kaibab National Forest, of a Plan of Operations for the Canyon Mine (Appendix A) with reasonable mitigation measures that are in addition to those proposed by EFN. The Supervisor's decision may be to approve the Company's plan as proposed or to require modification of the plan.

2. SCOPING AND EIS PROCESS

A primary objective of this Environmental Impact Statement (EIS) is to disclose for both Forest Service officials and the public, information sufficient to permit a reasoned evaluation of the environmental aspects and implications of implementing a range of project alternatives.

An evaluation of the extensive public review of the Canyon Mine proposal indicated significant public concern about uranium mining in Northern Arizona. Although much of this concern is based on opposition to the eventual uses of uranium, there are also many concerns related to the effects of uranium mining on the human, physical, and biological environment.

After intensive screening and evaluation, ten issues and concerns were identified for analysis in the EIS. These issues and concerns were used in the formulation and evaluation of alternatives and assessment of impacts. To varying degrees,

these issues and concerns are the focus of this EIS. However, other issues and impacts are identified and discussed as appropriate.

1. What social and economic impacts will the uranium mine have on the local communities and Coconino County?

2. What reclamation measures will be required for site restoration?

3. Can proponent-incurred project costs be held to a reasonable level?

4. What impacts will the mining operation have on important wildlife habitats?

5. What effect will the mining activities have on forest vegetation?

6. What effect will the mining activities have on visual quality of the Kaibab Forest, State Highway 64, and the Grand Canyon?

7. What effects will the mining activities have on the air quality of the surrounding area?

8. What impacts will the mining transportation system have on the local environment and the management of National Forest System Lands?

9. What impacts will the mining activities have on the soil, and surface and subsurface water quantity and quality?

10. What impacts will mining and ore transportation have on Indian religious sites and practices?

Following scoping, the Draft Environmental Impact Statement (DEIS) was prepared for the Canyon Mine. The DEIS was transmitted to EPA and the public on February 28, 1986. The public comment deadline was May 1, 1986 though substantive comments received after that date were also considered and are included in the EIS to the maximum extent possible. The DEIS considered five alternatives in detail, including the No Action Alternative and four operational alternatives. Those alternatives are described in detail in Chapter 2.

The EIS has been revised to reflect the comments received on the DEIS. Important changes include:

1. Addition of Indian religious concerns as an issue and concern.

The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the DEIS in conjunction with a general analysis of impacts on American Indians. Comments on the DEIS by the Hopi and Havasupai Tribes alleged that religious sites and practices would be adversely affected by the Canyon Mine, a concern which was not raised by the Tribes during scoping or earlier consultation with the Tribes. Based on those comments and continuing consultation with the affected Tribes, the Forest Service has added Indian religious concerns to the list of issues evaluated in detail by the EIS. The text of the FEIS includes an expanded discussion of Indian religious sites and practices in the affected area. The Forest Service has also requested a meeting with tribal representatives at the proposed mine site to identify any specific sacred sites that might be disturbed by mining activity. To date, neither Tribe has committed to a visit to the mine site. Consultation with the Tribes regarding religious concerns will continue beyond completion of the NEPA process.

2. Expanded discussion of potential groundwater impacts.

Several comments expressed concern about potential depletion or contamination of groundwater resources in the area, including potential impacts on seeps and springs which flow from underground aquifers. The DEIS evaluated the impacts on surface and subsurface water as a major issue and concern. The DEIS concluded that adverse impacts either during or after mining operations were extremely unlikely. In response to public comments, the FEIS includes an expanded discussion and analysis of groundwater conditions and potential impacts. The additional analysis confirms the conclusion of the DEIS that no adverse impacts are expected. The Preferred Alternative includes a monitoring well at the mine site. If groundwater is present at the site, the well will disclose any unanticipated changes in water quality resulting from mine operations.

3. ALTERNATIVES CONSIDERED INCLUDING THE PROPOSED ACTION

The major issues and concerns identified through the scoping process, management concerns of affected State and Federal agencies and pertinent legal and regulatory requirements were used in developing suitable alternatives for analysis. The

alternatives to be considered in detail represent a reasonable range of opportunities that address the significant issues and concerns. Briefly the five alternatives developed are:

1. No action, or disapproval of the Plan of Operations.. This alternative provides baseline data against which the impacts of the following alternatives can be compared.

2. Plan of Operations as proposed by EFN which includes using Haul Route #1 along the north boundary of Tusayan Ranger District and south of the Grand Canyon National Park; shortest distance overhead powerline; pooled worker transportation; ten 20-ton ore trucks per day to the Blanding, Utah mill; 5 to 10 year mining period; holding ponds for mine-yard runoff; 6-foot chainlink security fence; runoff channels around mine yard; and potable water from ground water or trucked from Williams.

3. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; equivalent wildlife habitat replacement; use either haul route #1 or #2 along the northern boundary of the Tusayan Ranger District; modified diversion channels with dikes; and construction of a 35-car parking lot.

4. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; equivalent wildlife habitat replacement; construction of haul route #5 off the east end of the Coconino Rim escarpment; and an overhead powerline along access road.

5. Proposed Plan of Operations with the following modifications: monitoring of air, soil and water; buried powerline along access road; minimize road construction by use of haul route #7 near SP Crater (pending right-of-way acquisition across 20 miles of State and private land), or haul route #6 which utilizes State Highway 64 south to I-40, east to US 89, north on US 160 and 191 to Blanding, Utah.

The intent of the general constraints, guidelines and mitigation measures contained in each alternative is to ensure that adverse environmental impacts are avoided or minimized during construction and operation of the project, and during reclamation after mine closure. These requirements also aid in the process of identifying the Preferred Alternative.

4. PREFERRED ALTERNATIVE

No Preferred Alternative was identified in the DEIS. Based on the analysis in the DEIS and public comments received in response to the DEIS, Alternative 5 has been selected as the Preferred Alternative with one minor modification. Alternative 5 included a buried powerline along the access road to the mine site; the Interdisciplinary Team concluded that, given the relative temporary nature of the project, burying the powerline would increase costs significantly with no corresponding environmental benefits and the Interdisciplinary Team has therefore, substituted an above ground powerline.

The operational elements of the Preferred Alternative are:

1. Expanded monitoring of soil, air and water (described in Sections 2.5.10 and 2.5.11);
2. Modified surface water diversion structure (Section 2.5.12);
3. Use of haul route #6 (the all highway route described in Section 2.2.1.1) or haul route #7 (the SP Crater road described in Section 2.2.1.1);
4. An overhead powerline from Highway 64 following the access road to the mine site (Section 2.2.1.1);
5. Transportation of mine workers by the company (Section 2.2.1.1); and
6. The mitigation measures applicable to all alternatives (described in Section 2.5) including equivalent acre replacement of disturbed wildlife habitat and relocation of key wildlife waters.

The DEIS noted that "Generally, no environmental impacts have been identified in any alternative which cannot be mitigated to a substantial extent." This conclusion is still valid. However, the Preferred Alternative represents the combination of operational components, mitigation measures and haul routes which minimize potential impacts and best responds to the issues and concerns identified in the EIS.

5. CONCLUSION

Adverse environmental impacts identified with past uranium mine activities in Northeastern Arizona and Northwestern New Mexico, such as radionuclide contamination of surface and ground water, radon gas emissions affecting the health of mine workers and a general degradation of the environment, can be minimized by

implementation of the monitoring, mitigation measures and operating procedures required in Alternatives 2, 3, 4 and 5. The Preferred Alternative includes all of the monitoring and mitigation measures evaluated in the EIS.

Throughout most of the analyses, potential impacts were analyzed by assuming extreme conditions in order to assure maximum confidence in the results of the analysis.

There do not appear to be any significant adverse radiological impacts on the environment from the Canyon Mine Project. This conclusion is based on evaluation of existing and projected radiation, radon and dust emissions levels, the requirements of the Clean Water Act and the water quality permits applicable to the mine, and the fact that no discharge from the mine is anticipated.

During mine operation the direct radiation from the ore piles will probably not be measurable at distances greater than a few hundred meters from the mine site. In any event, it should not be possible to distinguish the mine induced radiation from the variations in the natural radiation environment which currently exist in the vicinity of the site.

Changes in radon gas levels in the community of Tusayan from the Canyon Mine are projected to be too small to detect and will remain within normal radon level fluctuations existing in the environment.

Ore transport to the mill will not expose inhabitants along the haulage route to any measurable increase in radiation. A few accidents may occur during the life of the mine when ore spillage occurs. A thorough and timely cleanup of any spills will not pose a health hazard from the radiation of the ore.

An extreme flood event exceeding that to be expected once every 500 years, followed by a total loss of the mine site diversion structures, could release several Curies of radioactivity from the ore piles to the downstream wash. However, residual contamination would be removed and returned to the mine yard. There would be no health hazard. The mine site is being designed to preclude accidental discharges to the wash; however, if an accidental release occurs, the impact must be assessed immediately and cleanup effected if the situation warrants.

Social and economic impacts will likely be felt the most in the community of Williams and are generally considered to be beneficial because of increased employment. Population increases or other development in Tusayan will probably be discouraged by lack of housing, a limited water supply and a

small existing work force. However, because the resources of the town are limited, even small increases in population will result in noticeable impacts.

Development of the mine site could slightly reduce the amount of land available for Indian religious practices, including hunting and gathering activities. However, mine development is not expected to affect the current level of Indian religious practices in the area. An archeological review of the site and consultation with affected Tribes have failed to disclose any specific sacred sites or properties which would be disturbed by any of the alternatives.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated religious beliefs.

Wildlife habitat on the Tusayan Ranger District or near vacant State and privately owned lands along haul route #7, can be adversely affected by the development of the mine site, improvement of the required haul routes and increased traffic flows over these routes. The additional mitigation measures developed in Alternatives 3, 4 and 5 should be more effective in reducing these impacts than measures described in Alternative 2.

The use of state highways for haul route #6 in Alternative 5 should have no measurable impacts on adjacent wildlife habitat since the increase in traffic level resulting from the 10 ore trucks would be insignificant when compared to the 2800-3800 average daily traffic that is already using these routes.

The possibility of significant ground water contamination from the mine is remote. Ground water flows, if they exist, are likely to be at least 1,000 feet below the lower extremities of the mine. This, plus the low potential for encountering groundwater in the mine, effectively eliminates the possibility of contaminating the Redwall-Muav aquifer. Groundwater flows, if present, will be monitored by a test well drilled at the site. Water samples will be taken, and if contamination is found, the well will be pumped and the water will be held on site or discharged in accordance with the Clean Water Act.

Data and information contained in this EIS indicates that neither the Grand Canyon National Park nor Havasupai Indian

Reservation should be affected either directly or indirectly by the development of the Canyon Mine. This conclusion is further supported from the apparent lack of any environmental degradation (other than visual impacts and the obvious inconsistent land use) caused by the operation of the Orphan Uranium Mine, located 2 miles west of Grand Canyon Village on the south rim of the Grand Canyon. It was active during the period from 1956 to 1969, under regulatory guidelines much less restrictive than those which exist today. Radionuclide contamination of air, soil or water from the Orphan Mine has not been identified. For comparative purposes, the proposed Canyon Mine is some 13 air miles from the rim of the Grand Canyon. Implementation of mitigation measures in Alternatives 2-5 will minimize the likelihood of any adverse environmental impacts on the Grand Canyon National Park.

Alternatives 3, 4, and 5 provide for postoperational monitoring of the air, soil and water resources. Data will be compared to preoperation baseline data to determine if any significant environmental changes are occurring.

In summary, an evaluation of the development of the Canyon Mine has not identified any environmental impacts of Alternatives 2-5 which cannot be mitigated to a substantial extent through the implementation of the additional mitigation measures identified in the Plan of Operations and Alternatives 3, 4 and 5.

Comparison of Alternatives for Resolution of Issues and Concerns

None of the project alternatives fully resolves all of the identified issues and concerns (IC's). However, by implementing the mitigation measures identified in Section 2.5, Alternatives 3, 4 and 5 are considered environmentally acceptable by the Forest Service. Alternative 5, with the substitution of an overhead power line, has been selected as the Preferred Alternative.

IC #1-Social and economic impacts on the community of Williams and Coconino County as a whole are considered by the Forest Service to be beneficial and virtually the same for Alternatives 2-5.

If the No Action Alternative were implemented, there would be no change in current levels of employment, income, tax revenue or output as a result of the Canyon Mine. Demand for public services would remain at current levels. No cultural resource sites would be identified or disturbed by mine development or road improvement or construction.

IC #2-Reclamation measures required at the mine site are judged by the Forest Service to be satisfactory in Alternatives 2-5 although measures called for in Alternatives 3-5 are more comprehensive and oriented toward improving wildlife habitat at the mine site upon its closing. Under the No Action Alternative, of course, no reclamation would be required at the Canyon Mine site.

IC #3 -The least cost alternative is Alternative 2. Alternatives 3-5 indicate increased expenditures of $360,000 to $1,300,000 can be expected depending on the haul route used and mitigation measures required. Increased expenditures are generally associated with mitigation requirements. The No Action Alternative would result in no construction or development costs, however, the costs of exploration and environmental review could not be recovered by EFN.

IC #4 -Wildlife habitat will be affected to varying degrees in all alternatives depending on the ore haulage route used. Alternative 5 has the least impact on wildlife. Alternative 2 would have the greatest impact because of a lack of mitigation requirements. Mitigation measures in Alternatives 3 and 4 should be effective in reducing the adverse impacts on wildlife resulting from increased road traffic.

Alternatives 3-5 all call for "equivalent habitat replacement" resulting from the Forest's assumptions about the impacts of decreased habitat utilization caused by the mine and expanded transportation system. Alternative 3 also includes a proponent choice of road closure during May and June in lieu of habitat replacement.

The No Action Alternative would have no impact from mining or ore transport on wildlife or wildlife habitat and would require no mitigation. Any benefits associated with construction of alternative wildlife waters or replacement habitat would not be realized.

IC #5-Implementation of Alternatives 2-5 will have a negligible and insignificant effect on the make-up of vegetative types now present on the Tusayan Ranger District. The No Action Alternative would have no impact on vegetation at the Canyon Mine site.

IC #6-Visual quality associated with the Grand Canyon will not be affected by the development of the Canyon Mine regardless of the alternative selected for implementation. Alternatives 2-5 will alter the short term visual quality at the mine site. Reclamation measures should effectively restore the area to its present characteristic landscape.

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Haul route selection will have a limited effect on the scenic qualities on the Tusayan Ranger District. Implementation of Alternative 4 would have the greatest effect by constructing a road off the Coconino Rim in a location that would be visible to travelers going to and from the Grand Canyon using the east Highway 64 entrance. The No Action Alternative would have no impact on the visual quality of the area near the mine site.

IC #7 -Implementation of Alternatives 2-5 will have no appreciable effect on the air quality, which includes particulates, radon gas, or radioactive dust, at either the Grand Canyon or the community of Tusayan. Increases in particulate matter will be site specific along haul routes and at the mine site itself and are expected to be well within air quality standards. Current levels of air quality in the vicinity of the Canyon Mine site and haul routes would be unchanged by the No Action Alternative.

IC #8 -Implementation of Alternative 5 and use of either the SP Crater haul route or the State Highway system would minimize impacts on National Forest resources and general forest environmental setting. It would, however, transfer the use, and resulting impacts, to private and State lands and existing highway systems at a greater cost to EFN. It is felt the environmental impacts on adjacent lands would be less than the overall impacts associated with the transportation routes identified in Alternatives 2, 3 or 4 if either of these routes are used.

The haul route identified in Alternative 4 would be most cost effective in providing a road that would meet long term management needs in the event other mines are developed in the eastern quadrant of the Tusayan Ranger District.

Haul routes included in Alternatives 2 and 3 are the most cost effective routes for hauling ore from the Canyon Mine to the mill in Blanding, Utah.

No ore would be transported under the No Action Alternative.

IC #9 -Mitigation measures and operational procedures included in Alternatives 3-5 will reduce the possibility of radionuclide contamination to surface or subsurface water sources, and identify any contamination at the earliest possible time. Alternative 2 does not include air, water and soil monitoring requirements to insure the operational designs of the mine are functioning properly. Under the Alternative 1, current parameters for water quantity and water quality would remain unchanged at the mine site. Soil resources at the mine site would not be affected.

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Neither the water quality on the Havasupai Indian Reservation nor the Grand Canyon National Park should be environmentally affected by the development of this mine under Alternatives 2-5. The Havasupai Reservation is located about 35 miles downstream from the mine site. A documented 100-year flood dissipated because of topographic features, about 14 miles downstream and 20 miles above the Reservation. Mitigation measures taken at the mine site would prevent any significant downstream radionuclide contamination in the event of an extreme flood occurrence.

IC #10 -Implementation of Alternatives 2-5 will have no demonstrable effect on Indian religious sites and practices. Consultation with the Hopi and Havasupai Tribes has not identified any specific sacred site which would be disturbed by the development of the mine or any of the haul route options. Similarly, a detailed archeological review of the site has disclosed no sites of religious significance.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated beliefs.

Development of the mine site (Alternatives 2-5) and haul route options requiring new construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any religious sites or areas be restricted. Furthermore, there is no physical evidence of Indian religious activity at the mine site. The development of the mine is not expected to significantly burden the traditional religious beliefs of either the Hopi or Havasupai Tribes.

The Preferred Alternative will include only the limited impacts associated with development of the mine site, as the haul route options included in the Preferred Alternative do not include any new road construction or significant reconstruction.

The No Action Alternative would have no impact on Indian religious sites or practices. The Hopi and Havasupai Tribes have expressed a preference for the No Action Alternative.

CHAPTER 1

PURPOSE OF AND NEED FOR ACTION

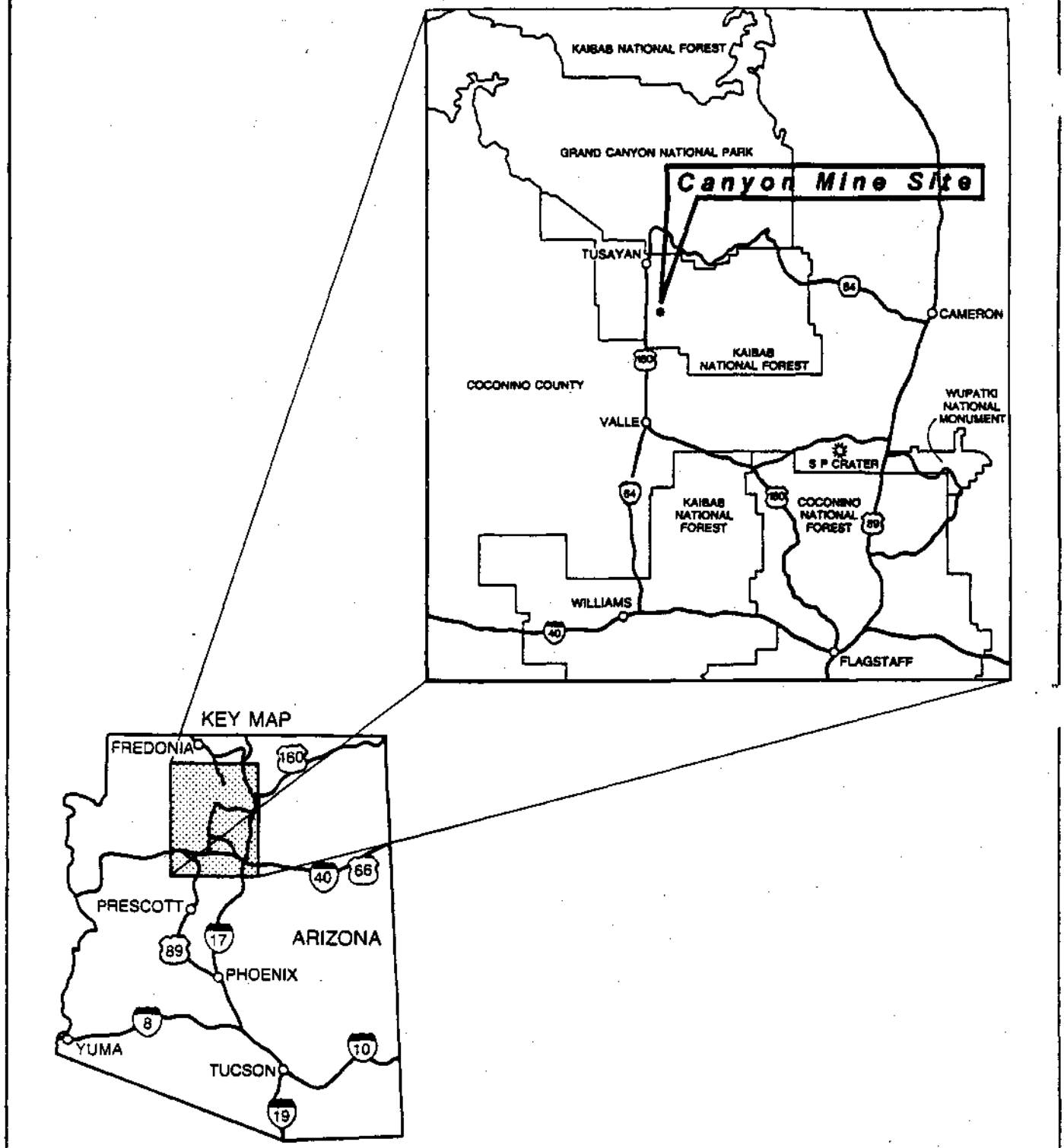
1.1 INTRODUCTION AND NEED FOR ACTION

In October 1984, Energy Fuels Nuclear, Inc. (EFN) submitted to the U.S.D.A. Forest Service, Kaibab National Forest, a Plan of Operations to mine uranium on unpatented mining claims on the Tusayan Ranger District, approximately 6 miles south of the village of Tusayan (Fig. 1.1). The discovery of this ore body was made during an earlier exploratory drilling program approved by the Forest.

Ore to be mined at the Canyon Mine is initially found at a depth of 900 feet below the surface in a breccia pipe occurring in the Coconino Sandstone geologic formation. The pipe extends downward another 500 feet into the Supai Formation or to a depth of approximately 1,400 feet below the surface. The ore will be extracted from a single 8 foot by 18-foot vertical shaft which parallels the ore bearing breccia pipe. A second 8-foot diameter ventilation and emergency escape shaft will also be drilled.

The proposed Canyon Mine would involve disturbance of approximately 17 acres for the mine shaft and surface facilities, plus some new or improved roads within the Forest, depending on which ore transportation route is ultimately selected. The ore would be hauled to EFN's licensed mill at Blanding, Utah, which has a daily design capacity that far exceeds scheduled ore production from the known uranium deposits being developed by EFN, including the proposed Canyon Mine. Estimated ore production from the Canyon Mine will comprise about ten percent of the total mill processing capacity.

Initial public input on the Canyon Mine proposal was sought during the months of December 1984 through February 1985, to determine the degree of public interest in the proposal and appropriate level of environmental review. A letter soliciting public comment which summarized the Plan of Operations, the NEPA process, and legal authorities applicable to the project, was mailed to federal, state and local government agencies, affected Indian tribes, the news media, and over 1,700 individuals on the Kaibab National Forest mailing list who have expressed an interest in mineral development or environmental documents.



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LOCATION MAP OF THE CANYON MINE SITE

FIGURE 1.1

Over 200 letters were received by the Forest Service in response to requests for written comment. Analysis of these comments, along with input received at several public meetings, made it clear there was substantial public concern and controversy about this uranium mine proposal and its potential effects on the quality of the human environment and that an environmental impact statement should be prepared.

The Canyon Mine is located on one of many mining claims filed in Northern Arizona, and Energy Fuels is only one of several companies who have located such claims. The uncertainty of the depressed domestic uranium market and many problems associated with the detection of breccia pipe deposits make it impossible to predict the level of future mining activity and specific future mine locations. There are no mining proposals except the Canyon Mine at this time, but it is likely that exploration and mining activity will continue in several locations in Northern Arizona south of the Grand Canyon, for the foreseeable future. Each uranium mining proposal should generate similar issues and have similar environmental impacts. A complete analysis of the Canyon Mine through an environmental impact statement (EIS) will provide data and experience useful in evaluating future mining proposals. Furthermore, the data generated by an EIS and subsequent monitoring of the mining operations will enable the Forest Service to better evaluate the potential of any cumulative impacts associated with additional mines.

A primary objective of this EIS is to disclose for both Forest Service officials and the public, information sufficient to permit a reasoned comparison of the environmental impacts of implementing a range of reasonable project alternatives.

The federal action considered in this document is the approval by the Forest Supervisor, Kaibab National Forest, of a Plan of Operations for the Canyon Mine (Appendix A) and the establishment of reasonable mitigation measures that are in addition to those proposed by EFN. The Supervisor's decision may be to approve the Company's plan as proposed or to require modification of the plan.

1.1.1 Statutory and Regulatory Authorities

The general mining laws provide a statutory right to explore and extract certain minerals from National Forest System lands. The minerals subject to the general mining laws are called locatable minerals; uranium is one such mineral. The Forest Service is directed to integrate, consistent with multiple-use management principles, the exploration, development and removal of locatable minerals with the use and

conservation of other resources. This policy is consistent with various legislative mandates including the Organic Act, Mining and Minerals Policy Act, Federal Land Policy and Management Act, and most recently, the National Materials and Mineral Policy, Research and Development Act. The Forest Service does not have the discretionary authority to deny access for the purpose of prospecting for and extracting minerals on those National Forest System Lands that are open to mineral entry.

The Forest Service is not authorized to manage locatable mineral resources on National Forest System Lands. However, the Forest Service is concerned with methods and techniques of prospecting, exploration, mining, or mineral processing to the extent that certain methods or techniques have greater or lesser environmental impacts.

It is the responsibility of the Forest Service to review and where necessary, modify proposed plans of operations for the development of a mine. Review and modification of plans is to insure that the mining operations will be conducted in a manner which minimizes, prevents, mitigates, or repairs adverse environmental impacts on National Forest system lands. The Forest Service does not have the authority to categorically deny reasonable operations proposed under the mining laws.

A brief summary of some laws and regulations relevant to the proposed action follows.

Statutory Authorities

(1) General Mining Law of 1872

EFN has the statutory right under U.S. Mining Law (30 U.S.C. 21-54) to enter on open National Forest System lands for the purpose of conducting exploration and mining activities. Development of a mine is subject to approval of a Plan of Operations and the Forest Service must adhere to the provisions of the National Environmental Policy Act (NEPA) and 36 CFR 228 before approving, approving with conditions, or denying a Plan of Operation.

As enacted and interpreted, the General Mining Law expressly incorporates the "free access" principle of mineral entry on public lands:

> Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States shall be free and open to exploration and purchase . . .

(2) Organic Administration Act of June 4, 1897

This is the Act that eventually created the National Forest System. The Act specifically mentions the mineral resource

> . . .Nor shall anything herein prohibit any person from entering upon such forest reservation for all purposes, including that for prospecting, locating, and developing the mineral resources thereof: Provided, that such persons comply with the rules and regulations covering such forest reservations.

Court decisions have interpreted this to mean that the national forests are open for entry "for all proper and lawful purposes, including that of prospecting, locating and developing the mineral resources thereof." 16 U.S.C. 478.

(3) Mining and Minerals Policy Act of 1970

This Act establishes policy for the Federal Government related to all types of mineral activity and specifically addresses the development of domestic sources of uranium.

> Sec. 2. The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, and (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs . . .
>
> For the purpose of this Act, 'minerals' shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium.

(4) Federal Land Policy and Management Act of 1976

This Act contains provisions which directly relate to minerals.

> Congress declares that it is the policy of the United States that . . . the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals . . .

(5) National Materials and Minerals Policy, Research and Development Act of 1980

> This Act had the purpose of reinforcing and expanding previous laws passed by Congress dealing with the need for a continuous supply of mineral materials necessary to

maintain National security, economical well-being, industrial production, etc.

Forest Service Regulatory Authorities

Regulations protect the surface resources of the National Forests during mining and prospecting operations and provide for rehabilitation of lands afterward. The regulations are currently found in 36 CFR Part 228 - Minerals. They apply to National Forest System lands subject to location and entry under the mining laws.

Among the major provisions of these regulations pertinent to this EIS are the following:

* All operations under the General Mining Law must be conducted, insofar as feasible, to minimize adverse environmental impacts on the National Forests, and take into consideration requirements for meeting Federal, State, and local air and water quality standards and solid waste disposal; harmony with scenic values; protection of fish and wildlife habitats; and minimization of road construction damage.

* The plan of operations must also show what steps the operator will take for feasible rehabilitation of the area when the prospecting or mining is completed.

* Upon filing the plan of operations, the operator may be required to furnish a bond commensurate with the expected cost of rehabilitating the area.

* The plan of operations must be approved by the authorized forest officer before any operations are conducted.

In analyzing each plan for approval, the forest officer will consider the economics of the operation along with other factors in determining the reasonableness of the requirements for surface resource protection. The Forest Service will assess the environmental impacts of the proposed operation, reasonable alternatives, and prepare any environmental documents that might be required under the National Environmental Policy Act.

1.2 SCOPING PROCESS

Public involvement is necessary in the environmental analysis process in order to identify issues and concerns relating to environmental impacts of the proposed action. The issues and concerns are then used to define and formulate alternatives that specifically address these issues and concerns. Issues raised by the public and federal and state agencies serve as a basis for comparison of the alternatives. Laws, regulations, and land management directives are also considered in order to frame issues, formulate alternatives and determine the overall scope of the evaluation.

Following EFN's submission of the Plan of Operations, more than 100 copies of the plan were distributed to interested parties. The proposal received extensive media coverage. More than 30 articles concerning the proposal appeared in area newspapers and magazines between October 1984 and May 1985. Following the decision to prepare an EIS, a "Notice of Intent" was published in the Federal Register on April 30, 1985. Then, over 2,000 scoping letters were distributed by the Forest Service to federal state and local government agencies, Indian tribes, news media and interested individuals in preparation for a public scoping session held in Flagstaff on May 15, 1985.

As a result of the analysis of the earlier public comments and agency discussion, eleven preliminary areas of concern were identified. The EIS scoping session, as well as written comments received in response to the scoping letter, was used to further refine these issues and concerns and to identify any new ones which may have been overlooked.

An evaluation of the extensive public review of the Canyon Mine proposal indicated significant public concerns about uranium mining in Northern Arizona. Some comments were directed to issues clearly within the potential impacts of the project, such as impacts on wildlife. Others, such as nuclear proliferation, were less directly associated with it. All of the issues and concerns raised by the public were screened to determine which were appropriate for consideration in this document as part of the NEPA process. It was determined that comments which dealt with the desirability of nuclear power or other uses of processed uranium, or disposal of high level nuclear wastes would not be addressed by this document because the impact of this proposal on such issues is too far removed for meaningful analysis. Similarly, detailed consideration of issues such as the health of uranium miners or the history of uranium mining in other areas such as Grants, New Mexico, also were determined to be beyond the scope of this analysis.

As a result of the scoping process, ten issues and concerns were identified that to a greater or lesser extent are the focus of this EIS. These issues and concerns were used in the formulation and evaluation of alternatives. The ten issues and concerns (IC's) are:

IC #1. What social and economic impacts will the uranium mine have on the local communities and Coconino County?

IC #2. What reclamation measures will be required for site restoration?

IC #3. Can Company-incurred project costs be held to a reasonable level?

IC #4. What impacts will the mining operation have on important wildlife habitats?

IC #5. What effect will the mining activities have on forest vegetation?

IC #6 What effect will the mining activities have on visual quality of the Kaibab Forest, State Highway 64, and the Grand Canyon?

IC #7. What effects will the mining activities have on the air quality of the surrounding area?

IC #8. What impacts will the mining transportation system have on the local environment and the management of National Forest System Lands?

IC #9. What impacts will the mining activities have on the soil, and surface and subsurface water quantity and quality?

IC #10. What impacts will mining activities and ore transportation have on Indian religious sites and practices?

1.2.1 Issues and Concerns Not Covered as Separate Items in the Analysis

During the scoping process, several concerns were raised which are not analyzed as a separate issue in this document. These concerns will be analyzed, but integrated into the discussion of other related issues. For example, radiation and mitigation measures surfaced throughout the public involvement process as major concerns. These concerns are relevant to many issues

such as effects of the mining operation on air quality, surface and subsurface water quality and reclamation measures. Similarly, monitoring requirements and questions related to impacts on the Grand Canyon are considered under each appropriate issue and concern.

1.2.2 Cumulative Effects

Considerable interest was generated under the general topic of addressing potential cumulative effects of multiple mines on the environment and local population. The question most often asked in this regard, was "how many mines will be too many for the physical and biological environment to support without seriously affecting the human environment?"

The potential for uranium mining on the Tusayan Ranger District of the Kaibab National Forest south of the Grand Canyon, is uncertain and problematical. While literally thousands of mining claims have been filed in the Tusayan area, this has little relation to the number of mines that may ultimately be developed. There are no known proposed mines other than the Canyon Mine, on the Tusayan Ranger District south of the Grand Canyon. The highly speculative nature of mineral prospecting and exploration, the fact that mining claims are located prior to discovery of a mineral deposit, the current depressed conditions of the domestic uranium market and the highly localized nature of breccia pipe deposits, all contribute to the difficulty in predicting the extent of future uranium developments. Because the exact schedule and location of future mining is not possible to predict, this EIS analyzes potential cumulative impacts by hypothesizing the addition of several new mines in the area, developed concurrently with the Canyon Mine.

The analysis for the Canyon Mine is based on a site specific proposal. Based on components of the proposal, effects of the mine operation on various resource values specific to the mine site and affected area can be estimated. Upon implementation, intensive monitoring of the mine operation will allow assessment and verification of estimated impacts, and the relative effectiveness of prescribed mitigation measures. The results can then be used for estimating individual and cumulative impacts of successive mine developments, as can the information and data contained in specific technical reports found in the Appendices.

If, in the future, additional mines are proposed in the general area, data gathered through monitoring of the Canyon Mine will greatly assist in the estimation of impacts of future site

specific proposals. It is therefore apparent that monitoring of environmental effects of the Canyon Mine is desirable.

1.3 PERMITTING PROCESS

There are a number of federal, state and local regulatory permits, controls and constraints which apply to the proposed Canyon Mine. The following list describes the primary permits and approvals necessary for implementing the proposed project. EFN must comply with all applicable requirements. Additional permits and approvals may also be necessary during the life of the project.

FEDERAL

Permit or Approval	Responsible Agency
Approve Plan of Operations (36 C.F.R. Part 228)	U.S.D.A. Forest Service
Approve Rights-of-way or Special Uses on National Forest System Lands (36 C.F.R. Part 251)	U.S.D.A. Forest Service
Consult with U.S. Fish and Wildlife Service in compliance with Endangered Species Act (16 U.S.C. 1531, et seq., 50 C.F.R. Part 402)	U.S.D.A. Forest Service
Consult with Arizona State Historic Preservation Office in compliance with National Historic Preservation Act (16 U.S.C. 470 et seq., 36 C.F.R. Part 800)	U.S.D.A. Forest Service
Consult with affected Indian tribes in compliance with American Indian Religious Freedom Act (42 U.S.C. 1996)	U.S.D.A. Forest Service
Issue National Pollutant Discharge Elimination System (NPDES) Permit, if necessary	U.S. EPA, Arizona State Department of Health Services

Issue National Emission Standards for Hazardous Air Pollutants (NESHAPS) permit for Radon-222 emissions from underground uranium mines. [50 Fed. Reg 15 386 (1985)] (to be codified at 40 C.F.R. Part 61)	U.S. EPA
Comply with Mine Safety and Health Standards for Metal and Non-Metal Underground Mines (30 C.F.R. Part 57)	U.S. Mine Safety and Health Administration Arizona State Mine Inspector
Comply with Federal Motor Carrier Regulations (49 C.F.R. Parts 390-393, 395 - 397)	Arizona State Department of Transportation
Comply with Hazardous Materials Hauling Regulations (49 C.F.R. Parts 171-173, 177, 178) (Notification of ore spills.)	Arizona State Department of Transportation

STATE OF ARIZONA

Permit or Approval	Responsible Agency
Groundwater Quality Protection Permit [A.R.S. 45-511 to 45-528 (1985) and A.R.S. 36-1859 (1986)]	Arizona Department of Health Services, Division of Environmental Health Services
Construction Approval of on-site water and wastewater systems [A.R.S. 36-1881 and A.R.S. 36-132(8) (1984)]	Arizona Department of Health Services, Division of Environmental Services
Well Permit [A.R.S. 45-999 (1984)]	Arizona Department of Water Resources
Notification of Operation	Arizona Department of Revenue
Arizona Motor Carrier Safety Regulations (Title 28, Sections 2401-2405)	Arizona Department of Transportation

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COCONINO COUNTY

Building Permit for on-site facilities	County Building Inspector
Approval of on-site wastewater system	County Health Inspector

1.4 UNITS OF MEASURE FOR ESTIMATING RESOLUTION OF ISSUES AND CONCERNS

The following is a table of units which were used to estimate how well each alternative resolves the issues and mitigates the concerns. They provided the analytical basis for the selection of the Preferred Alternative. Not all issues and concerns can be quantified. These are described in narrative form and can be qualitatively compared.

Issue or Concern	Units of Measure
1. Social & Economic Impacts	
a. Local & Regional Economic Impacts	-change in employment (primary and secondary -number of jobs affected)
	-changes in total annual income for Coconino County ($)
	-changes in total annual gross output for Coconino County ($)
	-annual tax revenues (sales, property and severance) ($)
b. Effect on Williams Water Supply	-total storage capacity (ac.-ft.)
	-potable City consumption (ac.-ft./yr.)
	-Canyon Mine projected needs (ac. -ft./yr.)

	-change in City's annual demand caused by the mine (%)
c. Cultural Resources	-relative archeological site density along transportation corridor
d. Social Impacts	-lifestyle, beliefs, and attitudes
	-population change
e. City & County Infrastructure	
1) School Enrollment	-enrollment
2) No. of Police	-number of police
3) Fire Protection	-amount
4) Medical Facilities	-amount
5) Housing	-amount
2. Reclamation of Mine Site	
a. Need for Reclamation	-area requiring restoration (acres)
b. Measures/Methods	-revegetation -mixture (species) -application (type)
	-stabilization of stockpiled topsoil (narrative)
	-surface facilities removal (narrative)
	-radioactive waste disposal (narrative)
c. Reclamation Bond Assessment	-amount ($) (narrative)

3. Project and Mitigation Costs

a.	Transportation	-hauling ($) -construction ($) -maintenance ($)
b.	Monitoring	-radiation: -air, soil, & water ($) -groundwater: -well construction ($) -water sampling ($)
c.	Equivalent Habitat Improvement	-key waters: -relocation ($) -create equivalent acres of foraging areas ($)
d.	Site Reclamation	-total costs ($)
e.	Worker Transportation	-total costs ($)
f.	Cultural Resource Mitigation	-total costs ($)
g.	Powerline	-total costs ($)
h.	Right-of-Way Acquisition	-total costs ($)
i.	Total Project Costs	-net discounted cost (NDC)($)

4. Impacts on Wildlife

a.	Elk Calving Habitat	-acres potentially impacted (within .5 mi. of road)
b.	Deer, Antelope & Turkey Fawning/Nesting Habitat	-acres potentially impacted
c.	Elk Migration Routes	-percent of population potentially impacted
d.	Habitat Lost From New Road Construction	-acres taken out of production
e.	Big Game Foraging Habitat	-acres directly impacted
f.	Key Waters	-number of waters impacted

	-percent of key waters in affected area (%)
g. Total Acres of Habitat Replacement	-equivalent acres required (ac.)
5. Effect on Vegetation	
a. Loss of Grazing Capacity and Timber Production	
1) Grazing Capacity	-district total (AUM's) -amount lost (AUM's) -amount lost (%)
2) Timber Volume	-district annual allowable cut (AAC) (MBF/yr.) -amount (ACC) lost (MBF/yr.) -amount (AAC) lost (%)
b. Loss of Vegetation	
1) Ponderosa Pine	-district total (acres) -amount lost (acres) -amount lost (%)
2) Pinyon-Juniper	-district total (acres) -amount lost (acres) -amount lost (%)
3) Forest Vegetation Similar to Mine Site	-district total (acres) -amount lost (acres) -amount lost (%)
c. Threatened, Endangered and Sensitive Plant Species	-species present & amount of impact (narrative)
6. Effect on Visual Quality of the Grand Canyon, and Kaibab National Forest	
a. Impacts on Viewed Landscape	-Forest Service visual quality objectives (narrative)
b. Impacts on Grand Canyon National Park and State Highway 64	-changes in visual quality

7. Effect on Air Quality at Grand Canyon, Tusayan, and Mine Site

a. Predicted Impacts on Air Quality	-predicted impacts of fugitive dust and radon gas emissions on air quality at Grand Canyon National Park (narrative) -predicted impacts of fugitive dust and radon gas emissions on air quality at mine site, Tusayan and along haul routes <u>Radon:</u> (pCi/L) average for western U.S. projected levels at: Owl Tank Tusayan <u>Particulates:</u> (ug/m3) NAAQS standards current levels projected levels 1) mine site 2) haul routes <u>Radioactive Dust:</u> current levels (narrative) projected levels (ug/m^3)
b. Monitoring	-requirements (narrative)

8. Effects of Transportation Route Selection

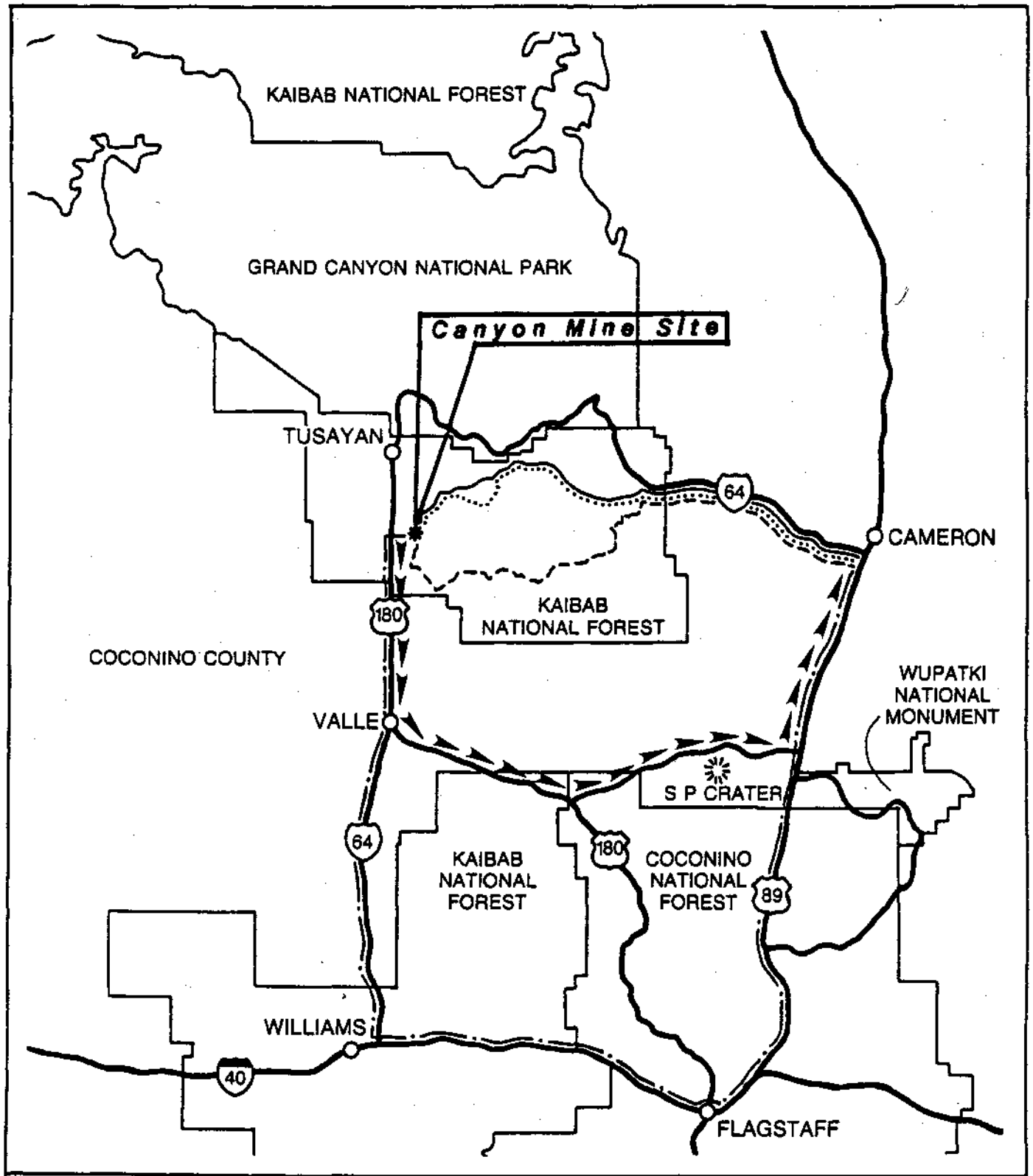
a. Road Construction	-new construction (miles) -reconstruction (miles)
b. Hauling Distance	-to Cameron (ton/miles)
c. Integration with Potential Future Forest Resource Management Needs	-degree of integration (narrative)

d.	Surfacing Material	-total required (vol. in cu. yd. & surface acres disturbed)
e.	Traffic Use on Haul Route	-seasonal average daily traffic count before project construction -projected average daily traffic count after project construction -increase in traffic (%)
f.	Monitoring	-traffic count after project implementation -radiometric surveys along haul roads (Y/N)
g.	Wildlife	-potential increase in impacted area of key wildlife habitat (ac.)

9. Impacts on Soil and Water Resources

a.	Radionuclide contamination of downstream lands and waters by flooding of ore stockpiles at Mine Site	-diversion channel capacity (cfs) -expected 500-yr. flood peak (cfs) -potential of flood waters reaching ore stockpiles (narrative) -potential of 100-yr. flood reaching lower portion of Cataract Creek (narrative)

	-sampling for change from baseline surface water quality (pCi/L): Arizona statewide average gross alpha gross beta Ra-226 current levels at Owl Tank gross alpha gross beta Ra-226 Uranium
	-sampling for changes from soil baseline radionuclides (piC/L) gross alpha gross beta Ra-226 Uranium
b. Possible Groundwater Contamination by Radionuclides	-sampling for change from baseline quality at Redwall Springs in Grand Canyon and Havasu Canyon current levels: gross alpha (pCi/L) gross beta (pCi/L) Ra-226 (pCi/L) Uranium (pCi/L)
10. Impacts on American Indian Religious Concerns	
a. Direct Impact on Religious Sites	-Number of sites affected
b. Continued Access to Religious Sites	-Number of sites affected
c. Gathering of Ceremonial Plants, Animals and Herbs	-Acres of land temporarily lost to religious activities.
d. Compatibility with Traditional Religious Beliefs	Consistency with stated beliefs (narrative)



HAUL ROUTE OPTION BY PROJECT ALTERNATIVE			
PROJECT	HAUL ROUTE		
ALTERNATIVE 2&3	OPTION 1	N	PROPOSED HAUL ROUTE OPTIONS FROM THE CANYON MINE SITE
ALTERNATIVE 3	OPTION 2		
ALTERNATIVE 4	OPTION 5		
ALTERNATIVE 5	OPTION 6		
ALTERNATIVE 5	OPTION 7		

FIGURE 2.1

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(3) Transportation of workers

The transportation of mine workers was evaluated because of the potential for impacts resulting from increased traffic and a parking lot at the mine site.

The nearest available housing for mine workers is in Williams, a distance of 45 miles one-way from the Canyon Mine site. Some form of pooled transportation would seem to be a logical choice; however, the option of driving personal autos was considered as part of Alternative 3 because this preference by the mine workers may exist.

2.2.1.2 Description of independent operational components common to Alternatives 2-5

The component evaluation procedure eliminated those components which were of little or no consequence to the environment. These component parts did not have the potential to create measurable environmental consequences, and did not significantly affect issue resolution either by themselves or collectively; therefore, they did not warrant separate project alternative analyses. Project alternatives were analyzed with most such components identical or only slight modifications.

(1) Holding ponds

Waste rock generated during shaft sinking, development and mining will be removed and stockpiled on the surface in the waste disposal areas, to the extent such material cannot be utilized for road maintenance, dike construction, or utilized in the construction of the mine yard. Ore will be stockpiled on the surface near the shaft until shipment to a mill takes place. Since local precipitation will be in contact with this uranium ore, all surface runoff within the mine yard, as well as all water encountered during mining which cannot be utilized in the mining operation, will be collected and retained on-site in holding ponds until it evaporates or until it meets the discharge standards under the NPDES permit.

The holding pond(s) (Appendix B) must be adequate to receive local runoff from a 100 year thunderstorm event, plus normal annual runoff and water that may be pumped from the mine. The volume of water in the pond(s) must be maintained at a level that will allow a reserve pond volume to accommodate unforeseen and normally expected runoff events (Appendix B and Sec. 2.5.12).

The holding pond(s) would only be discharged in exceptional circumstances in accordance with the NPDES permit. Exact pond volume will depend on the amount of water encountered during the shaft sinking operation.

(2) Sewage

Sewage at the mine can be handled by using vault toilets, or by installing a leach field sewage system if sufficient water is available.

(3) Method of ore transport

In the early stages of identifying haul routes options, consideration was also given to transporting the ore by helicopter or rail. Both methods were deemed unreasonable due to exorbitant costs. Trucking was determined to be the only viable method. Specific haul routes are considered in detail in the four project alternatives.

(4) Mine production rate

The proposed Operating Plan calls for an average production rate of 200 tons/ day for the life of the mine. Although a number of production rates could be proposed, reasonable variances in these rates would not appreciably affect the impacts of the mine on the environment.

(5) Method of mining

Ore to be mined at the Canyon deposit occurs at a minimum depth of 900 feet. Open pit mining is not considered a reasonable alternative for this deposit as it is not economically feasible and would create greater surface disturbance and environmental impacts. In-situ leaching is not feasible because water is not available for injection and recovery wells. Underground mining is considered to be the only viable method.

Access to the deposit will be by a vertical shaft located northeast of the deposit in the area of operations as shown on Plate 2, Appendix A. This shaft will be sunk utilizing either a surface drill rig or by conventional methods using drilling and blasting.

After the vertical shaft has been sunk to a depth of approximately 1,400 feet below the surface and paralleling the breccia pipe, workings will be driven toward the deposit at various levels off the main shaft. The highest level of the mine will be located approximately 900 feet below the surface in the Coconino Formation and the lowest level is expected to be approximately 1,400 feet below the surface in the Supai Formation.

Once the initial underground drilling program has fully delineated the extent of the ore deposit, the lower level will be driven underneath the deposit due south to a point just outside of the furthest extent of the ore reserve. At this point, a vertical ventilation shaft will be drilled from the surface to connect with the workings. The ventilation shaft is used to exhaust air, thereby creating adequate airflow throughout the mine workings and, in addition, providing a second exit or escapeway from the mine in the event of an emergency. The ventilation shaft will be drilled using a one-foot diameter pilot hole from the surface to intersect the lowest elevation level. An eight-foot diameter upward reaming bit will then be attached to the drill pipe and the vertical ventilation shaft drilled upward to the surface.

Raises or vertical workings within the mine will connect the various mining levels within or very near the deposit. At various elevations from these raises, sublevel workings will be driven off to extract ore from the deposit. The broken ore will be dropped down raises, designed for such use, to draw points on the lower level. The ore will be hauled to the shaft, placed in skips and hoisted to the surface.

(6) Potable water

A water source of a few gallons per minute is needed for sanitation and underground drilling. At the start of activities, water will be trucked to the site. It is hoped that drilling the mine shaft may generate a flow of a few gallons per minute of water from the base of the Coconino Formation at a depth of approximately 1,000 feet. The ground water well that will be drilled to the Redwall formation at 2,500 to 3,000 feet is a second possible source of water although its primary purpose is for monitoring groundwater quality below the ore body. If neither of these sources produce water, trucking water from Williams or Bellemont will continue throughout the operation of the mine.

(7) Site configuration

Alternative configurations of facilities at the mine site were eliminated due to a lack of measurable and meaningful differences associated with alternative locations for on-site facilities. For example, the buildings or the holding ponds could be relocated within the project area but the change in environmental impacts to the area would be minimal.

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transportation routes when future mines, if any, are proposed. Selection of this alternative also allows future decisionmakers to consider the option of consolidating or dispersing ore truck traffic to minimize transportation costs and environmental impacts.

4) Overhead Powerline -- Alternative 5 includes a buried powerline along the access road to the mine site. Burying the powerline substantially increases project costs (Table 2.6) without any corresponding environmental benefit. Accordingly, Alternative 5 has been modified for purposes of the Preferred Alternative to include a surface powerline following the access road to the mine site.

5) Transportation of Mine Workers -- Company transportation of mine workers is preferable to private transportation because it reduces surface disturbance (no large employee parking lot is required), access to the mine site and traffic to and from the mine.

6) Wildlife Mitigation -- While the potential wildlife impacts of Alternative 5 are small, any loss of key wildlife habitat should be mitigated. Implementation of the Preferred Alternative will require that EFN replace the 32 acres of big game foraging habitat lost at the mine site and replace one key watering area. In addition, operating restrictions may be placed on the use of haul route #7 to avoid potential impacts on elk migration.

7) Other Mitigation -- Other mitigation measures, including management of ore transportation, reclamation and fire protection (see Section 2.5) are common to all project alternatives, including Alternative 5. All of those measures are incorporated in the Preferred Alternative.

2.5 MITIGATION MEASURES

Management constraints and guidelines, corresponding mitigation, and monitoring and control measures needed "to ensure that the final actions conform to all other applicable laws relating to Forest Service activities" are discussed in this chapter, as directed by the Forest Service NEPA Procedures

Handbook (FSH 1909.15 6/85). The intent of the general constraints, guidelines, and mitigation measures is to ensure that adverse environmental impacts are avoided or minimized during construction and operation of the project, and during reclamation following mine closure.

Special attention was directed toward (1) controlling drainage, reducing erosion and sedimentation potential, and offsite radionuclide contamination from the mine area, waste piles and roads, and (2) mitigating the effects of the selected ore haulage route.

Monitoring programs were designed to mitigate public and resource management concerns, and to verify the projected effects of project implementation. These programs concentrate on air, soil and surface and ground water quality monitoring.

2.5.1 Regulatory Requirements

Operations of the proposed Canyon Mine will be subject to legal and regulatory requirements imposed by federal and state law. The question of applicable environmental standards was raised at the public scoping meeting. While these standards are not technically mitigation, in response to those questions important statutes and requirements that limit to some extent the magnitude of any impacts of mining, are summarized in this section.

Clean Water Act

Water quality is regulated by the Environmental Protection Agency and the State of Arizona. The Canyon Mine has applied for a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act to regulate any discharge from the mine site. EPA and the State share responsibility to insure compliance with that permit. Before the permit is granted, the State of Arizona must certify that the discharge from the mine site, if any, will comply with Arizona water quality standards. The permittee has an affirmative duty under the permit to notify EPA of any incident of noncompliance which may endanger health or environment. EPA retains authority to inspect the mine site or company records to insure compliance with the permit. Noncompliance with the conditions of the permit subject Energy Fuels to substantial civil and criminal penalties under Section 309 of the Act. Citizens' suits are also possible to ensure compliance.

The federal Clean Water Act regulates the discharge of pollutants into surface waters. The Canyon Mine must receive a National Pollution Discharge Elimination System (NPDES) permit from the EPA in order to release any water from the mine site. Although EFN does not anticipate encountering significant quantities of groundwater at the site, the company applied for an NPDES permit on December 20, 1984, for the possible discharge of mine drainage water.

The proposed mine is a "new source" under EPA regulations. Pursuant to Section 511 of the Clean Water Act, the issuance of an NPDES permit to a new source is subject to the environmental review requirements of NEPA. EPA is meeting its obligations under NEPA by cooperating with the Forest Service in the preparation of this EIS. A final NPDES permit for the Canyon Mine cannot be issued until at least 30 days after the date of issuance of the FEIS. Prior to issuing an NPDES permit, EPA must also make a proposed permit available for public review and comment, and provide the opportunity for a public hearing if there is significant public interest.

An NPDES permit for the discharge of mine drainage from a uranium mine must contain effluent limitations established under national EPA guidelines for the Ore Mining and Dressing Point Source Category at 40 CFR Part 440, Subpart C. These guidelines contain limitations on carbonaceous oxygen demand, zinc, dissolved radium 226, total radium 226, uranium, pH, and total suspended solids. In addition, all NPDES permits must contain any more stringent limitations necessary for achieving compliance with State Water Quality Standards.

The applicable Arizona State Water Quality Standards are those radiochemical standards which apply to all Arizona surface waters, and specific standards for trace substances which are based upon the protected uses of the receiving waters. The radiochemical standards are found at A.C.R.R. 9-21-204.B. and are based on federal drinking water standards. The protected uses of the receiving waters are those which are designated for the nearest downstream surface water segment listed in Appendix A of R9-21-208. The nearest designated surface water segment downstream of the proposed discharge point is Cataract Creek (tributary to Havasu Creek). The protected uses of this segment are: Aquatic and Wildlife (cold water fishery), Full Body Contact, Agricultural Irrigation, and Agricultural Livestock Watering. As no discharges will be permitted which do not meet these standards, authorized discharges will have no adverse environmental impact, and it is recommended that a permit be issued.

Under NPDES permits, facilities are required to sample their discharges and report pollutant concentrations to EPA and the Arizona Department of Health Services (ADHS). Such reports are public information. Permitted facilities are inspected regularly for compliance with the Clean Water Act. NPDES permits give EPA and ADHS personnel right of entry for inspection and sampling. Violation of the Clean Water Act are subject to civil penalties of up to $10,000 per day, with higher penalties for willful or negligent violations.

Cultural Resource Protection Laws

Cultural resources are protected pursuant to a number of Federal laws, the most important of which are the Antiquities Act of 1906 (16 USC §§ 431-433), National Historic Preservation Act of 1966 as amended in 1980 (16 USC §§ 470-470a), Historical and Archaeological Data Preservation Act of 1974 (16 USC §§ 469-469h), American Indian Religious Freedom Act (42 USC § 1996) and the Archaeological Resource Protection Act of 1979 (16 USC §§ 470aa-47011). Generally, the acts require consultation and/or surveys and other investigations of significant cultural resources and attempt to protect such resources from theft, vandalism, removal or other direct or indirect adverse impacts, by data recovery, site recovery or avoidance.

Clean Air Act

The EPA has promulgated standards to protect the public from exposure to Radon-222 emissions under authority of Section 112 of the Clean Air Act. These regulations call for bulkheading (sealing-off) abandoned areas of a mine, in order to reduce radon-222 emissions to the above ground air. These requirements are specified at 40 CFR Part 61. Airborne radiation from the Canyon Mine is discussed in Section 4.2.5.2, and Appendix E.

Endangered Species Act

Protection of threatened or endangered species occurs under the Endangered Species Act. (16 USC § 1531 et seq.). Section 7 of that Act generally prevents the Forest Service from authorizing any action that is likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of its critical habitat. Section 9 of that Act prohibits EFN from taking, hunting, harassing, killing or harming any wildlife species listed as endangered. Section 11 of the Act imposes substantial civil and criminal penalties for knowing or willful violations of the Act. Citizen suits are also available to ensure compliances.

Mine Safety and Health Act

Mine safety and health is regulated by the Federal Mine Safety and Health Administration and the Arizona State Mine Inspector. The Mine Safety and Health Administration imposes substantive standards for mine construction and operation, in 30 CFR § 57,"Safety and Health Standards--Metal and Non-Metal Underground Mines," and retains authority for inspection of mines and enforcement of its standards. Any incidents of noncompliance may give rise to civil and criminal penalties. The Arizona State Mine Inspector has similar authority. He applies the safety and health standards of Chapter 3 of Title 27 of the Arizona Statutes.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act requires that Federal Agencies consider Native American beliefs and practices in the formulation of policy and approval of actions. The intent of the Act is to insure for traditional Native religions the same rights of free exercise enjoyed by other religions. However, it does not afford Indian religions a more favored status than other religions, but only insures equal treatment. The Act does not mandate protection of Tribal religious practices to the exclusion of all other courses of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices.

2.5.2 Reclamation Plan

The Reclamation Plan for the Canyon Mine Project is described in the Plan of Operations in Appendix A and supplemented by the Forest Service in Appendix B. The objective of the plan is to restore the approximately 17-plus acres of land disturbed by the mining operation and the mine entrance road, to as near natural a condition as possible after the mine is closed. The plan outlines a program for returning the disturbed area to vegetative productivity.

Prior to the construction of the mine yard, topsoil within the area of operations will be removed and stored for use in final reclamation activities. Storage will be in the form of a dike around the northern perimeter of the yard.

At the end of mining activities, EFN will remove all structures, clean the area of operations, seal the mine entrance and reclaim the disturbed areas. After the removal of all equipment, the main and vent shafts will be sealed in a manner approved by the appropriate regulatory agencies. The

mine yard will be radiometrically surveyed and cleaned-up to the extent dictated by regulations applicable at the time of closure. The area of operations and all disturbed areas will be recontoured to blend with the surrounding topography. Previously stockpiled topsoil will then be spread evenly over the entire area of operations and revegetated.

EFN will be required to provide a performance and reclamation bond of $100,000 before mining activities start. The amount of this bond was determined by using cost estimates in Appendix B (p. 13) and adding a contingency amount based on inflation and possible estimating error, then discounted over a 7-year planning horizon.

The reclamation plan will be updated prior to closure, utilizing any revised forest land use objectives, new technology and operating experience.

2.5.3 Visual Impacts

The mine head frame and support facilities will be painted with earth tone colors. Implementation of this mitigation measure will be ensured by ongoing review by the Forest Service.

2.5.4 Public Safety

A 6-foot chainlink security fence with lockable gates will be constructed on the outside edge of the top of the 4-foot dike that surrounds the area of operations. All gates will be locked during periods of inactivity at the mine. Signs will be posted on all sides of the fenced perimeter to indicate "no trespassing," and "uranium mine." Energy Fuels will maintain the integrity of this fencing as well as monitor other aspects of the safety and security program. Federal safety inspection requirements, administered by the State Mine Inspector through the Mine Safety and Health Administration, will ensure that a safe working environment is maintained.

2.5.5 Ore Haulage Control

All ore trucks will be covered with a tarpaulin to prevent loss of material in transit. The tarpaulin will be lapped over the sides of of the truck bed approximately one foot and secured every 3 or 4 feet with a tiedown rope. In the event of a truck accident that causes ore spillage, Energy Fuels will take

immediate aggressive action to: 1) notify Arizona or Utah Departments of Public Safety and Transportation, 2) notify appropriate tribal councils and the Bureau of Indian Affairs, if the ore spill occurs on Indian lands, and 3) clean up any spilled material. All uranium ore will be removed from the spill site within two working days of the time of the spill, unless the appropriate Federal and State agencies deem that such action is prevented by conditions beyond the control of Energy Fuels. In any event, all State and Federal cleanup standards relating to spillage of the ore will be strictly adhered to.

2.5.6 Air Quality

Ore stockpiles will be managed at all times to eliminate the potential for wind dispersed radioactive dust. This may require management of the stockpiled ore by wetting or chemical treatment. In project alternatives that incorporate the following sections of roads, excessive dust will be controlled by appropriate dust abatement methods: Forest Service Road 302 from the junction of Forest Service Road 2723 to the junction of Forest Service Road 307; Forest Service Road 307 from the junction of Forest Service Road 302 to the junction of Forest Service Road 2804.

2.5.7 Noise

The project will be designed and operated in a manner to reduce noise to the lowest practical levels. All equipment will be carefully maintained to achieve the lowest practical noise levels (e.g., replacing worn-out mufflers, tightening loose parts, etc.).

2.5.8 Erosion Control

Erosion from all access and haul roads and the area of operations that are disturbed during construction activities will be controlled by revegetating these areas immediately after construction. Stabilization of the stockpiled topsoil will also be accomplished by revegetation. The outside slopes of the dikes that surround the mine yard will be riprapped with barren rock fragments taken from the mine during shaft construction. These fragments should exceed six inches on any one face.

The following species and application rates are recommended for revegetation of disturbed areas:

Species	Percent in Mix		Lbs./Acre for 25 seeds per sq. ft.		Pounds Needed In Mixture
Crested Wheat	30	X	6.4	=	2
Pubescent Wheatgrass	30	X	15.4	=	4.5
Smooth Brome	25	X	9.8	=	2.5
Yellow Sweet Clover	15	X	4.6	=	1
Lbs. of mix. for 25 seeds/ft. (pure live seed)				=	10 lbs./ac.*

*Application rate is for drilling; for broadcasting double this rate.

Drill the following browse species separately:

Four-wing saltbush	4 lbs./ac.
Winterfat	4 lbs./ac.

The following general guidelines will be followed as a part of the erosion control mitigation measures:

1. Construct drainage on relocated roads in accordance wit' forest Service standards.

2. Minimize changes in configuration of existing drainage courses around the mine perimeter.

3. Improve drainage channels in the immediate area of the mine site by removing obstructions to increase channel capacity.

4. Revegetate all disturbed areas as soon as possible. Reseed previously reclaimed areas if necessary until a vigorous vegetative cover is established.

5. The minimum elevation of the base of the ore pads at the southern end of the yard, will be at the height of the top of the dike ... well above the 500-year-flood high-water level.

6. All abandoned roads outside the mine perimeter will be brought to original grade, ripped, water barred and revegetated.

7. The dike and the primary drainage courses in the vicinity of the mine will be routinely maintained to ensure ther integrity at all times.

2.5.15 Raptor Protection

Overhead powerlines must have a 60-inch minimum separation of wires.

2.5.16 Pooled Worker Transportation

Employees will be provided transportation to and from the mine site by a Company van or bus. Driving of individual vehicles to the mine will be discouraged.

Table 2.3 summarizes the mitigation measures that apply to the different alternatives.

TABLE 2.3 -- Mitigation Measures That Apply to Project Alternatives

MITIGATION MEASURE	Alternative # 2[1]	3	4	5
1. Compliance with laws and regulations	X[2]	X	X	X
2. Mine site reclamation	X	X	X	X
3. Visual resource	X	X	X	X
4. Public safety controls	X	X	X	X
5. Ore haulage control (spills)	X	X	X	X
6. Air quality management		X	X	X
7. Noise management		X	X	X
8. Erosion control	X	X	X	X
9. Fire protection		X	X	X
10. Radiological monitoring		X	X	X
11. Groundwater monitoring		X	X	X
12. Surface runoff diversion	X	X	X	X
13. Control of truck access at SR 64				X
14. Wildlife mitigation				
a. replacement foraging area		X	X	X
b. new water source to offset loss of elk calving habitat near haul road or close road during calving season		X		
c. construct replacement waters impacted by haul route		X	X	X
15. Raptor protection		X	X	X
16. Pooled worker transportation	X		X	X

[1]The mitigation measures that are marked under this alternative were proposed by EFN in the original Plan of Operations.

[2]An "X" indicates that the listed mitigation measure is specified as part of that alternative.

TABLE 2.13 IMPACTS ON AMERICAN INDIAN RELIGIOUS CONCERNS

Preferred Alternative

ISSUE OR CONCERN	UNITS OF MEASURE	ALTERNATIVE 1 NO ACTION (BASELINE DATA)	ALTERNATIVE 2 PROPOSED PLAN OF OPERATION (P.P.O.) USING HULL CABIN HAUL ROUTE TO CAMERON (ROUTE #1)	ALTERNATIVE 3 P.P.O.; MIT.WILDLIFE; MONITOR SOIL, WATER & AIR; USE HAUL RTS. 1 OR 2; SHORTEST DIST. OVERHEAD POWERLINE; 35-CAR PARKING LOT		ALTERNATIVE 4 P.P.O; WILDLIFE MITIGATION; MONITORING AIR, SOIL & WATER; COC. RIM ROUTE #5; OVERHEAD POWERLINE ALONG ACCESS ROAD	ALTERNATIVE 5 P.P.O.; MONITORING AIR, S&W;WILDLIFE MITIGATION USING HAUL ROUTE #6(ALL HIGHWAY) OR ROUTE #7 (SP CRATER) TO MINIMIZE HAUL ROUTE IMPACTS
				Route #1	Route #2		
Direct Impact on Religious Sites	Sites Affected (no.)	0	No specific sites have been identified which would be impacted by the development of the mine site or the proposed haul routes.				
Interference With Access to Religious Sites (eg. burial grounds or shrines)	Sites Affected (no.)	0	Access to religious sites would not be curtailed by operational activities.				
	Trails Intersected by Mine Site or Haul Routes (no.)[a]	0					
Interference With Gathering of Religious Articles (eg. feathers & herbs)	Land Temporarily Lost to Hunting & Gathering (ac.)[b]	0	39	39	36	37	32
	Potential Gathering Areas Impacted by Ore Hauling (mi.)[c]	0	3.6	3.6	2.3	2.9	0
Compatibility with Traditional Religious Beliefs	Narrative	Consistent with traditional beliefs	Development of lands of Hopi ancestral occupancy for commercial purposes conflicts with stated Hopi traditional religious beliefs.				

[a] Trails leading to sites with religious significances.

[b] The Hopi and Havasupai Tribes indicate that the area near the mine site is used for hunting and gathering, but there is no evidence that the Canyon Mine site has been used for religious practices. (Areas shown here represent the sum of the mine site plus any new road corridors.)

[c] Number of miles of new road construction.

and providing overnight camping at the Forest Service operated Ten-X Campground.

Recreational activities away from the highway corridors and developed campgrounds is light and fairly seasonal. Most dispersed use is associated with hunting, woodcutting and Christmas tree harvesting. Russell Tank is a small water impoundment which provides a local fishery for Tusayan and Grand Canyon Village residents. Annual recreational use for the Tusayan District in these categories is estimated at 21,000 recreation visitor days (RVD's).

There are no specific recreational activities or unique recreational attributes associated with the Canyon Mine site.

3.1.9 Noise

Background ambient sound levels within the project area and along haulage routes vary depending upon the level of human activity, including traffic, recreation and aircraft flight paths. Major sources of noise unrelated to human activities include insects, birds, wildlife and foliage rustling due to wind.

The Day-Night Average Sound Level (Ldn), for open unpopulated areas away from highways and paved roads can be expected to vary from 30 to 45 decibels (dB).

3.1.10 Cultural Resources

The Canyon Mine site and the associated ore haulage roads are located within an area that has been occupied over thousands of years by various prehistoric and historic American Indian groups. The Canyon Mine site was surveyed in November of 1984 to determine if any cultural resource sites were located in the area. A survey performed by Abajo Archeology disclosed the existence of two prehistoric sites. These sites were archeologically tested in June of 1985 to determine if they met the eligibility criteria for nomination to the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, 16 U.S.C. § 470 et. seq. and 36 CFR 800.

One site, AZ-H-4-3, 4 and 5 (inclusive), located in an alluvial catchment basin just north of the proposed area of operations, was indicated by sparse, surface artifact scatters containing

evidence of prehistoric Kayenta Anasazi, Cohonina and Cerbat (Pai) groups. Testing of this site revealed no subsurface archeological material, and it was found not to be eligible for the National Register.

A second site, AZ-H-4-6 and 7, located on a ridge sideslope east of the proposed catchment basin, was tested and produced evidence of a subsurface pit structure, as indicated by burned adobe, a wooden post and trash midden. The pit house was tentatively identified as a domestic structure, which may have been constructed and occupied by the prehistoric Kayenta Anasazi (750-950 A.D.). The general site area may have been sporadically occupied as an encampment in later years by the Cerbat (Pai) (about 1300 A.D.) groups. The historical role of sites of this type in the settlement/subsistence patterns and adaptive strategies of such groups is not well understood due to the paucity of the detailed excavation data. For this reason, this site was determined to be eligible for inclusion on the National Register.

In consultation between the Forest Service, the Arizona State Historic Preservation Officer, and the Advisory Council on Historic Preservation, it was determined that there would be no adverse effect to this site if an acceptable data recovery program was carried out. A data recovery program was proposed by Abajo Archeology and approved by these three agencies. Data recovery field work was carried out in November of 1985. Following data analysis, a final report will be submitted to the Forest Service for review and approval. All recovered data, including artifacts, photographs, maps and analyses will be submitted to the Arizona State Museum at the University of Arizona for curation and storage.

Proposed alternative haul roads have not yet been surveyed for cultural resources. However, based upon a one percent sample survey of the entire Tusayan Ranger District and tens of thousands of acres of project surveys on this same district, probable cultural resource site densities were projected for each of the alternatives as shown in Table 2.4. Probable cultural resource site density is one of the factors that will be considered in final haul route selection. In any case, a complete cultural resource survey will be carried out along the preferred haul route before a commitment is made to use that route. A similar survey will be undertaken for the powerline corridor prior to construction. Any sites located will be evaluated for National Register eligibility and dealt with through consultation between the Forest Service, the Arizona State Historic Preservation Officer and the Advisory Council.

3.1.11 American Indians

Three Indian Reservations can be found within the general vicinity of the Canyon Mine site. The Havasupai Indian Reservation is located approximately 35 miles northwest of the mine site, the Hualapai Indian Reservation is approximately 42 miles west of the mine site and the Navajo Indian Reservation is approximately 25 miles east of the mine site. Arizona State Highway 64 and U.S. Highway 89 intersect within the Navajo Reservation. The Hopi Reservation is approximately 80 miles east of the mine site and 40 miles north of Winslow, Arizona.

3.2 ISSUES AND CONCERNS

This section provides descriptions of specific components of the environment which will be directly or indirectly affected by mining activities and which have been identified as major issues and concerns from the scoping process.

Two of the ten identified issues and concerns do not lend themselves to a discussion of their specific affected environment: "Reclamation Measures" and "Cost". The affected environment for reclamation includes general climatic conditions, soils, vegetation, hydrology and geology. These elements are described under the general environmental setting (Section 3.1) and issues and concerns #5 and #9 (Sections 3.2.3 and 3.2.7).

Project costs have zero as an existing baseline, or present environment, and therefore will be discussed only in Chapter 4 when there are projected differences from this zero base.

3.2.1 IC #1 Socio - Economic Impacts on Coconino County

(a) Affected Community Descriptions

<u>Social Environment</u>

Development of the Canyon Mine has the potential of affecting three local communities, Tusayan, Williams and Flagstaff to varying degrees.

Tusayan

Tusayan is located closest to the proposed mine site. It is a

Summary of Haul Route Option #7

Road #	Length(mi)	Width(ft)	Alignment	Surfacing
305A	2.8	8	Very poor	None
305	2.0	12	Good	None
County 417	4.0	24	Very Good	Cinders
State/Private	21.0	12	Good	None
	29.8			

The Blanding mill is an additional 242 miles over State and Federal Highways.

3.2.7 IC #9 Impacts on Water and Soil Resources

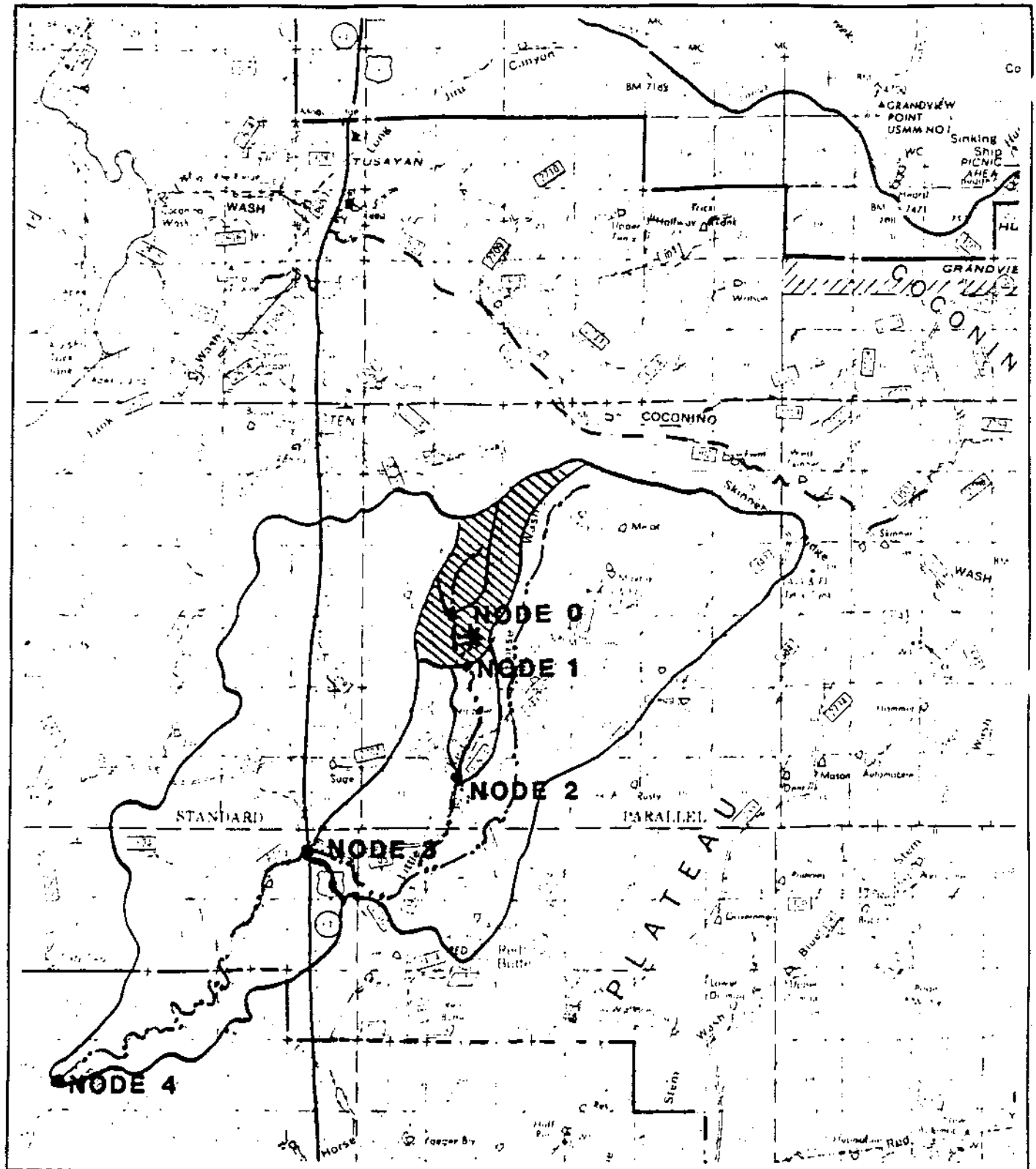
3.2.7.1 Surface water

Surface water drainages near the proposed Canyon Mine are usually dry, but flow intermittently during periods of rainfall or rapid snowmelt. The area is subject to high intensity rainfall and in frequent, but sometimes significant flooding. Heavy rains confined to small areas and of short duration are responsible for most storm runoff.

Figure 3.6 shows watersheds analyzed in the area. The shaded area in Figure 3.6 identifies the watershed that would directly impact the proposed development. Five reference locations, or nodes, define the outlet of the primary drainage areas. Each Node represents the point past which storm runoff from the watershed must pass.

Node 0 is located just upstream from the proposed mine site. This watershed drains approximately 1.0 square mile. Node 1 located just below the site, has a drainage area of 2.3 square miles. Node 2 is just below Owl Tank, and has a drainage area of 3.5 square miles. Node 3, just upstream from Highway 64, receives runoff from 22.7 square miles in Little Red Horse Wash. Node 4 is at the confluence of Little Red Horse Wash in Red Horse Wash some 13.5 miles downstream from the mine site. The drainage area of Node 4 is 43.4 square miles (Appendix D).

The Canyon Mine site will occupy approximately 17 acres. The area is part of a natural clearing approximately 0.2 mile (0.3 km) in diameter. The area generally slopes downward to the



DRAINAGE DIVIDE DRAINAGE CHANNEL MINE WATERSHED CANYON MINE SITE	N ½" = 1 MILE	STUDY WATERSHEDS	FIGURE 3.6

south, and surface water from small storm events is diverted around the clearing by natural drainageways. The area is surrounded by pinyon, juniper, ponderosa pine and scrub oak.

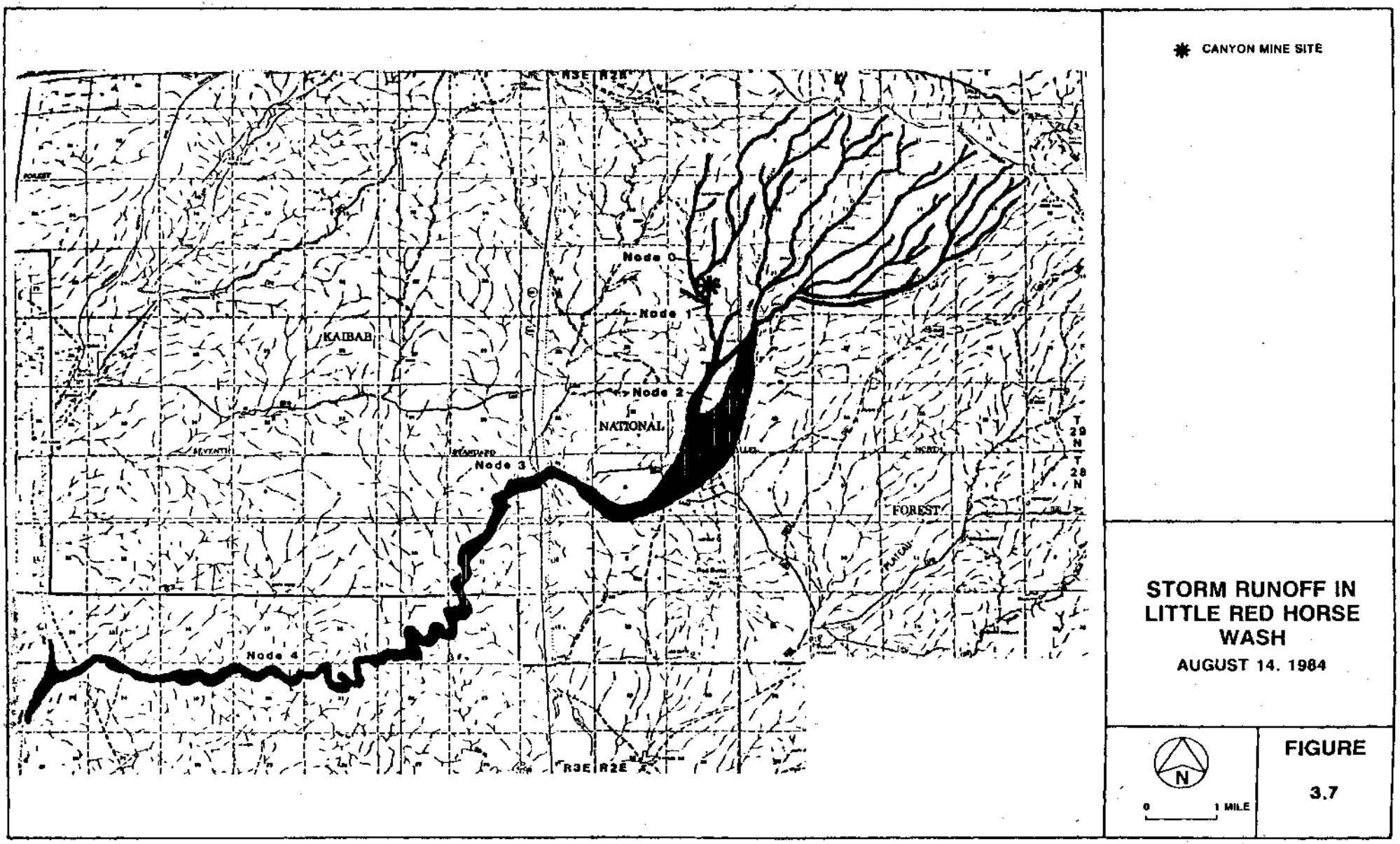
The Canyon Mine site lies in the ephemeral watershed of Little Red Horse Wash, which is tributary to Red Horse Wash, which is tributary to Cataract Canyon and Havasu Creek. In the principal stream channel between the mine site and Cataract Canyon, outcrops of Kaibab Limestone separate sections of channel alluvium. Water flow does not occur across these outcrops except during, and for a short time after, flood flow in the channel. After flood events, water stored in the discontinuous sections of channel alluvium percolates readily downward via fractures and solution openings in the Kaibab Limestone, which comprises an important recharge medium in northern Arizona. Downward percolation of groundwater from temporary groundwater storage in the channel alluvium reduces water content in the alluvium until another flood event occurs. Therefore, groundwater underflow in the channel alluvium in this reach of the drainage does not occur except during, and for a short time after, flood flow in the channel.

Historical data, as well as projections of storm intensity and runoff are important to the design of diversion channels which will protect the mine site and prevent any release from the ore or waste stockpiles to the surface drainages during a storm or heavy runoff. An extreme (100-year recurrence interval) storm event in Little Red Horse Wash in August of 1984 provides useful data to evaluate flooding potential at the mine site.

Peak flows for this storm (at Nodes 0-3) were computed from high water marks and surveys of channel cross-sections and slope.

Node #	Estimated Peak Discharge from August 14, 1984 Storm (c.f.s.)
0	106
1	908
2	1350
3	2447

According to an observer who monitored the flood, the crest overtopped Highway 64, flowed downstream in Little Red Horse Wash, merged with main Red Horse Wash (Node 4) and dissipated in the large flat area some 4 miles downstream (see Fig. 3.7). Apparently, no significant runoff from this event was observed beyond the large open area.



STORM RUNOFF IN LITTLE RED HORSE WASH

AUGUST 14, 1984

FIGURE 3.7

3.35

0585

3.2.7.2 Groundwater

An analysis of the hydrogeologic structure of the proposed Canyon Mine site and the results of other wells and boreholes drilled in the area indicate that it is unlikely that any significant groundwater resources or aquifers will be encountered by mine construction and operation.

Figure 3.1 illustrates the formations present at the Canyon Mine site. Any groundwater present will likely be stored in small perched reservoirs. The perched aquifers do not occur at all locations. Most wells drilled to the perched aquifer units in the region do not encounter groundwater and are immediately abandoned. Most wells which encounter perched groundwater fail after a pumping period of several days to several years. Groundwater may be perched above confining layers in areas where fractures are sparse. These conditions occur most commonly in the Toroweap Formation and in the base of the Coconino Sandstone where groundwater may be perched on the mudstone strata of the Hermit Shale. At these places, the perched aquifers may yield small quantities of groundwater for domestic and stock use. Because the perched water leaks slowly downward through the confining layers and moves downward along fractures, the perched reservoirs are commonly small, thin and discontinuous. If the groundwater stored in these perched reservoirs is not replenished annually by rainfall and snowmelt, wells and springs which yield from the perched aquifers may fail. A comparison of the quantity of groundwater yielded to seeps and springs from the perched aquifers to the quantity yielded from the Redwall-Muav aquifer indicates that the principal direction of groundwater movement is downward in the rocks overlying the Redwall-Muav aquifer.

An exploration borehole drilled at the proposed mine site encountered perched groundwater in the Kaibab Limestone at a depth of 140 feet. Initial yield from this aquifer was approximately eight gallons per minute (gpm), later declining until groundwater production ceased. No wells in the area show significant, consistent production.

Groundwater recharge in the Canyon Mine site area occurs via infiltration of rainfall and snowmelt through the rocks which underlie the plateau south of the Grand Canyon. Metzger, in his report on groundwater conditions along the South Rim of the Grand Canyon (U.S. Geological Survey Water-Supply Paper 1475-C, 1961), estimated that average groundwater recharge in the drainage area of Cataract Canyon, in which the mine site lies,

is approximately 0.3 inch of water per year. Under natural conditions, a fraction of the groundwater recharge to the area passes through the Canyon Mine uranium deposit and other similar mineralized breccia pipes. Small quantities of native minerals, including radioactive minerals, are continuously leached from the breccia pipes and other mineralized zones, and travel in solution in the water.

Several springs issue from fractures or sandstone strata in the Toroweap Formation, Coconino Sandstone, and the Supai Group along the south wall of the Grand Canyon and its southern tributary canyons from Havasu Spring to Blue Spring. Records available for three of these springs indicate that average discharge is less than one gpm. The most important springs that discharge from these strata are Sinyella Spring in the western wall of Havasu Canyon, Great Thumb Spring in 140 Mile Canyon, Fossil Spring in Fossil Canyon, and Dripping Springs and Santa Maria Spring in Hermit Creek Canyon. Discharge from the Redwall-Muav aquifer is comparatively large, over 100,000 gm at Blue Spring, Havasu Spring and Indian Gardens Spring. Small springs and seeps discharge from volcanic rocks south of the Canyon Mine site. These springs and seeps are exit points for groundwater which has become perched on generally impermeable unfractured lavaflow rocks. These perched aquifers are discontinuous and lie above the strata in which the mine openings will occur in the volcanic rocks.

Sinyella Spring, a major spring on the Havasupai Reservation, is located about 25 miles west of the mine site and occurs in a tributary canyon along the west wall of Cataract Canyon, about 640 feet above the floor of the canyon. Sinyella Spring was inspected during the initial water sampling round for the groundwater monitoring program for the Canyon Mine project. Sinyella Spring appears to discharge from a perched aquifer at the base of the Coconino Sandstone, where the underlying Hermit Shale retards the downward seepage of infiltrated rainfall and snowmelt.

The Grand Canyon and its tributary canyons provide a regional groundwater drain for the rock units which are cut by the canyons. The existing data do not allow for an exact determination of the direction of groundwater flow in the Redwall-Muav aquifer at the mine site. However, groundwater movement in this aquifer is chiefly lateral from areas of principal recharge located generally south of the mine site toward large springs along the south wall of the Grand Canyon.

3.2.7.3 Groundwater quality

Existing data for chemical quality of groundwater from wells which penetrate perched aquifers are summarized in Table 3, Appendix F. Existing data for chemical quality of groundwater which discharges from the Redwall-Muav aquifer at Havasu, Indian Gardens and Blue Springs have been compiled and summarized in Tables 4 and 5 of Appendix F.

In cooperation with the National Park Service, and the Havasupai, Hopi and Navajo Indian Tribes, a water quality monitoring program has been established by EFN for the Canyon Mine site area. The monitoring program is comprised of three program elements: first, an inventory of existing data for chemical quality of groundwater in the area; second, periodic collection and chemical analysis of water samples from Havasu, Indian Gardens and Blue Springs, which are the largest springs along the south wall of the Grand Canyon; and third, construction by EFN of a groundwater supply and monitoring well at the mine site. The initial results from the second element -- water quality sampling from selected springs -- were reported in Appendix F of the DEIS and discussed in Section 3.2.7.3 of the DEIS.

In accordance with the monitoring program, water samples for laboratory chemical analyses are presently collected from Havasu, Indian Gardens, and Blue Springs at six-month intervals. These springs discharge from the Redwall-Muav aquifer. The initial sampling round was conducted on May 16 - 17, 1985 and the results included in the DEIS. The second sampling round was conducted on December 18, 1985. Results for the sampling rounds are summarized in Tables 3.3, 3.5 and 3.6. The results of the December 1985 sampling round are discussed below. A third sampling round was conducted in June 1986, but laboratory results were not available for inclusion in the FEIS.

The parameters analyzed include routine constituents, trace elements, gross alpha/beta radiation, uranium (isotopic and fluorometric), thorium, radium 226 and radium 228. These parameters were selected to provide comprehensive documentation of water quality at the springs prior to mining operations, and to provide a basis for monitoring water quality during mining operations. In addition, a check sample was obtained from bottled deionized drinking water and was analyzed for radiological parameters. All samples were collected and transmitted to qualified chemical laboratories in accordance with U.S. Environmental Protection Agency (EPA) protocol and

instructions from the laboratories. The samples were collected by Errol L. Montgomery and Associates personnel at the headwaters point where discharge at each spring begins. The water samples were analyzed using laboratory methods recommended by EPA.

At the request of the Havasupai Indian Tribe, duplicate water samples were collected from Havasu Spring for submittal to an independent chemical laboratory selected by the Tribe.

The CFEP (Controls for Environmental Pollution, Inc.) chemical laboratory was selected by the Havasupai Tribe. CFEP analyzed only the water samples submitted by the Havasupai Tribe for Havasu Spring. BC Laboratories, Inc., EAL (EAL Corp.) and ASU (Arizona State University) were selected by Errol L. Montgomery and Associates, Inc., and analyzed water samples from each of the springs. The laboratories and analyses requested include:

Laboratory	Analyses Requested
BC Laboratories, Bakersfield, California	Routine constituents and trace elements
EAL Corp., Richmond, California	Radiological parameters
Arizona State University, Tempe, Arizona	Radiological parameters
Controls for Environmental Pollution, Inc., Santa Fe, New Mexico	Routine constituents, trace elements and radiological parameters

(A) Routine Constituents

Results of laboratory analyses for routine constituents are given in Tables 3.3, 3.5 and 3.6. Federal drinking water standards for parameters analyzed are given in Table 3.4. Results for the December 1985 sampling round corroborate results for the May 1985 sampling round.

(1) Havasu Springs

Results of the December 1985 sampling round for Havasu Spring (Table 3.3A) indicate a calcium bicarbonate water type, with average total dissolved solids content of 584 mg/l (milligrams per liter). With the exception of total dissolved solids content, routine constitutents analyzed do not exceed Federal and Arizona drinking water limits. Total dissolved solids content in the water samples from Havasu Spring exceeds the

suggested Federal drinking water limit of 500 mg/l (U.S. Public Health Service, 1962) but is less than the maximum Federal drinking water limit of 1,000 mg/l (Table 3.4). The water samples from Havasu Spring would be classified as fresh by the USGS (U.S. Geological Survey) water classification system based on dissolved solids content (Heath, 1984). The water samples from Havasu Spring would be classified as very hard by the USGS water classification system based on hardness as calcium carbonate; average hardness as calcium carbonate was 476 mg/l.

Normal data processing procedures for chemical analyses of routine constitutents in water samples include computations of analytical error using methods described in Standard Methods (American Public Health Association et. al., 1981) and in Anderson (1979). Chemical analyses are normally rejected if the analytical error is more than the maximum allowable. Analytical error for routine constitutent results reported by CFEP for the May and December 1985 samples from Havasu Spring exceeds the maximum allowable for error. The groundwater consultant, Errol L. Montomgery and Associates, Inc., recommended that those results be rejected. Analytical error for results reported by BC Laboratories, Inc., EAL, and ASU do not exceed the maximum allowable error.

(2) Indian Gardens Springs

Results of the December 1985 sampling round for Indian Gardens Spring (Table 3.3B) indicate a magnesium-calcium bicarbonate water type, with total dissolved solids content of 310 mg/l. Routine constitutents analyzed do not exceed Federal and Arizona drinking water limits. The water samples from Indian Gardens Spring would be classified as fresh by the USGS water classification system based on dissolved solids content. The water samples from Indian Gardens Spring would be classified as very hard by the USGS system based on hardness as calcium carbonate.

(3) Blue Spring

Results of the December 1985 sampling for Blue Spring (Table 3.3C) indicate a sodium chloride water type, with total dissolved solids content of 2,455 mg/l. With the exception of chloride concentrations, total dissolved solids content, and specific electrical conductance, routine constitutents analyzed do not exceed Federal and Arizona drinking water limits. Concentration of chloride and total dissolved solids content in the water samples from Blue Spring both exceed the maximum Federal drinking water limits. The water samples from Blue Spring would be classified as slightly saline by the USGS water classification system based on dissolved solids content.

Specific electrical conductance exceeds the maximum Federal drinking water limit of 1,600 umho/cm. Specific electrical conductance of water is defined as the electrical conductance of a cube of water with a volume of one cubic centimeter and is reported in micromhos per centimeter (umho/cm). The water samples from Blue Spring would be classified as very hard by the USGS water classification system based on hardness as calcium carbonate.

(B) Trace elements

Results of laboratory analyses for trace elements are given in Tables 3.5 A, B and C. Results for the December 1985 sampling round corroborate the results for the May 1985 sampling round.

(1) Havasu Spring

Results of the December 1985 sampling for Havasu Spring (Table 3.5A) indicate that low concentrations of arsenic, barium, boron, and zinc were detected. Concentration of trace elements analyzed were less than Federal and Arizona drinking water limits.

(2) Indian Gardens Spring

Results of the December 1985 sampling for Indian Gardens Spring (Table 3.5B) indicate a low concentration of zinc was detected. Concentration of trace elements analyzed were less than Federal and Arizona drinking water limits.

(3) Blue Spring

Results of the December 1985 sampling for Blue Spring (Table 3.5C) indicate that low concentrations of boron and zinc were detected. Concentration of the trace elements analyzed were less than Federal and Arizona drinking water limits.

(C) Radiological Parameters

Results of laboratory analyses for radiological parameters are given in Tables 3.6 A, B and C. Field measurements of relative ambient radiation were obtained at each sampling site using scintillometers and results are also provided. The analyses of radiological parameters performed by ASU are not yet complete and therefore are not included. In addition to the Federal drinking water limits given in Table 3.4, the Arizona Department of Health Services (ADHS) has adopted a maximum limit of 35 ug/l (micrograms per liter) for total uranium in drinking water.

Considering the low concentrations reported, there is generally good agreement between results of chemical analyses for radiological parameters by the different laboratories and between results of analyses for the May and December 1985 sampling rounds. Small differences between laboratory results may appear to be significant, however, these differences are not unusual because assay of such small amounts of radioactivity approaches the minimum detection limits of laboratory methods.

Because emissions of atomic particles from radioactive elements in a water sample are counted statistically, results of laboratory analyses for radiological parameters are commonly reported as a concentration ± the statistical error of measurement. For example, a result of 7 ± 2 pCi/l (picocuries per liter) indicates that there is a 95 percent confidence that the true concentration is within a range from five to nine pCi/l. For problematic analyses, the statistical error of measurement may be large.

(1) Havasu Spring

Results of the December 1985 sampling round indicate that low concentrations of uranium and radium, as well as low levels of gross alpha and gross beta radiation, occur naturally in the groundwater discharged from Havasu Spring (Table 3.6A). Concentrations of other radiological parameters analyzed were zero or slightly greater than zero. None of the radiological parameters analyzed for the December 1985 samples exceed Federal or Arizona limits for drinking water. In general, there is good agreement of results between laboratories and between sampling rounds.

Notable differences between concentrations reported by EAL for the May and December water samples from Havasu Spring occur for gross alpha, gross beta and thorium 228. Concentrations of gross alpha and gross beta reported by EAL for the May 1985 water samples were problematic and were not corroborated by results reported by CFEP and ASU. Analyses for gross alpha radiation for water samples may be affected by impurities in water such as calcium, which increases the detection thresholds and self-absorption corrections and which reduces detection efficiencies. Analyses for gross beta radiation may also be affected by impurities, but to a lesser extent. Concentrations of gross alpha and gross beta reported by EAL for the December samples are more similar to results reported by CFEP and ASU.

(2) Indian Gardens Spring

Results of the December 1985 sampling indicate that low concentrations of uranium and radium, as well as low levels of gross alpha and gross beta radiation, occur naturally in the groundwater discharged from Indian Gardens Spring (Table 3.6B). Concentrations of other radiological parameters analyzed were zero or slightly greater than zero. None of the radiological parameters analyzed exceed Federal or Arizona limits for drinking water. In general, there is good agreement of results between laboratories and sampling rounds.

A notable difference between concentrations reported by EAL for the May and December samples occurs for thorium 228. EAL reported a concentration of thorium 228 in the May 1985 sample which was definitely greater than zero. However, EAL detected a concentration of thorium 228 in the December 1985 sample which is in the range from zero to 0.5 pCi/l. (Table 3.6B).

(3) Blue Spring

Results of the December 1985 sampling indicate that low concentrations of uranium and radium, as well as low levels of gross alpha and gross beta radiation, occur naturally in the groundwater discharged from Blue Spring (Table 3.6C). Concentrations of other radiological parameters were zero or slightly greater than zero. None of the radiological parameters analyzed exceed Federal or Arizona limits for drinking water. In general, there is good agreement of results between laboratories and sampling rounds.

Due to statistical error of measurement, gross alpha radiation reported by EAL for the May 1985 samples from Blue Spring is within the range from zero to 19.4 pCi/l. Therefore, this level of gross alpha radiation might have exceeded the Federal and Arizona limit of 15 pCi/l for drinking water. The limit of detection reported by ASU for gross alpha radiation in the May 1985 samples was above the Federal and Arizona limit for drinking water. Gross alpha radiation reported by EAL for the December 1985 samples from Blue Spring does not exceed the Federal and Arizona limit. The significant error of measurement for analyses of gross alpha and gross beta in the Blue Spring samples are believed to result from impurities such as calcium.

A notable difference between concentrations reported by EAL for the May 1985 and December 1985 samples from Blue Spring occurs for thorium 228. EAL reported a concentration of thorium 228 in the May 1985 samples which was definitely greater than zero. However, EAL detected a concentration of thorium 228 in

the December 1985 samples which is in the range from zero to 0.5 pCi/l (Table 3.6C).

(D) Check Samples

As a check for quality control for each sampling round, a water sample was obtained from bottled deionized drinking water and was submitted to one of the three laboratories for analyses of radiological parameters. The same brand of bottled water was used for each sampling round.

Results of the May 1985 and December 1985 sampling rounds indicate that low levels of gross alpha and gross beta radiation were detected in the bottled water (Table 3.6D). Concentrations of all other radiological parameters analyzed were zero or, due to statistical error of measurement, slightly greater than zero. None of the radiological parameters analyzed exceed Federal or Arizona standards and there is good agreement of results between sampling rounds.

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TABLE 3.3A. SUMMARY OF RESULTS FOR ROUTINE CONSTITUENTS IN WATER SAMPLES COLLECTED FROM HAVASU SPRING

DATE SAMPLED:	05/16/85		12/18/85	
LABORATORY[a]:	BC	CFEP	BC	CFEP
CONSTITUENTS (mg/l)				
CALCIUM	130	127	97	134
MAGNESIUM	44	51	42	47
SODIUM	32	30	34	26
POTASSIUM	4.9	5.2	4.8	4
CARBONATE	0	0	0	0
BICARBONATE	580	534	482	551
SULFATE	37	35	40	21
CHLORIDE	44.6	44	37.2	46
FLUORIDE	0.25	0.25	0.24	0.23
NITRATE	1.8	1.3	1.8	1.4
PHOSPHATE	<0.1	<0.1	<0.1	<0.1
SILICA	16	16.2	18	18.1
ALKALINITY (as $CaCO_3$)	476	438	396	452
HARDNESS (as $CaCO_3$)	506	505	416	518
TOTAL DISSOLVED SOLIDS (residue @ 180°)	605	614	615	552
PARAMETERS				
SPECIFIC ELECTRICAL CONDUCTANCE (umho/cm):				
field	1,200	1,200	970	970
laboratory	1,040	1,060	1,000	940
pH: field	6.7	6.7	6.9	6.9
pH: laboratory	7.5	7.27	7.6	7.46
FIELD TEMPERATURE (°C)	21.5	21.5	21	21

[a] BC - BC Laboratories, Inc., Bakersfield, California
CFEP - Controls for Environmental Pollution, Inc., Santa Fe, New Mexico

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TABLE 3.3B. SUMMARY OF RESULTS FOR ROUTINE CONSTITUENTS IN WATER SAMPLES COLLECTED FROM INDIAN GARDENS SPRING

DATE SAMPLED:	05/17/85	12/18/85
LABORATORY[a]:	BC	BC
CONSTITUENTS (mg/l)		
CALCIUM	45	44
MAGNESIUM	32	29
SODIUM	7	6
POTASSIUM	2	2.3
CARBONATE	0	0
BICARBONATE	275	262
SULFATE	17	16
CHLORIDE	9.9	9.9
FLUORIDE	0.16	0.17
NITRATE	2.2	2.2
PHOSPHATE	<0.1	<0.1
SILICA	10	16
ALKALINITY (as $CaCO_3$)	225	215
HARDNESS (as $CaCO_c$)	244	229
TOTAL DISSOLVED SOLIDS (residue @ 180°)	330	310
PARAMETERS		
SPECIFIC ELECTRICAL CONDUCTANCE (umho/cm):		
field	520	430
laboratory	470	460
pH: field	6-7	7.5
laboratory	8.1	8.0
FIELD TEMPERATURE (°C)	18	17.5

[a] BC - BC Laboratories, Inc., Bakersfield, California

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TABLE 3.3C. SUMMARY OF RESULTS FOR ROUTINE CONSTITUENTS IN WATER SAMPLES COLLECTED FROM BLUE SPRING

DATE SAMPLED:	05/16/85	12/18/85
LABORATORY[a]:	BC	BC
CONSTITUENTS (mg/l)		
CALCIUM	243	243
MAGNESIUM	74	74
SODIUM	540	550
POTASSIUM	6.4	5.9
CARBONATE	0	0
BICARBONATE	889	903
SULFATE	156	141
CHLORIDE	846	839
FLUORIDE	0.36	0.28
NITRATE	1.8	1.3
PHOSPHATE	<0.1	<0.1
SILICA	16	12
ALKALINITY (as $CaCO_3$)	728	741
HARDNESS (as $CaCO_3$)	912	913
TOTAL DISSOLVED SOLIDS (residue @ 180°)	2,315	2,455
PARAMETERS		
SPECIFIC ELECTRICAL CONDUCTANCE (umho/cm):		
field	5,500	5,000
laboratory	4,100	4,100
pH: field	6.3	6.4
laboratory	7.3	7.3
FIELD TEMPERATURE(°C)	20.5	19.5

[a] BC - BC Laboratories, Inc., Bakersfield, California

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TABLE 3.4 FEDERAL DRINKING WATER STANDARDS FOR PARAMETERS ANALYZED

PARAMETERS	MAXIMUM[b] LIMIT	
PRIMARY:		
ARSENIC:	0.05	mg/l
BARIUM	1.0	mg/l
CADMIUM	0.01	mg/l
CHROMIUM (TOTAL)	0.05	mg/l
LEAD	0.05	mg/l
MERCURY	0.002	mg/l
NITRATE (as NO_3)	45	mg/l
SELENIUM	0.01	mg/l
SILVER	0.05	mg/l
FLUORIDE[a]	1.4 - 2.4	mg/l
RADIUM 226	3	pCi/l
COMBINED RADIUM 226 AND RADIUM 228	5	pCi/l
GROSS ALPHA PARTICLE ACTIVITY (EXCLUDING RADON AND URANIUM)	15	pCi/l
GROSS BETA PARTICLE ACTIVITY	50	pCi/l
SECONDARY:		
CHLORIDE	500	mg/l
COPPER	1.0	mg/l
IRON	0.3	mg/l
MANGANESE	0.05	mg/l
SULFATE	500	mg/l
ZINC	5.0	mg/l
TOTAL DISSOLVED SOLIDS	1,000	mg/l
SPECIFIC ELECTRICAL CONDUCTANCE	1,600	umho/cm.

[a] Temperature dependent
[b] mg/l - milligrams per liter
pCi/l - picocuries per liter
umho/cm - micromhos per centimeter

TABLE 3.5A. SUMMARY OF RESULTS FOR TRACE ELEMENTS IN WATER SAMPLES COLLECTED FROM HAVASU SPRING

DATE SAMPLED:	05/16/85		12/18/85	
LABORATORY[a]:	BC	CFEP	BC	CFEP
CONSTITUENTS (mg/l)				
ALUMINUM	<0.1	<0.1	<0.5	<0.1
ANTIMONY	<1.0	<0.003	<1.0	<0.01
ARSENIC	0.01	0.01	0.01	<0.01
BARIUM	<0.5	0.2	<0.5	0.2
BERYLLIUM	<0.05	<0.0001	<0.01	<0.001
BORON	0.27	0.3	0.26	0.3
CADMIUM	<0.005	<0.001	<0.005	<0.001
CHROMIUM (total)	<0.01	<0.01	<0.01	<0.01
COPPER	<0.01	<0.01	<0.01	<0.01
IRON	<0.05	<0.01	<0.05	<0.01
LEAD	<0.01	<0.01	<0.01	<0.01
MANGANESE	<0.01	<0.01	<0.01	<0.01
MERCURY	<0.0002	<0.0004	<0.0002	<0.0004
MOLYBDENUM	<0.1	<0.01	<0.1	<0.01
NICKEL	<0.05	<0.01	<0.05	<0.1
SELENIUM	<0.005	<0.01	<0.005	<0.01
SILVER	<0.01	<0.01	<0.01	<0.01
THALLIUM	<0.5	<0.01	<0.5	<0.01
VANADIUM	<0.5	<0.01	<0.5	<0.01
ZINC	<0.01	<0.005	0.01	<0.1

[a] BC - BC Laboratories, Inc., Bakersfield, California
CFEP - Controls for Environmental Pollution, Inc., Santa Fe, New Mexico
(<) Less than

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TABLE 3.5B. SUMMARY OF RESULTS FOR TRACE ELEMENTS IN WATER SAMPLES COLLECTED FROM INDIAN GARDENS SPRING

DATE SAMPLED:	05/17/85	12/18/85
LABORATORY[a]:	BC	BC
CONSTITUENTS (mg/l)		
ALUMINUM	<0.1	<0.5
ANTIMONY	<1.0	<1.0
ARSENIC	<0.01	<0.01
BARIUM	<0.5	<0.5
BERYLLIUM	<0.05	<0.01
BORON	<0.1	<0.1
CADMIUM	<0.005	<0.005
CHROMIUM (total)	<0.01	<0.01
COPPER	<0.01	<0.01
IRON	<0.05	<0.05
LEAD	<0.01	<0.01
MANGANESE	<0.01	<0.01
MERCURY	<0.0002	<0.0002
MOLYBDENUM	<0.1	<0.1
NICKEL	<0.05	<0.05
SELENIUM	<0.005	<0.005
SILVER	<0.01	<0.01
THALLIUM	<0.5	<0.5
VANADIUM	<0.5	<0.5
ZINC	<0.01	0.01

[a] BC - BC Laboratories, Inc., Bakersfield, California
(<) Less than

0600

TABLE 3.5C. SUMMARY OF RESULTS FOR TRACE ELEMENTS IN WATER SAMPLES COLLECTED FROM BLUE SPRING

DATE SAMPLED:	05/16/85	12/18/85
LABORATORY[a]:	BC	BC
CONSTITUENTS (mg/l)		
ALUMINUM	<0.1	<0.5
ANTIMONY	<1.0	<1.0
ARSENIC	<0.01	<0.01
BARIUM	<0.5	<0.5
BERYLLIUM	<0.05	<0.01
BORON	0.39	0.42
CADMIUM	<0.005	<0.005
CHROMIUM (total)	<0.01	<0.01
COPPER	<0.01	<0.01
IRON	<0.05	<0.05
LEAD	<0.01	<0.01
MANGANESE	<0.01	<0.01
MERCURY	<0.0002	<0.0002
MOLYBDENUM	<0.1	<0.1
NICKEL	<0.05	<0.05
SELENIUM	<0.005	<0.005
SILVER	<0.01	<0.01
THALLIUM	<0.5	<0.5
VANADIUM	<0.5	<0.5
ZINC	<0.01	0.04

[a] BC - BC Laboratories, Inc., Bakersfield, California
(<) Less than

0601

TABLE 3.6A. SUMMARY OF RESULTS FOR RADIOLOGICAL PARAMETERS IN WATER SAMPLES COLLECTED FROM HAVASU SPRING

DATE SAMPLED:	05/16/85			12/18/85		
LABORATORY[a]:	EAL	CFEP	ASU	EAL	CFEP	ASU
PARAMETER (in picocuries per liter +/- two standard deviations)						
GROSS ALPHA	41.6±34.7	<2	<8	<0.7±5.0	<2	<8.5
GROSS BETA	44.8±40.4	<3	6.4±3.8	<5.4±7.9	5±2	5.4±1.5
TOTAL URANIUM						
picocuries per liter	7±2	3±1	---	3±2	7	---
micrograms per liter	10±3	4±1	---	4±3	10	---
URANIUM 234	3.6±0.2	<0.6	3.1±1.2	3.8±0.2	<0.6	3.0±0.2
URANIUM 235	0±0.2	<0.6	0.3±0.4	0±0.2	<0.6	0.13±0.04
URANIUM 238	1.3±0.1	<0.6	1.6±0.8	1.3±0.1	<0.6	1.2±0.1
THORIUM 228	2.1±0.5	<0.6	---	0±0.5	<0.6	---
THORIUM 230	0±0.2	<0.6	---	0±0.2	<0.6	---
THORIUM 232	0±0.2	<0.6	---	0±0.2	<0.6	---
RADIUM 226	0±0.05	<0.6	0.45±0.34	0.8±0.1	<0.6	0.26±0.05
RADIUM 228	0±0.5	<1	---	0±0.5	<1	---
POTASSIUM 40	---	---	4.1	---	---	---

[a] EAL - EAL Corporation, Richmond, California
CFEP - Controls for Environmental Pollution, Inc., Santa Fe, New Mexico
ASU - Arizona State University, Tempe, Arizona
(<) Less than

TABLE 3.6B. SUMMARY OF RESULTS FOR RADIOLOGICAL PARAMETERS IN WATER SAMPLES COLLECTED FROM INDIAN GARDENS SPRING

DATE SAMPLED:	05/17/85		12/18/85	
LABORATORY[a]:	EAL	ASU	EAL	ASU
PARAMETER (in picocuries per liter +/- two standard deviations)				
GROSS ALPHA	1.5±2.5	<4	1.0±3.0	11.7±8.2
GROSS BETA	2.2±2.0	3.2±3.6	1.9±3.3	<2.0
TOTAL URANIUM				
picocuries per liter	3±2	---	4±2	---
micrograms per liter	4±3	---	6±3	---
URANIUM 234	2.5±0.1	3.1±0.8	2.7±0.1	2.2±0.2
URANIUM 235	0±0.1	0.1±0.1	0±0.2	0.08±0.03
URANIUM 238	0.6±0.1	0.8±0.4	0.8±0.1	0.52±0.07
THORIUM 228	1.4±0.4	---	0±0.5	---
THORIUM 230	0±0.2	---	0±0.2	---
THORIUM 232	0±0.2	---	0±0.2	---
RADIUM 226	0.14±0.05	0.25±0.20	1.4±0.2	0.18±0.03
RADIUM 228	0±0.5	---	0±0.8	---
POTASSIUM 40	---	1.4	---	---

[a] EAL - EAL Corporation, Richmond, California
ASU - Arizona State University, Tempe, Arizona
(<) Less than

TABLE 3.6C. SUMMARY OF RESULTS FOR RADIOLOGICAL PARAMETERS IN WATER SAMPLES COLLECTED FROM BLUE SPRING

DATE SAMPLED:	05/16/85		12/18/85	
LABORATORY[a]:	EAL	ASU	EAL	ASU[b]
PARAMETER (in picocuries per liter +/- two standard deviations)				
GROSS ALPHA	1.5±17.9	<21	1.2±9.5	<24
GROSS BETA	8.4± 8.1	9.4+-4.9	3.9±16.0	5.0±2.4
TOTAL URANIUM				
picocuries per liter	5±2	---	3±2	---
micrograms per liter	7±3	---	4±3	---
URANIUM 234	4.4±0.2	4.4±0.9	3.9±0.2	4.2±0.4
URANIUM 235	0±0.2	0.4±0.2	0±0.2	0.18±0.07
URANIUM 238	1.8±0.1	1.4±0.4	1.7±0.1	1.3±0.2
THORIUM 228	1.7±0.3	---	0±0.5	---
THORIUM 230	0±0.2	---	0±0.2	---
THORIUM 232	0±0.2	---	0±0.2	---
RADIUM 226	0.12±0.05	0.31±0.24	1.0±0.2	<0.5
RADIUM 228	0±0.5	---	0±0.5	---
POTASSIUM 40	---	6.6	---	---

[a] EAL - EAL Corporation, Richmond, California
ASU - Arizona State University, Tempe, Arizona
(<) Less than

TABLE 3.6D. SUMMARY OF RESULTS FOR RADIOLOGICAL PARAMETERS IN CHECK WATER SAMPLES COLLECTED FROM BOTTLED DEIONIZED DRINKING WATER

DATE SAMPLED:	05/17/85	12/18/85
LABORATORY[a]:	EAL	EAL
PARAMETER (in picocuries per liter +/- two standard deviations)		
GROSS ALPHA	0.2±0.6	<0.4±1.5
GROSS BETA	<0.2±1.7	<0.9±2.4
TOTAL URANIUM		
picocuries per liter	0±2	0±2
micrograms per liter	0±3	0±3
URANIUM 234	0±0.1	0±0.1
URANIUM 235	0±0.1	0±0.1
URANIUM 238	0±0.1	0±0.1
THORIUM 228	0±0.5	0±0.5
THORIUM 230	0±0.2	0±0.2
THORIUM 232	0±0.2	0±0.2
RADIUM 226	0±0.05	0±0.1
RADIUM 228	0±0.5	0±0.5
POTASSIUM 40	---	---

[a] EAL - EAL Corporation, Richmond, California
(<) Less than

As part of the sampling procedure, field measurements of relative ambient radiation were made at each sampling site using a scintillometer. At each site, one measurement was made directly above the water surface where samples were collected. A second measurement was made over dry ground approximately 50 feet from the sampling site. Results of the scintillometer measurements are as follows:

SCINTILLOMETER READING
(microrems per hour)

Havasu Spring

Date Measured	At Water Sampling Site[a]	50 Feet From Sampling Site[b]
05-16-85	5 - 7	5 - 7
12-18-85	7 - 7.5	7.5 - 8

Indian Gardens Spring

Date Measured	At Water Sampling Site[a]	50 Feet From Sampling Site[b]
05-17-85	4 - 6	4 - 6
12-18-85	6 - 7	6 - 7

Blue Spring

Date Measured	At Water Sampling Site[a]	50 Feet From Sampling Site[b]
05-16-85	2	5
12-18-85	4	8

[a]Measured at the water sampling site, about six inches above water surface.
[b]Measured about 50 feet from the sampling site, about six inches above ground surface.

Radon commonly occurs as a gaseous emission from springs fed by groundwater containing elevated levels of radionuclides. Radon emissions from springs commonly result in ambient radiation near the springs which is higher than background levels. Results of the scintillometer measurements indicate that radiation detected near the springs was not higher than background radiation detected 50 feet from the springs.

Results of scintillometer measurements made during the December 1985 sampling round are slightly higher than results for the May 1985 sampling round.

3.2.7.4 Soils

Soil samples were collected and assayed for background radionuclides. These sample sites are shown in Figure 2.4, Chapter 2. Results of the assays are as follows:

Radionuclide Assays in Soil (pCi/gm)

Sample	Ra-226	Gross Alpha	Gross Beta	Th-232	TI-208	K-40	Cs-137
Wash NNW	1.3(9)*	20(10)	21	0.7(6)	0.24(4)	13(3)	0.42
Wash NNE	1.3(9)	35(11)	25	1.0(5)	0.36(3)	17(2)	0.32
Wash SSW	1.8(14)	23(10)	32	1.3(8)	0.42(7)	21(4)	1.10
Owl Tank	1.6(11)	35(9)	28	1.0(6)	0.35(4)	18(2)	0.83

*Values in parenthesis are the percent error at one standard deviati

The results for soil collected from Red Horse Wash at U.S. Highway 180 and at Willaha are not yet available. All soil is also being analyzed for uranium content but results are not yet available. The Ra-226 reported is normal for Arizona soil. The gross alpha and gross beta results are not sufficiently accurate to provide useful information. Improvement in assay technique is not possible due to the magnitude of the self absorption corrections which need to be made. Th-232 and Ti-208 radionuclides are members of the Thorium decay chain and are normal. The naturally occurring K-40 concentrations are the same as other soils measured in Arizona. Fallout Cs-137 concentrations are approximately a factor of two higher than those measured in the Phoenix area.

In summary, the radionuclide concentrations in the soil around the Canyon Mine site are normal and do not indicate the presence of surface deposits of natural radioactivity. It appears that the two prime indicators for changes in the natural radiation environment will be Ra-226 and uranium. Therefore further soil sampling analysis will be limited to these radionuclides.

3.2.8 IC #10 Indian Religious Concerns

Lands historically occupied by Native Americans and their ancestors are common in Northern Arizona. The American Indian Religious Freedom Act, 42 U.S.C. §1996, requires that federal agencies, have an awareness of tribal beliefs and practices and consider these when formulating government policy by: (1) consulting with Tribes with respect to actions which may affect traditional Indian religious practices; and (2) evaluating policies with an aim toward protecting Tribal religious practices. The statute does not require that Federal officials protect Tribal religious practices to the exclusion of all other Federal courses of action nor is it intended to provide Indian religions with a more favorable status than other religions.

In completing this environmental impact statement, the Forest has attempted to identify Indian concerns, both religious and environmental, through the formal scoping process and through informal consultation with tribal leaders.

The primary concern expressed by Indian tribes relates to possible water quality impacts that might result from contamination of the Redwall-Muav aquifer by mine operation. Blue Spring, located in the Little Colorado River Gorge, approximately 30 miles northeast of the mine site, and Havasu Springs, located on the Havasupai Indian Reservation approximately 35 miles northwest of the mine site, both discharge from the Redwall aquifer. Havasu Springs is an important water source and economic asset to the Havasupai Tribe. Blue Spring is an extremely important sacred site for the Hopi Tribe. For a discussion of existing water quality at these springs, see Section 3.2.7.3. Potential impacts are discussed in Section 4.2.7.2.

The Hopi and Havasupai Tribes have suggested that sacred religious sites, including ruins, graves and hunting areas, exist at or near the mine site and haul routes. However, consultation with the Tribes and experts on Indian religious sites and practices as well as archeological inventories have failed to identify any specific Hopi or Havasupai sites of sacred or religious significance near the proposed mine site.

There is evidence that Hopi gather turkeys, pinion nuts and sacred herbs in the area near Tusayan. Turkeys are gathered around Twin Lakes, Skinner Ridge and Red Butte. These practices have religious significance. Hopi also hunt deer

for both food and ceremonial purposes in the Tusayan area and visit ruins of Hopi ancestors.

The Havasupai traditionally cremated their dead until sometime in the 1880's. Since this times they have buried their dead in Supai Canyon with the exception of medicine men, who are buried at locations away from the Grand Canyon.

Hopi also gather golden eagles along U.S. Highway 89 near the Little Colorado River bridge and near the Echo Cliffs. The feathers of golden eagles are used in making "pahos" or prayer feather sticks which convey the prayers of Hopi to the Creator.

The Sipapu and Salt Trails are also of religious importance to the Hopi. Both trails are in the floor of the Little Colorado River near the confluence with the Colorado River.

Other areas sacred to the Hopi are located on the San Francisco Peaks and Bill Williams Mountain, 48 miles south of the mine site. Those areas are discussed in the Environmental Impact Statement for the Bill Williams Mountain Ski Area Proposal. No areas of sacred or religious significance have been identified near the mine site or proposed ore haul routes.

milliworking levels m(WL). Radon progeny will be present at approximately 10 percent of their potential equilibrium values. This means that much of the radon gas will be removed from the mine before it is able to decay to its hazardous decay products. The occupational radon progeny limit is 4 Working Level Months (WLM) per year. Miners at Hack Canyon are currently experiencing an average of about 2.2 WLM/yr. (See Appendix E and Glossary.)

Currently, uranium miners work an average of 10 years underground. The cumulative 10 to 25 WLM they may receive is well below the 100 WLM value where studies indicate possible increases in lung cancer might appear. Current data and standards support the conclusion that increases in lung cancer among mine workers are not expected at levels lower than 100 WLM. However, EPA has suggested that the risk of lung cancer may increase at exposure levels in the range of 20-100 WLM.

4.1.11 Cultural Resources

No impacts upon cultural resources are expected under the No Action Alternative. The construction and operation of the mine would have essentially similar impacts on cultural resources under Alternative 2-5. Site AZ-H-4-3, 4 and 5 (inclusive) would not be directly impacted by construction or operation as it is out of the area of operations. However, indirect impacts from construction activities or greater use of the mine area could result in the disturbance to this area. During the process of evaluating this site, virtually all surface artifacts were collected and analyzed. Archeological testing revealed no subsurface material. The site was determined to contain no significant information and was thus found to be ineligible for the National Register. Any disturbance to the site area will not result in loss of important data.

Site AZ-H-4-6 and 7 (inclusive) is also outside the area of direct mining impact but is close enough that it could be impacted indirectly by activity around the mine. The site was excavated through an approved data recovery program, which was designed to recover information important to the prehistory of the region. Since it was the information potential of the site that made it eligible for the National Register, and the information has been recovered through an approved program, the spot where the site was located no longer has archeological value. Thus future disturbance of this location will not result in loss of important data.

Impacts on cultural resources associated with road construction, improvement or maintenance, powerline construction or wildlife mitigation activities can only be

estimated qualitatively based on cursory field surveys (see Table 2.4). No detailed site specific inspection of the potentially impacted areas has occurred. However, prior to any construction or improvement of any road or line, or construction associated with wildlife mitigation, a site specific investigation of any affected area will be conducted for evidence of cultural resources. Any resources found will be avoided by realignment of the road. If avoidance is not practical, sites will be evaluated for National Register eligibility. If any are found eligible, a program of mitigation will be developed through consultation between the Forest Service, the Arizona State Historic Preservation Officer and the Advisory Council in accordance with the National Historic Preservation Act of 1966 and 36 CFR 800.

4.2 ISSUES AND CONCERNS

This section is primarily directed to those issues and concerns which were considered of major importance, or which surfaced as significant issues during the scoping process. Impacts of the four alternatives have been displayed in Chapter 2, as well as here, so the relative resolution of each issue and concern can be distinguished.

The No Action Alternative represents the existing environment with no mining activities on the Tusayan Ranger District and provides a baseline against which all other alternatives can be measured.

4.2.1 IC #1 What Social and Economic Impacts Will the Uranium Mine Have on the Local Communities and Coconino County

A computer impact model called IMPLAN was used to estimate the number of jobs created or lost by implementing each alternative. The model takes a regional area, in this case Coconino County, and estimates the dollars generated in the area, the amount of money brought into the County and the ripple effect of new money through the region. The model assigns jobs in each of several hundred industry sectors. These industry sectors were grouped into nine general categories to coincide with available employment data. The IMPLAN Model is not suitable for use on a small subsection of a regional area, so it was not used to predict the number of jobs generated specifically in Williams or Tusayan. Changes in job numbers for these two areas were estimated by looking at the change in the total number of jobs in an industry sector on a county-wide basis.

The various project alternatives evaluated in this EIS will not have any different effect on employment levels at the mine or development costs associated with the mine. Consequently, the estimated economic changes will apply to all project alternatives.

The following projected 10-year estimates of wages, capital investments, taxes, etc., derived from the mine, were used to drive the IMPLAN economic model and to predict the secondary changes in the employment, salaries and Total Gross Outputs for Coconino County.

1.	Wages and Fringe Benefits	$10,000,000
2.	Plant and Equipment	$ 3,000,000
3.	Mining Supplies	$15,000,000
4.	Haulage to Blanding, Utah	$ 4,000,000
5.	Transaction Privilege (sales and use taxes)	$ 600,000
6.	Mineral Severance Taxes	$ 1,700,000
7.	Property Taxes	$ 1,275,000
8.	Energy Usage	
	Electricity	$ 2,000,000
	Diesel Fuel	$ 450,000

In addition to the above estimated expenditures, there will be income taxes generated at both the state and federal levels throughout the life of the mine. Additional tax revenues generated from mining activities will include license fees, motor vehicle taxes, motor carrier taxes, fuel taxes and local retail transaction privilege taxes incurred by mine workers, mine suppliers and other contractors.

Some assumptions have been made in developing Table 4.1, "Estimated Employment Change by Sector for Alternatives 2-5," which warrant explanation.

The Community of Williams may initially receive the most direct economic impacts from the development of the mine for several reasons. The lack of available water, housing and a labor pool in Tusayan, sufficient to meet employment needs of the mine, may limit the economic effects in the Tusayan area. The Williams area has both a labor pool and housing sufficient to meet the immediate employment needs of the additional 10-35 personnel required at the mine. However, it is not clear that

Three additional mines in Coconino County south of the Grand Canyon would not increase the impact which may result from a release of radioactivity into the surface waters, but may increase the risk that such an accident could occur.

Potential radiological impacts on groundwater would be localized near the mine site. Mitigation measures, including wells or pumping from the mine shaft, would be taken to insure no increase in groundwater radioactivity at any site.

4.2.8 IC #10 Impacts on Indian Religious Concerns

(1) Alternative 1

Implementation of the No Action Alternative would create no additional impacts on the religious sites or practices of American Indians. Indian concerns about potential impacts on unidentified sacred sites, sacred springs and hunting and gathering, and conflicts with traditional beliefs would be alleviated for the Canyon Mine proposal, but not for other activities in the region.

(2) Alternatives 2-5

Construction and operation of the Canyon Mine will have no impact on Indian lands in northern Arizona. Traffic on U.S. Highway 89 across the Navajo Reservation will increase by approximately 20 ore truck trips per day, but given existing traffic levels, that increase is insignificant. (See Table 2.11.)

The Hopi and Havasupai Tribes have expressed concern about possible water quality impacts at Blue Spring and Havasu Springs. (See Section 4.2.7.) Both springs discharge from the Redwall-Muav aquifer which is located below the mine site. The aquifer is well below mine shaft depth and no impacts are expected. In addition, movement of subsurface water to and in the Redwall-Muav aquifer and toward the springs is extremely slow and significant dilution over time and distance is anticipated. Finally, Alternatives 3-5 include a groundwater quality monitoring well which is expected to identify any contamination and allow mitigation, thus preventing any threat to either Blue Spring or Havasu Spring. (See Section 4.2.7.)

After communications and consultation with Hopi and Havasupai Tribal leaders and experts on Indian religious sites and practices as well as an archeological investigation of the mine

site, no specific Indian sacred or religious sites have been identified near the mine site. The Tribes maintain that Indian religious interests will be adversely affected but have not identified specific sites which are threatened. In addition, a review by an expert in Indian religious sites and practices has failed to identify sites that would be affected by the proposed action. Consultation with tribal leaders will continue.

Certain sites and areas with religious significance have been identified and evaluated. (See Section 3.1.11.) The area near Tusayan has been historically used by the Hopi to gather turkey feathers and sacred herbs for religious and ceremonial purposes. The loss of the mine site and the additional traffic and activity in the area will reduce the area available for these practices but should not impose a significant burden on these occasional uses and will not prevent the Hopi from continuing these practices on National Forest lands. Mine development will not affect Indian access to the area nor materially restrict the present level of religious activities. The mine site is only one small part of a large area available for Indian religious activities, and development of the mine will not burden traditional Indian religious beliefs.

Some areas near the haul routes are also used for gathering purposes, including the Little Colorado River near the bridge on U.S. Highway 89. These areas are used for gathering golden eagles and feathers to be used in religious ceremonies. The additional truck traffic along these well-traveled highways would not impair Indian access to the area or affect the current level of religious activity. Arizona Highway Department figures show an average daily traffic count of 7600 and 3100 vehicles along U.S. 89 and U.S. 160, respectively. An additional 20 trucks/day would be virtually unnoticed.

Other sites have been identified in the area including Blue Springs and the Sipapu and Salt Trails. (See Section 3.1.11.) These areas will not be affected by mine operations or ore transport.

Finally, in comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated religious beliefs.

Cumulative Impacts

Indian religious sites and practices are sensitive to increased mineral and industrial activity and thus may be adversely affected by additional mines or other activities that intrude upon land utilized by the Indians. The precise impacts of additional mines, if any, can only be determined on a site specific basis following consultation with the affected Tribes. Tribal leaders must be consulted and included in the decision making process for any proposed mine. Sites of religious significance to the Indians must be identified and avoided or mitigated. However, the Forest Service is not required to protect Tribal religious practices to the exclusion of all other land uses.

Because of the nature of Indian beliefs and the religious importance of all lands of Hopi ancestral occupancy in northern Arizona any mining activity or ore transport is expected to conflict with stated traditional beliefs that the earth is sacred and not to be developed and is believed by the Hopi to diminish the availability of the land for sacred and religious purposes. This is true of the hunting and gathering activities of the Hopi in the Tusayan area. While each additional mine will only marginally affect these occasional religious uses, the loss of any land is considered significant by the Hopi and each new activity impacts the general environmental setting of such areas and detracts from their religious significance.

CHAPTER 5

LIST OF PREPARERS

CONSULTANTS

The following individuals had a major direct role during the past year in the collecting of background data and evaluations which formed a basis for the preparation of the Environmental Impact Statement on the Canyon Uranium Mining Proposal.

Charles F. Leaf - Consulting Hydrologist. Dr. Leaf is a registered Professional Engineer in Colorado, Montana and New Mexico. He is a private consultant with 20 years of experience that includes working for USGS, USFS, and as a consulting meteorologist in private practice. His expertise includes such fields as: streamflow forecasting, avalanche hazard evaluation, design and construction of surface water management and control systems, and snowpack management. Dr. Leaf has authored more than 40 technical publications and hydrologic impact analyses. He was awarded a PhD in 1969 from Colorado State University.

John W. McKlveen - Consulting Radiological Engineer. Dr. McKlveen is Professor of Engineering and Radiation Protection Officer at Arizona State University. He is in charge of the Radiation Research Laboratory, which he created. He teaches nuclear engineering and health physics. He has 15 years of research and teaching experience. Dr. McKlveen has authored more than 55 technical publications and one book. He was awarded a PhD from the University of Virginia in 1973.

Errol L. Montgomery - Consulting Hydrogeologist. Dr. Montgomery heads his own consulting firm, Errol L. Montgomery and Associates, Inc. He has 20 years experience in groundwater geology including the design and construction of water wells. As Assistant Professor of Geology at NAU for seven years, he taught classes in hydrogeology, applied geophysics and engineering geology. Dr. Montgomery has authored more than 16 technical publications. He was awarded a PhD in 1971 from the University of Arizona.

Barry L. Stewart - Consulting Atmospheric Scientist. Mr. Stewart is senior atmospheric scientist with the consulting firm of EnecoTech. He has 13 years of experience in air quality and meteorological monitoring, modeling and permitting studies, and EA and EIS support. Mr. Stewart has managed

DOCUMENT #6

RECORD OF DECISION

USDA Forest Service
Kaibab National Forest

CANYON MINE PROPOSAL

Final Environmental Impact Statement

Coconino County, Arizona

RECORD OF DECISION

USDA Forest Service
Kaibab National Forest

CANYON MINE PROPOSAL
Final Environmental Impact Statement

Coconino County, Arizona

I. Introduction

This Record of Decision documents my approval of a modified Plan of Operations for the Canyon Uranium Mine on the Kaibab National Forest. The alternatives considered and my rationale for selecting the preferred alternative are described in this Record of Decision. The environmentally preferred alternative is also identified.

In October, 1984, Energy Fuels Nuclear, Inc. (EFN), submitted to the USDA Forest Service, Kaibab National Forest, a proposed Plan of Operations to mine uranium on unpatented mining claims on the Tusayan Ranger District. The proposed mine is located in Coconino County, Arizona, approximately six miles south of the community of Tusayan.

A detailed description of the proposed mine operations can be found in the Environmental Impact Statement (EIS). In brief, the proposed Canyon Mine would involve underground mining of a breccia pipe uranium deposit and would require disturbance of approximately 17 acres for the mine shaft and surface facilities. Ore from the mine will be trucked to the licensed mill near Blanding, Utah.

When the Plan of Operations was submitted, the Forest Service sought public review and comment on the proposal to assist in determining the appropriate level of analysis and documentation required under the National Environmental Policy Act (NEPA). The Forest Service decided the preparation of an EIS was warranted and a notice to prepare an EIS was published in the Federal Register on April 30, 1985.

A Draft EIS was prepared and released to the public on February 28, 1986. A Final EIS, including public comments on the Draft EIS and Forest Service responses, was completed and released on September 29, 1986. The purpose of the EIS was to present information to allow for an informed decision on whether to reject, accept, or accept with modifications the proposed Plan of Operations. The EIS analyzed potential environmental, social and economic impacts of the proposed mine and developed and evaluated mitigation measures designed to minimize potential impacts from mining and ore transportation.

II. Decision

My decision is to select Alternative 5, the alternative preferred by the interdisciplinary team in the EIS.

The Selected Alternative includes approval of a modified Plan of Operations for an underground uranium mine and allows EFN to choose between two ore transportation options: Haul Route #6, an all-highway route along Highway 64, Interstate 40 and Highway 89, from the mine site to Blanding; and Haul Route #7, another southern route which crosses State and private lands on gravel roads near SP Crater. A detailed description and analysis of the haul route options considered and selected is provided in the EIS. If EFN chooses to use Haul Route #7, it must negotiate the necessary rights-of-way with the State of Arizona and private landowners.

Other important operational features of the Selected Alternative include:

1. Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary;

2. Construction of an overhead powerline from Highway 64 following the access road to the mine site;

3. Transportation of mine workers by company van or bus;

4. Modified surface water diversion structure to provide increased protection from storm runoff;

5. Mitigation measures for the replacement of disturbed wildlife habitat and key wildlife waters; and

6. Expanded mine reclamation plan.

The operational components of the Selected Alternative are analyzed in detail in the EIS. The mitigation measures which have been adopted as part of my decision are described in Section VII of this Record of Decision. All practicable means to avoid, minimize and monitor environmental impacts have been adopted.

III. Alternatives Considered

Based on available data, all reasonable alternatives to the proposed Plan of Operations were developed and analyzed in the EIS. The following alternatives were considered in detail:

Alternative 1 — No Action, Disapproval of the Plan of Operations.

No mine would be developed at the Canyon Mine site. While the Forest Service can impose reasonable environmental controls on a mining operation, we do not have the authority to disapprove a reasonable operating plan for a mining operation which will be conducted in an environmentally responsible manner. The use of this alternative,

however, is consistent with previous Forest Service administrative decisions to treat the no action mining alternative as the no project option.

Alternative 2 — Proposed Plan of Operations.

This alternative is the Plan of Operations as proposed by EFN, in October, 1984.

Alternative 3 — Modified Plan of Operations with Additional Monitoring, Mitigation and Haul Routes #1 and 2.

This alternative includes an expanded monitoring program for soil, air and water, an alternative haul route and additional mitigating measures, including the replacement of disturbed wildlife habitat and key wildlife waters.

Alternative 4 -- Modified Plan of Operations with Additional Monitoring, Mitigation and Haul Route #5.

This alternative includes the monitoring and mitigation measures of Alternative 3, but considered different haul routes. Alternative 4 also includes company provided transportation for mine workers.

Alternative 5 — Preferred Alternative.

The Preferred Alternative includes the monitoring program and mitigation measures considered in Alternatives 3 and 4, haul route options #6 and 7, company transportation for mine workers and a surface powerline along the access road to the mine site.

The project alternatives differ primarily in the level of monitoring and mitigation required, and the haul routes evaluated. The alternatives also consider different operational features of the mine, including power supply, worker transportation and surface water diversion.

In addition to the alternatives described above, several other alternatives were considered but eliminated from detailed study in the EIS. Two alternatives that were initially considered as possible agency actions, but dropped from further consideration, were withdrawal of the land from mineral entry and patenting (fee title ownership of the mine site) of the lands in the area of the proposed Canyon Mine by EFN. Patenting remains a discretionary option still available to EFN, and the authority of the Forest Service to influence project mitigation and monitoring under this alternative would be much less. Other non-project alternatives considered but eliminated from detailed analysis as remote, speculative and conjectural, providing no additional information which could aid the public or the Forest Service in considering the impacts of the proposed Canyon Mine include energy conservation, alternative energy development and obtaining uranium from other sources. The reasons for eliminating these alternatives from detailed study are discussed in Chapter 2 of the EIS.

IV. Response to Public Comments

Two hundred and thirty-eight letters were received in response to the Draft EIS. The major concerns expressed in these letters fell mainly into the following broad categories: Proximity of the proposed mine to the Grand Canyon National Park, including the perception that the mine was located within the boundaries of the Park; cumulative impacts of several uranium mines; potential for groundwater contamination; the "valuable mineral" test under the 1872 mining law; radioactive dust exposure along haul routes; potential human health effects; effects on wildlife and wildlife habitat; heavy truck traffic; and, opposition to the proposed mine because of social issues and controversy associated with the use of uranium.

The EIS was revised to reflect the comments received on the Draft EIS. Important changes include:

1. **Addition of Indian religious concerns as an issue and concern.** The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the Draft EIS in conjunction with a general analysis of impacts on American Indians. Comments on the Draft EIS by the Hopi and Havasupai Tribes alleged that religious sites and practices would be adversely affected by the Canyon Mine, a concern which was not raised by the Tribes during scoping or earlier consultation with the Tribes. Based on those comments and continuing consultation with the affected Tribes, Indian religious concerns was added to the list of issues evaluated in detail by the EIS. The text of the EIS includes an expanded discussion of Indian religious sites and practices, and beliefs about the affected area. Following the printing of the EIS, Havasupai and Hopi representatives met with Forest Service representatives and provided additional comments and information with respect to these issues. Consultation with the Tribes regarding religious concerns will continue during the review, construction and operation of the mine.

2. **Expanded discussion of potential groundwater impacts.** Several comments expressed concern about potential depletion or contamination of groundwater resources in the area, including potential impacts on seeps and springs which flow from underground aquifers. The Draft EIS evaluated the impacts on surface and subsurface water as a major issue and concern. The Draft EIS concluded that adverse impacts either during or after mining operations were extremely unlikely. In response to public comments, the EIS was revised to include an expanded discussion and analysis of groundwater conditions and potential impacts. The additional analysis confirms the conclusion of the Draft EIS that no adverse groundwater impacts are expected.

Many letters responding to the Draft EIS expressed concerns related to the milling process in Blanding, Utah, rather than the extraction of uranium ore at the mine site. There seems to be some confusion over the two separate processes. The proper handling and disposal of tailings at the Blanding mill site and the safe transport of "yellowcake" surfaced frequently in letters. Both of these concerns are associated with the concentration process of the uranium ore at the mill in Blanding, Utah. No uranium ore will be processed at the Canyon Mine site. Therefore, comments related to the potential

impacts of uranium milling are not appropriate and are beyond the scope of the Canyon Mine EIS.

In addition to comments made about specific elements of the Draft EIS, many letters expressed a preference for one or more of the alternatives evaluated in the Draft EIS. One hundred and fifty responses were supportive of the mining development. Seventy four letters, including some with multiple signatures, expressed opposition to all mining alternatives, preferring the No Action Alternative. Section 1.1.1 of the EIS discusses the statutory and regulatory authorities of the Forest Service to administer mining activities. The general mining laws provide a statutory right to explore and extract certain minerals from the National Forests. The Forest Service does not have the discretionary authority to categorically deny access for the purpose of prospecting for and extracting minerals on those National Forest System lands that are open to mineral entry. It is the responsibility of the Forest Service to review and where necessary, modify proposed plans of operation for the development of a mine. Review and modification of plans is to ensure that the mining operations will be conducted in a manner which minimizes, prevents, mitigates or repairs adverse environmental impacts. The Forest Service does not have the authority to categorically deny reasonable operations proposed under the mining laws.

Many comments also expressed the need for a "regional programmatic planning document" for uranium mining operations on the entire Coconino Plateau and Arizona Strip. The option of preparing a broader, regional analysis of uranium mining was considered and rejected in the decision to prepare the EIS for the Canyon Mine proposal. NEPA requires such an analysis in two instances; when there is a comprehensive federal plan for the development of a region and where various federal actions have significant cumulative or synergistic environmental impacts in a well defined region. The first requirement is clearly inapplicable. The second was analyzed in detail but rejected for several reasons. First, only one mining plan was pending before the Forest Service. While other mine plans are possible, and perhaps even likely, only one federal decision in the region south of the Grand Canyon required NEPA analysis, the review of the Canyon Mine Plan of Operations. Second, evidence from similar mines operating north of the Grand Canyon indicated that impacts were localized and that major interactive impacts were unlikely. The distance between the two areas and the unique geology which separates them creates two distinct regions.

We were also influenced by the practical problems of such a regional analysis. Since no other mine sites had been proposed, a regional analysis would have required us to hypothesize sites and development schedules for an unspecified number of future mines. Since the location and timing of the mines would determine whether cumulative or interactive impacts existed, the outcome of the study would have been determined by the selection of mine sites. Such an artificial study did not appear to be valuable in the review of the Canyon Mine Plan of Operations.

While there was no basis for a regional environmental impact statement, the EIS does recognize the possibility of cumulative impacts from the development of additional mines in the area. Potential cumulative impacts on the region were analyzed by considering two scenarios; one additional mine in the Tusayan area near the Canyon Mine and three additional mines in Coconino County south of the Grand Canyon. The conclusion of the EIS was that, apart from transportation and social and economic impacts, the impacts of

development of mines such as the Canyon Mine are limited to a relatively small area near the mine site. While several commentors asked for more detailed analysis of cumulative impacts, no comment challenged the conclusion of the Draft EIS or provided any evidence to the contrary.

Finally, the Forest Service land management planning process is the agency's primary broad environmental analysis effort. Special resource values and uses that could be affected by exploration and mining have been identified in the proposed Forest Land Management Plan. Standards and guidelines in the proposed Plan specify restrictions and mineral withdrawals to protect these special resources. Thus, while it does not specifically focus on uranium mining, the proposed Plan is, to some extent, comparable to an "area wide" EIS for the entire Kaibab National Forest, which includes Forest lands both north and south of the Grand Canyon. The lands in the Grand Canyon region are managed under a myriad of federal, state, private and tribal jurisdictions and, taken collectively, both the Canyon Mine EIS and the proposed Forest Land Management Plan reflect an appropriate level of analysis at this time in light of the past, present and reasonably foreseeable proposals.

V. Issue Resolution

Although none of the project alternatives fully resolves all of the identified issues and concerns, the modified project alternatives with specified mitigation measures are all considered environmentally acceptable. A brief discussion of how each alternative analyzed in the EIS addresses each issue is provided below:

1. **Social and Economic Impacts.** Social and economic impacts on the community of Williams and Coconino County as a whole are considered to be beneficial and virtually the same for Alternatives 2-5. If the No Action Alternative were implemented, there would be no change in current levels of employment, income, tax revenue or output as a result of the Canyon Mine.

2. **Reclamation Measures.** Reclamation measures required at the mine site are satisfactory in Alternatives 2-5, although additional measures called for in the modified project alternatives (Alternatives 3-5) are more comprehensive and oriented toward improving wildlife habitat at the mine site upon its closing. No reclamation would be required at the mine site under the No Action Alternative.

3. **Project Costs.** The least cost alternative is Alternative 2. Alternatives 3-5 all result in increased expenditures depending on the haul route used and mitigation measures required. Increased expenditures are generally associated with mitigation requirements. The costs of exploration and environmental review already incurred by EFN could not be recovered under the No Action Alternative.

4. **Wildlife Impacts.** Wildlife habitat will be affected to varying degrees in all alternatives depending on the ore transportation route used. Alternative 5 has the least impact on wildlife. Alternative 2 would have the greatest impact because of a lack of

mitigation requirements. Mitigation measures in Alternatives 3 and 4 should be effective in reducing the adverse impacts on wildlife resulting from increased road traffic.

Alternatives 3-5 all call for equivalent habitat replacement to offset impacts to wildlife habitat caused by the mine and expanded transportation system. Alternative 3 also includes a proponent choice of road closure during May and June in lieu of habitat replacement.

The No Action Alternative would have no impact from mining or ore transport on wildlife or wildlife habitat and would, therefore, require no mitigation.

5. **Impacts on Vegetation.** Alternatives 2-5 will have a negligible and insignificant effect on the make-up of vegetative types now present on the Tusayan Ranger District. The No Action Alternative would have no impact on vegetation at the Canyon Mine site.

6. **Visual Quality Impacts.** Visual quality associated with the Grand Canyon will not be affected by the development of the Canyon Mine regardless of the alternative selected for implementation. Alternatives 2-5 will alter the short term visual quality at the mine site. Alternative 4 requires constructing a road off the Coconino Rim in a location that would be visible to travelers going to and from the Grand Canyon using the east Highway 64 entrance. The No Action Alternative would have no impact on the visual quality of the area.

7. **Impacts on Air Quality.** Implementation of Alternative 2-5 will have no appreciable effect on the air quality, which includes particulates, radon gas, or radioactive dust, at either the Grand Canyon or the community of Tusayan. Increases in particulate matter will be site specific along haul routes and at the mine site itself and are expected to be well within air quality standards. Current levels of air quality in the vicinity of the Canyon Mine site and haul routes would be unchanged by the No Action Alternative.

8. **Impacts from Ore Transportation System.** Implementation of Alternative 5 and use of either the SP Crater haul route or the Federal and State Highway system would minimize impacts on National Forest resources and general forest environmental setting. The haul route identified in Alternative 4 would be most cost effective in providing a road that would meet long term management needs in the event other mines are developed in the eastern quadrant of the Tusayan Ranger District. Haul routes analyzed in Alternatives 2 and 3 are the most cost effective routes for hauling ore from the Canyon Mine to the mill in Blanding, Utah. No ore would be transported under the No Action Alternative.

9. **Impacts on Soil, and Surface and Ground Water.** Mitigation measures, operational procedures and monitoring requirements included in Alternatives 3-5 will reduce the possibility of radionuclide contamination to soil, and surface and subsurface water sources, and identify any contamination at the earliest

possible time. Alternative 2 does not include air, water and soil monitoring requirements to ensure the operational designs of the mine are functioning properly. Current parameters for water quantity and water quality would remain unchanged at the mine site under the No Action Alternative.

Neither the water quality on the Havasupai Indian Reservation nor the Grand Canyon National Park should be environmentally affected by the development of the Canyon Mine under Alternatives 2-5.

10. **Impacts on Indian Religious Sites and Practices.** Development of the mine site under Alternatives 2-5 and haul route options requiring the new road construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices consisting of plant gathering and ceremonial activities. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any known religious sites or areas be restricted. Although there is no physical evidence of Indian religious activity at the mine site itself, the Havasupai have recently stated that sacred camping and burial sites are present in the general area north of Red Butte, and perhaps at the mine site itself. However, the Havasupai Tribe refuses to disclose the location of the sites. The Havasupai Tribe has also recently stated that the general area around the mine is important to the Tribe's religious well being because it lies within a sphere of existence or continuum of life extending generally from the Grand Canyon to Red Butte. They explain that any uranium mining or similar activity within the sphere or continuum will violate unidentified Havasupai religious values and, may pose a threat to their very existence. The Havasupai have steadfastly declined to provide any additional information concerning the nature or importance of this sphere of existence, because, they stated, to discuss it further would be sacrilege.

In comments regarding other proposed actions on the Kaibab National Forest, the Hopi Tribe has expressed a belief that the earth is sacred and that it should not be subjected to digging, tearing or commercial exploitation. While this conflict has not been raised directly in relation to the Canyon Mine, it is acknowledged that commercial use of the Forest within the area of Hopi ancestral occupancy is inconsistent with these stated beliefs.

Further consultation with the Havasupai and Hopi people will continue during project review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.

The No Action Alternative would have no impact on Indian religious sites or practices. The Hopi and Havasupai Tribes have expressed a preference for the No Action Alternative, stating that no degree of project mitigation is acceptable.

Environmentally Preferred Alternative

Alternative 1, the No Action Alternative, represents the no project option. Under Alternative 1, no impacts from mine development and ore transport would occur. Therefore, Alternative 1 is the environmentally preferrable alternative.

VI. Reasons for Decision

While the Forest Service acknowledges the controversy surrounding the eventual uses of processed uranium and the heated debate over potential health hazards from radiological contaminants, the EIS disclosed no potential significant environmental impacts of the proposed Canyon Mine which could not be substantially mitigated or avoided entirely. These controversial issues of national debate are clearly outside the scope of the Canyon Mine analysis in light of anticipated impacts of the proposed mine and the well-defined legislative mandates and authorities of the Forest Service. Although none of the modified project alternatives were considered environmentally unacceptable, the Selected Alternative represents the combination of operational components, mitigation measures and haul routes which minimize potential impacts and best responds to the issues and concerns identified in the EIS.

Based on the EIS, no significant environmental impacts are expected from mining operations or ore transportation. Impacts are expected to be small and localized near the mine site. The mitigation measures adopted as part of this decision further reduce the potential impacts to acceptable levels. Accordingly, I feel that the Canyon Mine can be permitted consistent with my responsibilities to minimize degradation of Forest resources.

Specific reasons and factors which I gave particular attention to in selecting Alternative 5 are listed below. No single factor determined the decision. Based on consideration of these factors, I feel the Selected Alternative provides the highest level of issue resolution and best meets the intent of the laws and regulations governing Forest Service operations.

1. Expanded Monitoring -- The air, soil and water monitoring program responds to issues and concerns raised during scoping and evaluated in the Draft EIS, and to comments made on the Draft EIS. The groundwater monitoring well, while expensive, is an important element of the monitoring and mitigation strategy as it responds to the unique concerns raised by the proposed Canyon Mine. The groundwater monitoring will confirm or invalidate assumptions about groundwater hydrology used in the Canyon Mine analysis. It helps assure that important water sources, including springs which are sacred to the Hopi and Havasupai Tribes, will not be adversely affected by the Canyon Mine. The monitoring program also responds to the fear of radioactive contamination of air, water and soil expressed by some members of the public. It will help determine the need to further modify the Plan of Operations to provide additional mitigation measures, including the construction of other groundwater monitoring wells, should any unforeseen impacts occur. Finally, the results of the monitoring program will provide important data needed for the evaluation of future mining proposals in the area, if any should occur.

2. Modified Surface Water Diversion -- The alternative flood diversion plan is clearly superior to that proposed in the Plan of Operations. It provides for increased flood control capacity (a 500-year event) with less surface disturbance at the mine site.

3. Haul Routes -- The Selected Alternative offers EFN the choice of two haul routes. Either haul route option minimizes potential impacts on wildlife, cultural resources and the Grand Canyon National Park. These benefits, however, create substantial increased costs for the proponent, EFN. Haul route #6 is the longest route, resulting in the highest hauling costs. Haul route #7 is the next most expensive option and will also require that EFN acquire State and private rights-of-way at additional costs.

   These haul route options we e selected despite the increased costs for several reasons. These routes are most responsive to public comments. While the EIS states that the impacts of any haul route option can be successfully mitigated, routes #6 and #7 have the least potential for adverse impacts. Finally, and most importantly, they provide the most flexibility for future transportation decisions and preclude an irrevocable commitment of resources to road construction or improvements which might forclose future transportation options. As the EIS notes, future uranium mines in this region are possible, however, it is impossible to predict the specific sites or timing of any future mine proposals. This decision which uses existing roads and minimizes new construction, will allow reconsideration of ore transportation routes when future mines, if any, are proposed. This decision also allows future decisionmakers to consider the option of consolidating or dispersing ore truck traffic to minimize transportation costs and environmental impacts.

4. Overhead Powerline -- The EIS evaluated a buried powerline and two surface powerline routes, one following the shortest route from the existing powerline to the mine site and one following the mine site access road. The surface powerline along the access road has been selected because it disturbs no new area. The buried line was rejected because it substantially increases project costs without any significant corresponding environmental benefit.

5. Transportation of Mine Workers -- Company transportation of mine workers is preferrable to private transportation because it reduces surface disturbance (no large employee parking lot is required) and traffic to and from the mine.

6. Wildlife Mitigation -- While the potential wildlife impacts of the Selected Alternative are less than those of the other project alternatives considered in the EIS, any loss of key wildlife habitat should be mitigated. Implementation of this decision will require that EFN replace the 32 acres of big game foraging habitat lost at the mine site and replace one key watering source impacted by the mine access and ore transportation route. In addition, operating restrictions may be imposed on the use of haul route #7 to avoid potential impacts on elk migration.

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7. Other Mitigation -- This decision also adopts an extensive list of additional mitigation measures designed to minimize potential environmental impacts. These measures are listed and discussed in the following section.

VII. Mitigation Measures

The mitigation measures and operational components described in Sections 2.2.1.2 and 2.5 of the EIS are all adopted as part of my decision. Important measures include:

1. **Regulatory Requirements with Associated Monitoring.** Compliance with all applicable federal, state and local statutory and regulatory requirements will be assured by monitoring of EFN activities during construction, operation and reclamation of the mine and through appropriate language in permitting documents.

2. **Reclamation Plan.** The reclamation plan in the Plan of Operations (Appendix A) and those Forest Service modifications contained in Appendix B of the EIS are adopted as part of this decision. EFN will be required to post a performance and reclamation bond in the amount of $100,000 before mining activities begin.

3. **Visual Impacts.** The mine head frame and support facilities will be painted with earth tone colors.

4. **Public Safety.** The mine site will be fenced, posted and secured.

5. **Ore Haulage.** Ore trucks will be tightly covered with a tarpaulin. Any ore spilled will be cleaned up immediately and the spill reported to appropriate federal, state and tribal authorities.

6. **Air Quality.** Ore stockpiles will be managed to minimize wind dispersal of dust. This may require management of the stockpiled ore by wetting or chemical treatment.

7. **Ore Stockpiles.** Prior to stockpiling ore, ore pads a minimum of one foot thick will be constructed to prevent leaching of mineral values from the ore into the soil. Uranium ore will be removed and trucked to a distant processing plant. During post-mining reclamation operations, only barren or slightly mineralized waste rock may be replaced into the mined-out workings.

8. **Holding Ponds.** Holding ponds will be constructed with a minimum capacity of six acre feet, with no more than three acre feet of storage used at any time. Total holding pond storage capacity is sufficient to accomodate runoff from a 100 year storm event, plus normal annual runoff and water that may be pumped from the mine. The ponds must be lined with plastic or impervious material to prevent percolation into the substrate.

9. **Noise.** The mine will be designed and operated in a manner to reduce noise to the lowest practical levels. All equipment will be carefully maintained.

10. **Erosion Control.** Erosion will be controlled by revegetating disturbed areas. Stabilization of stockpiled topsoil will be accomplished by revegetation. The outside slopes of the diversion dikes that surround the mine yard will be riprapped.

11. **Fire Protection.** The riprapped dike slopes surrounding the mine yard will serve as a fire break and a water tank and fire extinguishers will be maintained on site for fire suppression.

12. **Radiological Monitoring.** Baseline measurements of radiation values in soil, air and water have been taken. Monitoring will continue after the mine becomes operational. The monitoring program may be extended, expanded, suspended or curtailed by the Forest Service based on the results obtained. Monitoring will continue until sufficient data is available to assure that there are no significant off-site radiological impacts. A final radiological survey will be conducted at the time the mine is closed to assess the impact of the mine, and the need for additional reclamation measures and monitoring, of the project area. Radiological surveys and appropriate cleanup measures will be required for all unplanned events, including ore haulage accidents and failure of the surface water control stuctures. All monitoring will be by independent contractors and all costs will be borne by the applicant, EFN.

13. **Groundwater Monitoring.** A water well to the Redwall-Muav aquifer will be constructed and tested prior to the intersection of ore by mining operations. If groundwater is present, it will be sampled at regular intervals and analyzed. If groundwater becomes contaminated during mining operations, continuous pumping will be maintained until concentrations of the critical constituents are reduced to recommended primary drinking water standards or to within ten percent of ambient concentrations, or to some comparable level approved by the Forest Service. If new information surfaces which suggests the need for an expanded groundwater monitoring program, the Forest Service reserves the right to impose additional monitoring and mitigation measures it deems necessary, including the construction of other groundwater monitoring wells.

    If groundwater is not yielded from the Redwall-Muav aquifer at the mine site, the test borehole will be plugged and abandoned in accordance with requirements of the Arizona Department of Water Resources.

14. **Floodwater Control.** This decision adopts the modified surface water diversion system described in detail in the EIS in Section 2.5.12 and Appendix D. The modified design increases the flood carrying capacity of the channels to handle a 500 year event and precludes the possibility of runoff from local intense storms from either entering or leaving the operating site, thereby eliminating the potential of downstream radionuclide contamination from ore stock piles.

15. **Traffic Control.** Signing, and other measures if deemed necessary, will be used to control traffic at the intersection of Highway 64 and Forest Road 305.

16. **Wildlife Mitigation.** The acreage temporarily lost to development of the mine site will be mitigated by the creation of a foraging area in a different location. Important wildlife waters disturbed by mine development or ore transportation will be replaced. The location and design of these replacement habitats will be coordinated with the Arizona Game and Fish Department.

17. **Raptor Protection.** The overhead powerline will have a 60 inch minimum separation.

18. **Worker Transportation.** EFN will provide transportation for mine workers by van or bus and will discourage use of private vehicles.

VIII. Right to Administrative Review

This decision is subject to administrative review in accordance with the provisions of 36 CFR 211.18. The operator also has appeal rights under 36 CFR 228.14. Notice of appeal must be made in writing and submitted to:

Leonard A. Lindquist, Forest Supervisor
Kaibab National Forest
800 South 6th Street
Williams, Arizona 86046

Appeal notices must be submitted within 45 days from the date of this decision. A statement of reasons to support the appeal and any request for oral presentation must be filed within the 45 days allowed for filing a notice of appeal.

Implementation of this decision will not take place sooner than 30 days after publication by the Environmental Protection Agency of the Notice of Availability for the Final EIS.

LEONARD A. LINDQUIST
Forest Supervisor

September 26, 1986
Date

DOCUMENT # 188

00003927

Decision of the Deputy Regional Forester
In Response to Appeals of the Merits of
the Forest Supervisor's September 29,
1986, Decision to Approve a Modified
Operating Plan for Energy Fuels Nuclear's
(EFN) Canyon Mine.

00003928

FS-6200-28b (7/86)

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I. INTRODUCTION

As Deputy Regional Forester for Resources in the Southwestern Region and as Reviewing Officer, I have reviewed the entire administrative record and this is my decision under 36 CFR 211.18, regarding administrative appeals filed by recognized appellants on the merits of Forest Supervisor Leonard A. Lindquist's September 29, 1986, decision to approve a modified operating plan for EFN's Canyon Mine on the Kaibab National Forest. This modified operating plan [Alternative 5 in the Environmental Impact Statement (EIS)] is a modification of the original operating plan (Alternative 2) submitted by EFN. Appeals from the listed individuals and/or groups have been consolidated due to the similarities of the issues involved and relief sought. Appellants appeal the decision on the basis of issues raised pertaining to legal requirements, National Environmental Policy Act (NEPA) process and environmental impacts. EFN has intervened in the appeal process. This decision applies to all recognized appellants and the intervenor.

II. RELIEF SOUGHT

Most of the administrative appeals on the merits of the Supervisor's decision seek similar relief: to reverse the decision which approved a modified plan of operation for the Canyon Mine. As I will discuss, other appellants have taken issue with the adequacy of the environmental analysis, the chosen alternative, or other specific issues which were considered when the Forest Supervisor's decision was made.

III. BACKGROUND

The proposed mine site is located on three unpatented mining claims owned by EFN on the Kaibab National Forest. Exploratory drilling on these claims began in 1978 and recently confirmed the presence of a high quality deposit of uranium ore. In accordance with 36 CFR 228.4, EFN submitted a proposed plan of operations to the Forest Service for the Canyon Mine in October 1984, to develop and produce this deposit. In September 1986, following preparation of an EIS analyzing the environmental consequences of the proposal, Supervisor Lindquist approved a modified plan of operations. That decision was the subject of various administrative appeals and procedural requests for stay. Requests for stay resulted in my issuing a stay decision on November 21, 1986, which allowed continuing surface development at the mine site, while preventing sinking of a shaft or actual mining, while the appeals on the merits were being decided. The Chief of the Forest Service upheld my stay decision on appeal, issuing his own procedural decision on May 4, 1987. Appeals on the merits remain and are the subject of this decision.

A. Summary of events, actions

October 1984	EFN submitted proposed plan of operations to Forest Supervisor for Canyon Mine.
December 1984 - February 1985	Forest Supervisor review of proposal and beginning of public input.
February 28, 1986	DEIS submitted to EPA and public.
September 29, 1986	FEIS and Supervisor's record of decision submitted to EPA and public.

November 10, 1986	EFN began surface development of Canyon Mine Site under a modified operating plan.
October 1986 - November 1986	Twelve administrative appeals and five requests for stay were received on the FEIS/decision.
November 21, 1986	Deputy Regional Forester (DRF) issued a Decision granting a partial stay (of actual mining activities) at the Canyon Mine site.
January 30, 1987	DRF prepared a responsive statement and recommendation to the Chief in response to procedural appeals of his partial stay decision.
February 17, 1987	Forest Supervisor Lindquist prepared a responsive statement on the administrative appeals on his Decision, and transmitted it to the Regional Forester (RF) and the public.
February 25, 1987	Oral presentation before Mr. David G. Unger, representing the Chief of the Forest Service, by several appellants and intervenor (stay appeals to Chief).
May 4, 1987	Decision by Mr. Unger for the Chief, affirming the DRF's November 21, 1986, partial stay decision.
May 14, 1987	Oral presentation before Mr. David F. Jolly, DRF, by several appellants and intervenor.
June 18, 1987	Appeal record was closed.

IV. SCOPE

This decision will deal with the entire spectrum of issues raised by all appellants in the administrative (merits) appeals. For the sake of simplicity, different issues have been categorized into groups for easier reference, discussion, and comment. The format for discussion of issues is detailed in section VI. B. on p. 6.

Intervenor, EFN, has participated extensively, throughout the appeals process, by responding to and commenting on the various issues discussed by appellants. They have also offered independent submissions at the oral presentations. Because of the general support they have offered to the positions expressed by the Forest Supervisor in his responsive statement, and for the sake of brevity, I have chosen not to reiterate their position on each individual issue. These are readily available throughout the record.

The record regarding the present appeals has been extensively supplemented since the Forest Supervisor prepared his responsive statement of February 17, 1987. This decision is based on my review and consideration of the complete administrative record, including additional documents submitted for the record by appellants and the intervenor prior to closing the record on June 18, 1987.

In addition to conventional supplemental written documentation, an oral presentation was held before me on May 14, 1987, for the purpose of providing

view points and information to clarify the record pertaining to various appeal issues. As a result of the oral presentation, a complete transcript was independently prepared and was submitted by Ms. Margaret J. Vick for Sparks and Siler, P.C., representing the Havasupai Tribe. The transcript became a part of the record which I reviewed. Written summaries of comments on the transcript and comments on the written summaries also became part of the record.

V. APPELLANTS/INTERVENOR/ISSUES

The following is a listing of recognized appellants who appealed the merits of the Forest Supervisor's decision of September 29, 1986:

APPELLANT	APPEAL ISSUES	STAY ISSUES
Ian Root	C, E	N/A
AZ Wildlife Federation	F, I, J, P, R, B	N/A
Tonantzin Land Institute Notice of Appeal Statement of Reasons	A, B, C, D, K, L, O, P, W	"The proposed mining must not begun until a full hearing of important issues presented by this case." B, C, E, W
Canyon Under Siege	F	N/A
Sierra Club Legal Defense Fund & Rev. Garrison Lee Notice of Appeal Statement of Reasons	F, G, H, I, K, M	N/A
Havasupai Tribe, J. Sparks attorney	A, B, C, F, H, I, K, N, O, Q, T, U, V, Y B, C, K	Requests a stay of ". . . all mining and exploration activity at this site . . . ." A,
Mahoney/Hogan	J, S, Y	".. .that all activity . . . be stayed until a final decision is reached. . . ."
Friends of the River	A, E, F, G, H, K, L, X	". . . requests a stay of the decision and of development at the site pending all appeals . . . ." A, E, F, G, H, K, L, & X
Hopi Tribe, O'Connell	C, D, H, I, R	N/A
McDowell/Hansen	E (Withdrawn 2/1/87)	N/A
Bradford Cheff	E, Y	N/A

VI. REVIEW

A. Basis--My review of the administrative appeals filed by the appellants is based on the complete administrative record which includes the

appeals and statements of reason filed by appellants, the responsive statement submitted by the Forest Supervisor, the oral presentations of February 25, 1987, and May 14, 1987, and written summaries offered by appellants and intervenor, and various supplemental information offered by appellants and intervenor before the appeal record was closed on June 18, 1987.

B. Organization of issues--A thorough analysis of the appeals issues revealed substantial repetition of contentions and allegations by the appellants. As a result, twenty-five subject areas of appeal were identified and summarized by the Forest Supervisor in his responsive statement. I have chosen to adopt that list of subject (appeal issue) areas, but have further organized the list into the following major categories:

Legal	NEPA Process	Environmental	Other
B. Compliance with the Native American Religious Freedom Act	I. Procedural Deficiencies	A. Ground Water	O. Impacts on Havasupai Tribal Economy
C. Religious Rights Guaranteed Under the First Amendment	F. Cumulative Impact Analysis is Deficient and a Regional Programmatic EIS is Required	K. Surface Water	
N. Violation of Grand Canyon Enlargement Act	D. Cumulative Analysis of Impacts on Native American Beliefs and Practices	L. Holding Ponds	
T. Fiduciary Responsibilities	G. Valuable Mineral Test	M. Selenium	
W. Violations of the Treaty of Guadalupe Hidalgo	H. No Action Alternative	U. Disposal of Waste	
E. Impacts to the Grand Canyon	P. Reclamation Plan and Bonding	V. Air Quality	
Q. Non-Compliance With Other Statutes and Regulations	X. Mitigation Requirements	J. Wildlife	
		S. Ore Truck Accident Analysis	
		R. Impacts of the Milling Process	
		Y. Miscellaneous	

C. My Comments--In the following sections I have stated appellants' contentions regarding the subject issue, followed immediately by my comments and conclusions.

Legal

ISSUE: B. Compliance with the Native American (Indian) Religious Freedom Act (AIRFA)

Appellants contend:

1. that the decision to approve the development and operation of the Canyon Mine is substantively contrary to the American Indian Religious Freedom Act (AIRFA), and that the Forest's environmental analysis, to identify impacts on Native American religious beliefs, was fatally defective, unlawful, and unconstitutional.

2. that the Forest Service had decided, prior to preparing the EIS, that it lacked the authority to deny a plan of operation. Therefore, appellants contend that the Forest Service did not affirmatively seek to identify Native American religious concerns regarding the proposed action.

3. that the Forest Service did not follow its legal mandate to protect the inherent right of access and freedom for American Indians to believe, express, and exercise their traditional religious practices.

4. that comments from tribal members and other pertinent information were ignored or overlooked.

5. that traditional camps and sacred burial sites are located in the proposed mine area and that disclosure of information related to the nature and location of these sites, sought by the Forest Service, would compromise appellant's religious convictions to protect religious beliefs.

COMMENT: The American Indian Religious Freedom Act, and its implementing regulations, require that Federal Agencies consider Native American beliefs and practices in formulation of policy and approval of actions. However, it does not establish Indian religions as having a more favored status than other religions. The Act does not mandate protection of Tribal religious practices to the exclusion of all other courses of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices.

I have reviewed the complete administrative record and find that the Forest Supervisor sought Tribal input and review of the operating plan and environmental documents, from the appellants and from the Navajo Tribe, early in the scoping process and Forest Service environmental review. Religious concerns were not raised by appellants until after completion of the DEIS. All of the Tribal comments were responded to and the EIS was substantially revised to reflect the information provided by the Havasupai and Hopi.

The record reflects that the Forest Supervisor and his staff considered and evaluated Native American (Indian) religious beliefs and practices as part of their overall NEPA (environmental) review of the Canyon Mine project. In addition, the record indicates that the environmental documentation contained, or considered, available information on religious beliefs and practices when written. A decision was made on the basis of the information disclosed after adequate opportunity and time was made available. The record clearly displays the Forest's full commitment to and understanding of AIRFA and compliance with the law.

As part of my review of the record, I have also considered Tribal testimony provided in the oral presentations, written summaries of comments, and in comments on the written summaries.

I continue to have utmost regard and appreciation for a people's religious beliefs and practices and have given serious consideration to all the information relating to this issue, made available to me in the administrative record. However, I conclude that operations at the Canyon Mine site, approved by Supervisor Lindquist in his September 29, 1987, record of decision, do not interfere with continued religious belief and practice in any manner prohibited by AIRFA.

ISSUE: C. Religious Rights Guaranteed Under the First Amendment

Appellants contend:

1. that implementation of the decision would violate rights to free exercise of their religion guaranteed under the First Amendment.

2. that development of the Canyon Mine, at a sacred religious site, would burden Tribal religious beliefs by destroying the Continuum of Life which is central and indispensable to the Havasupai religion.

3. that certain mining-related activities at the Canyon site would burden or prevent Havasupai and Hopi access to religiously significant areas.

4. that the Forest Service cannot properly judge the effect such mining might have on Native American religion. Appellants suggest that new legislation is necessary to prevent or lessen the burden on religious rights from such proposed activity.

COMMENT: The First Amendment of the Constitution provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof." The United States Supreme Court has interpreted the free exercise clause of the First Amendment as proscribing government action that burdens religious beliefs or practices unless the action serves a compelling government interest that cannot be achieved in a less restrictive manner. The Supreme Court has also held that a person asserting an unconstitutional burden on his free exercise right has the initial burden of proof to establish a burden on his religion. Only if a burden is proven does it become necessary to consider whether the government interest served is compelling.

Appellants have contended, in numerous ways, that the Forest Supervisor's decision to approve a modified plan of operations violates Tribal constitutional rights to the free exercise of their religion as guaranteed by the First Amendment. Nothing in the record on this issue appears to satisfy the appellants' burden of proof to show that development of the Canyon Mine would burden any free exercise rights. Precedent concerning free exercise claims uniformly establishes that Native Americans may consider an area sacred. However, this fact alone is <u>insufficient</u> to characterize a contemplated government (authorized) action affecting such an area, as a burden on Native Americans' free exercise rights. In the same sense, I have not seen any convincing proof that mining activities at the Canyon site will prevent the Tribe's Ritual of Annual Renewal or destroy the Continuum of Life which is claimed as indispensable and central to the Havasupai religion. Moreover, the

record shows that the Canyon Mine site was disturbed by drilling some 38 exploratory core holes before EFN began its current surface development operations at the mine site. Therefore, while I recognize the general difference between core drilling and shaft sinking, it appears to me that the mine site has already incurred determinative subsurface impacts relative to this issue.

The record supports the Forest Supervisor's conclusion that no Tribal beliefs are penalized by this action. Individual members of the Tribe can continue to express and act on their beliefs without undue governmental interference. The record does not support the contention that identified religious practices will be prohibited. Contrary to appellant's opinion, I am under no obligation to refute any unsupported claims to the contrary.

The Forest Supervisor relied on numerous outside sources in his effort to obtain information on Havasupai religious beliefs and practices as they might apply to the Canyon Mine. In addition to Forest Archeologist Dr. Thomas R. Cartledge (See FEIS at page 5.2), the Forest Supervisor or his staff had extensive conversations with Dr. Robert C. Euler and reviewed numerous articles and publications (Exhibit #7 through 10). The Forest Supervisor discovered a considerable amount of information about the Havasupai which has been gathered and published by anthropologists in recent years, and which is readily available for study. Even though the information gathered by these anthropologists is not always consistent with information provided by the Tribal attorney, I feel it does represent a factual description of the Havasupai social and religious beliefs, not withstanding the additional information and beliefs recently divulged by the Tribe. The record clearly demonstrates that the Forest Supervisor's judgement of the effects of mining is, therefore, as prudent and reasonable as possible.

I conclude, therefore, that the administrative record does not support any contentions that the Forest Service did not comply with the provisions of the First Amendment of the Constitution nor does it contain information of sufficient specificity to establish the First Amendment claim made by any appellant.

ISSUE: N. Violation of Grand Canyon Enlargement Act

Appellants contend:

1. that contemplated mining activity, including fencing the mine site, as is outlined by EFN in their approved modified operating plan, is contrary to the provisions of both AIRFA and the Grand Canyon Enlargement Act. Appellants also claim that the latter act provides in part that "(n)othing in sections 228a to 228j of this title should be construed to prohibit access by any members of the (Havasupai) tribe to any sacred or religious places or burial grounds, native foods, paints, materials, and medicines located on public lands not otherwise covered in sections 228a and 228j of this title."

2. that the Forest Service did not comply with the Grand Canyon Enlargement Act (16 U.S.C. 228a et seq.) which the appellant states: "guarantees access by any members of the Havasupai Tribe to any sacred or religious places or burial grounds located on public lands" and "requires that nothing detract from the existing scenic, natural and wildlife values of the land."

COMMENT: The appellant did not provide any physical evidence that the Canyon Mine site has any special significance for the Tribe. General public access is, and will be, only restricted from the 17 acres within the mine yard. The gate, as part of the security fence, will be locked during times of inactivity at the mine site.

The issue of the propriety of constructing a fence at the Canyon Mine site, in light of the cited provisions of the Grand Canyon Enlargement Act, was not specifically raised by the Havasupai Tribe in their appeal on the merits of the Supervisor's decision. It was, however, raised before the Chief as part of the appeal of my stay decision. The administrative record lacks any substantive information on the specific contention other than the reference to AIRFA and the Grand Canyon Enlargement Act. My stay decision did not specifically address the subject, but I foresaw that constructing a fence would be allowed under that decision.

Appellants' second contention, that two sections of the Act require "that nothing detract from the existing scenic, natural and wildlife values of the land", is taken out of context. These sections only limit the uses that the Tribe can make both of the enlarged Reservation lands and those designated as Havasupai Use Lands.

I conclude, therefore, that the Forest Supervisor complied with any applicable provisions of the Act in reaching his decision to approve a modified operating plan for EFN's Canyon Mine and that approved mining activities on National Forest System lands are not contrary to the Act.

ISSUE: T. Fiduciary Responsibilities

Appellants contend:

1. that the United States Government, acting through the Forest Service, has not met its fiduciary responsibilities by approving the plan of operations.

2. that permitting the alleged deleterious activities on Federal lands adjacent to the Grand Canyon National Park and Havasupai Reservation frustrate the intent of Congress for establishing the Reservation and National Park.

3. that continuation of these activities will have a severe, detrimental, and irreversible impact on the Tribe and its activities.

COMMENT: Federal agencies may have statutorily established fiduciary duties associated with the management of Indian lands and resources. No such duties are at issue here since the lands embraced within EFN's mining claims are National Forest System lands, not Indian lands. There is nothing in the record to support the appellants' contention that the development and operation of the Canyon Mine on National Forest System land will have a deleterious effect on the Reservation or Park.

On review of the record, I have concluded that the Forest Supervisor recognized the limits of Federal fiduciary duties to Indians and properly considered the Federal role when he made his decision to approve the modified operating plan.

ISSUE: W. Violations of the Treaty of Guadalupe Hidalgo

Appellants contend:

1. that implementation of the mining project would violate rights (trust responsibility) guaranteed by the Treaty of Guadalupe Hidalgo which they claim is a guarantee of protection of the "free exercise of their religion without restriction."

COMMENT: The appellant alleges that the Treaty of Guadalupe Hidalgo creates some special rights or trust obligations which have been violated by the Forest Service in the present circumstance. In fact, the Treaty on Peace, Friendship, Limits, and Settlement, February 2, 1848, United States-Mexico. 9 Stat. 922, T.S. No. 201 ("Treaty of Guadalupe Hidalgo") has no application here. The Treaty was an interim provision to protect the religious freedom of Mexican citizens in the ceded territory during the interim period between the Treaty and Statehood. At the time of the Treaty, the affected peoples were to receive the "enjoyment of all the rights of citizens of the United States according to the principles of the Constitution," and upon Statehood, the interim provisions were to lapse. Arizona was admitted as a State on February 14, 1912. Accordingly, all claims the inhabitants of Arizona have to religious freedom after 1912, fall under the protections guaranteed by the Constitution of the United States instead of under provisions of the Treaty.

There is nothing in the administrative record which convinces me the appellant should have any special rights as a result of the Treaty of Guadalupe Hidalgo and I conclude that the Forest Supervisor properly recognized that fact when he reached his decision.

ISSUE: E. Impacts to the Grand Canyon

Appellants contend:

1. that the Forest Service did not address the concern that the Canyon Mine would have impacts upon and within the Grand Canyon National Park. Appellants further allege that the potential impacts of the mining proposal have been "de-emphasized", and cite the incursion of roadbuilding activities and the access patterns thus created, which geometrically increase archeological vandalism and big game disruption in former pristine areas in support of their allegation.

2. that the environmental hazards posed by mining in this biologically, hydrologically and culturally sensitive area are too great to justify approval.

COMMENT: Potential impacts to the Grand Canyon were identified as a major concern in the initial scoping process. The Forest Supervisor's responsive statement (pp. 35-37) contains a detailed response to this concern and cites numerous references in the final Environmental Impact Statement where this issue is analyzed. I find his analysis to be complete and agree with his conclusions that the impacts of the proposal are expected to be small, localized near the mine site and should pose no threat to the Grand Canyon or the National Park .

ISSUE: Q. Non-compliance with Other Statutes and Regulations

Appellants contend:

1. that the (modified) plan of operations for the Canyon Mine does not comply with the requirements of the Clean Water Act, the Atomic Energy Act, the Clean Air Act, the laws and regulations regarding mining, storing, and transporting hazardous materials, the Arizona Environmental Quality Act, and the special protection to be given to the Indians from hazards associated with uranium, pursuant to 25 U.S.C.A. S. 1676.

2. that the Draft EIS omits whether Energy Fuels Nuclear has obtained the required licenses from the NRC for the operation of the mine, the milling of the uranium ores, the transportation of the ore and the reclamation of the mine site.

3. that the Forest Service must insist upon these federal and state licenses prior to approving any activities on the site.

COMMENT: The FEIS at pages 1.10-1.12 and 2.22-2.24 identifies the legal and regulatory requirements that will be imposed by Federal and State law as part of the development of the Canyon Mine.

The approved modified operating plan requires that all Federal and State licenses will be obtained prior to initiation of the specific activity requiring the license at the mine. Specific lists of permits and approvals required are listed in the FEIS at 1.10-1.12.

From the record, I conclude that the Forest Supervisor gave proper consideration to the requirements of other statutes and regulations in reaching his decision.

NEPA Process

ISSUE: I. Procedural deficiencies.

Appellants contend:

1. that the Forest Service ignored or did not require compliance with certain regulatory and procedural requirements.

2. that the Forest Service did not consult with entities having knowledge and expertise regarding radioactive materials.

3. that the FEIS does not comply with CEQ's regulation dealing with missing or unavailable information.

4. that DEIS appendix material should be included in the FEIS.

COMMENT: The Forest Supervisor's responsive statement is a thorough and accurate reply to appellant's contentions. I agree with his statements and conclude that he followed the proper procedures in reaching his decision to approve the modified operating plan for the Canyon Mine. He was well aware of the fact that EFN could apply for and receive a patent to the mine site at any time thereby making moot the requirement for Forest Service approval of an operating plan.

ISSUES: F. Cumulative Impact Analysis is Deficient and a Regional Programmatic EIS is Required

Appellants contend:

1. that the Forest Service has not adequately considered the potential cumulative impacts of the Canyon Mine with respect to both potential (now undeveloped) mines, and existing uranium mines located on lands administered by the Bureau of Land Management, Department of Interior, on the north side of the Grand Canyon. Appellants are requesting that a "regional or programmatic EIS" be completed which evaluates the cumulative impacts of uranium mining on both sides of the Grand Canyon and on the Canyon itself.

COMMENT: The Forest Supervisor completed a thorough and accurately responsive discussion on the subject issues, beginning on page 39 of his responsive statement. The final EIS did estimate those cumulative effects that were not speculative and conjectural. During my review of the complete administrative record, I did not uncover any new information related to this contention, beyond that considered by the Forest Supervisor.

However, it has recently come to my attention that on March 10, 1987, the Interior Board of Land Appeals (IBLA) handed down a decision on an appeal by Southwest Resource Council, of a decision of the District Manager, Arizona Strip District, BLM, which approved a plan of operations for EFN's Pinenut Project (96 IBLA 86-1217). I elected to add this information to the official record because of its application to this issue. A copy of pertinent documents is attached to this decision.

In its decision, IBLA referred to a district court summary of the United States Supreme Court holding that regional environmental impact statements are required in two and only two instances: (1) when there is a comprehensive Federal plan for the development of a region, and (2) when various Federal actions in a region have cumulative or synergistic environmental impacts on a Region. The IBLA decision went on to state: ". . . nor has the appellant shown that various Federal actions have had cumulative or synergistic environmental impacts on the region." The IBLA agrees with BLM's conclusion that a regional EIS is not now required. Based on reasonably foreseen future (development) impacts, BLM concluded, as did the Forest Service in the instant case, that, in the absence of any conclusive indication as to the locations of future mines, it is, and would be, totally speculative and conjectural to estimate the impacts from such mines.

Based on a lack of supportive information in the record, I conclude that the Forest Supervisor reached a correct conclusion in deciding not to conduct a regional EIS to assess (speculative) cumulative impacts.

ISSUE: D. Cumulative analysis of Impacts on Native American Beliefs and Practices

Appellants contend:

1. that the EIS both misstated aspects of Native American religious beliefs and did not consider the impacts of various mining and non-mining management activities on Native American religious beliefs. Specifically, they

claim that the Canyon Mine EIS does not cumulatively analyze the interrelated impacts of several different recent Forest Service actions.

COMMENT: Potential cumulative impacts on Native American religious beliefs and practices were addressed in the EIS at page 4.44. The impacts at Bill Williams Mountain and the San Francisco Peaks are acknowledged on pages 3.59 and 9.6 of the EIS, which incorporates the discussion of those impacts, in the respective NEPA documents, by reference.

I have carefully reviewed the entire record concerning this issue. I greatly appreciated the oral presentations by Tribal leaders which went into more detail concerning their religious beliefs than they had previously. However, I conclude that operations at the Canyon Mine site, approved by Supervisor Lindquist in his September 29, 1986, record of decision, are not prohibited even though they constitute one more new use which impacts the general environment of the area and detracts from the area's religious significance to Tribal members. Moreover, as previously noted, the Forest Service is not required to protect Native American religious practices and beliefs to the exclusion of all other land uses, nor does AIRFA require that a cumulative effect analysis be done for individual project proposals.

ISSUE: G. Valuable Mineral (Validity) Test

Appellants contend:

1. that the Forest Service must initiate or require an economic analysis to determine whether a "valuable mineral deposit" exists within the meaning of the mining laws, and to determine whether the mining venture will likely be profitable enough to cover the costs of reclamation and mitigation.

COMMENT: In order to fulfill Forest Service responsibilities with regard to the Canyon Mine plan of operations, it was neither necessary nor appropriate for the Forest Supervisor to initiate or require a factual determination of the existence of a "valuable mineral deposit." However, the record does contain substantial economic and other evidence to support an opinion that the Canyon Mine deposit is a "valuable mineral deposit" within the meaning of the mining law. The record also supports the Forest Supervisor, who certainly was aware of reclamation costs and mitigation measures, in his recognition that "the claimant has shown substantial evidence that a successful mining operation can be developed."

Even if one granted the appellant's contention that the deposit does not currently meet an economic test of discovery, (i.e., prior to conducting the operations), one should not conclude that mining operations are not authorized under the mining laws. On the contrary, on Federal land, open to mineral entry, the mining laws allow for such operations in the <u>pursuit</u> of discovery of a "valuable mineral deposit." The mining claimant may conduct a wide range of exploration, development, and production operations in order to demonstrate a discovery of a "valuable mineral deposit." Implementation of the modified version of EFN's plan of operations would provide evidence (such as marketability and bona fide development) to demonstrate a discovery of a "valuable mineral deposit."

In any case, whether or not a "valuable mineral deposit" exists, the Forest Service's 36 CFR 228A regulations require that mining claimants conduct operations so as to minimize adverse environmental impacts. It is these

regulations (and not the mining laws or validity tests) which provide the Forest Service authority and procedures to insure proper reclamation and mitigation. Mining claimants, whether or not they make a profit, must comply with Forest Service regulations for reclamation and mitigation. The Forest Supervisor's record of decision (ROD) provides that EFN post a reclamation bond before mining activities begin. The ROD also provides for numerous mitigation measures which will be monitored and enforced through existing Federal as well as State and local jurisdictions.

ISSUE: H. No Action Alternative

Appellants contend that:

1. the analysis of the no action alternative is not adequate.

2. additional alternatives that would effectively result in denial of the proposed mine should have been considered in the EIS.

3. the Forest Service did not recognize, and act on, their ability to implement the no action alternative.

COMMENT: In regard to the first contention, analysis of the record shows that the no action alternative was one of the five alternatives considered in detail in the EIS. This no action alternative was defined in the EIS as a "baseline alternative" defining the current situation against which all other alternatives would be compared. In addition, the Forest Supervisor's responsive statement (p. 46, 47) summarizes the careful and detailed consideration given to the no action alternative. I conclude that the environmental analysis of the no action alternative was appropriate and adequate.

In regard to the second contention, the record shows that other no action alternatives were considered, but then eliminated from detailed consideration. For an adequate environmental analysis and compliance with NEPA, only one no action alternative need be considered in detail.

Moreover, the record shows that the Forest Supervisor did consider the No action alternatives suggested by appellants (such as contesting the mining claims or seeking mineral withdrawals) and properly decided not to include them as alternatives considered in detail. Review of the record supports the Forest Supervisor's conclusion (responsive statement p. 45) that "the claimant has shown substantial evidence that a successful mining operation can be developed. The record, in this case, supports the Forest Supervisor's decision not to consider in detail the alternatives of mining claim contest or mineral withdrawal. He had sufficient supporting evidence for his conclusion that these alternatives would not invalidate the claims or result in denial of the proposed mine. In addition, a contest or withdrawal action regarding existing claims is an action of unknown outcome (claims may be valid or invalid) and therefore, would be an ineffective and indeterminate no action alternative.

In regard to the last contention, the EIS description of the no action alternative begins by recognizing and describing the general procedures the Forest Service would use to implement the no action alternative:

"The no action alternative, for the purposes of this environmental evaluation, would involve disapproval of the plan of operations for the Canyon Mine

project. The plan would be returned stating the reasons for disapproval and requesting that the proponent submit a new plan that would meet the environmental and administrative constraints." (FEIS p. 3.15).

At this point the EIS might have described potential situations in which the Forest Supervisor would disapprove unreasonable plans of operations. Instead, the EIS was written to describe the actual situation in which the environmental analysis of the Canyon Mine showed that a reasonable plan of operation was available as an action alternative.

Therefore, when documenting the analysis, it was appropriate to point out that the Forest Service does not have the authority to disapprove a reasonable operating plan. This point simply recognizes that if a plan of operations has been reviewed by an environmental analysis, has incorporated appropriate mitigation measures, and otherwise complies with Federal laws, then the Forest Service does not have a basis on which to disapprove it.

Therefore, I would like to clarify one point which the EIS implies but does not state directly. The Forest Service does have the authority to disapprove unreasonable plans of operations and, thereby, to implement a no action alternative. If all, or portions, of a plan of operations do not contain reasonable requirements for surface resource protection, and the operator is unwilling or unable to make the necessary changes, then the Forest Service has the authority to disapprove all, or portions, of the plan. The operator may submit other plans of operation for Forest Supervisor review; but he is not obligated to approve any of these plans if they do not contain reasonable requirements for surface resource protection. In such circumstances, operations would be effectively denied by virtue of the Forest Supervisor's decision not to approve original or subsequent plans of operation. The FEIS (p. 2.12) recognizes that open pit mining of the Canyon deposit, which occurs at a depth below 900', is not considered a reasonable alternative. The reason being, in part, because it would create unreasonable surface disturbance and environmental impacts. From my review of the record, I am satisfied that the Forest Supervisor recognized his authority to choose a no action alternative.

ISSUE: P. Reclamation Plan and Bonding

Appellant contends:

1. that the FEIS supporting the Supervisor's decision did not provide for adequate project reclamation and bonding.

COMMENT: Forest Service regulations (36 CFR 228.13) authorize (but do not require) reclamation bonding as a means of ensuring compliance with a reclamation plan. The amount of the bond is discretionary with the authorized Forest Officer.

The Forest Supervisor's responsive statement on P. 64-65 is a thorough and accurate reply to appellant's contentions. I agree with the Supervisor's statements and conclude that the EIS and decision to approve a modified operating Plan for the Canyon Mine adequately deal with reclamation and bonding.

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ISSUE: X. Mitigation Requirements

Appellants contend:

1. that mining-related activities have and will continue to place stress on species and habitat and that mitigation should begin as soon as possible. New meadow construction would not be responsive to needs.

COMMENT: Appellant's points are valid. The fact that wildlife populations have been displaced by ongoing activities without concurrent replacement of habitat could likely depress those populations since important habitat elements are no longer immediately available to them. I will direct the Forest Supervisor to seek ways to enhance existing meadow environments first, rather than concentrating on development of entirely new meadows.

2. that new or revamped meadow systems need to be compatible with species needs.

COMMENT: Appellant contends that "This type of meadow system cannot be adequately replaced or duplicated." The Forest plans to mitigate the loss by creating a replacement meadow. I will direct the Supervisor to consider alternative mitigation or compensation by enhancing other natural meadows in the project vicinity. This may be done by closing or obliterating roads through existing meadows subject to disturbance, seeding desirable food plants, and developing additional waters (dug tanks).

3. that replacement habitat through mitigation should be made available to affected species during construction/mining and not wait until through.

COMMENT: I believe appellant's point is valid. Replacement habitat to mitigate losses should be improved and made available to wildlife as soon as possible. The current year's productivity has already been lost or depressed as a result of surface disturbance activities within the project area. I will direct the Forest Supervisor to seek ways to expedite wildlife habitat enhancement or replacement which were requirements of the modified operating plan approval.

4. that mitigation measures, ascribed to the approved modified operating plan, are inadequate.

COMMENT: With the exception of my discussion of the above wildlife concerns, I conclude the Forest Supervisor's responsive statement is a thorough and accurate reply to appellant's contentions about inadequate mitigation. He has required appropriate mitigation of impacts from development and mining activities at the Canyon Mine site.

Environmental

ISSUE: A. Groundwater

Appellants contend:

1. that the EIS did not adequately address the effects of the proposed mine on groundwater quality and quantity.

2. that the proposed groundwater monitoring program is ineffective.

COMMENT: Forest Supervisor Lindquist's Decision was appealed because of concern for the proposed mining effects on groundwater quality and quantity. The Supervisor responded to 19 specific points of appeal concerning groundwater in his responsive statement. The Supervisor and his staff relied heavily on consultation provided by the firm of Errol L. Montgomery and Associates, Inc. The Montgomery firm is a professional association of geologists, engineers, and hydrogeologists with considerable experience in Northern Arizona and, particularly, the area around the Grand Canyon. In addition, the Forest employed Mr. Jesse Thompson, a consulting hydrologist, to coordinate preparation of the FEIS.

Montgomery's analysis of the regional hydrogeology includes the review of five pertinent publications and the study of more than 150 pertinent wells and exploration bore holes in the proposed mine area. The publication and the well locations are listed in the EIS appendix. The conclusion, drawn by the Supervisor from the consultation provided by Montgomery, is that the proposed mining will have little or no impact on the quality and quantity of groundwater. Based on my review of the record, I agree with the Supervisor's conclusion.

Concerns remain about the possible effect of mining on groundwater, that the Supervisor never adequately addressed the concerns, and that the information needed to draw conclusions about groundwater impacts is not complete and lacks scientific integrity.

I understand and share the concerns for the groundwater. I also realize that groundwater hydrology is an extremely complex field. Rarely do managers have the luxury of complete hydrogeologic information. There is, however, no reason for me to find fault with the thoroughness or scientific integrity of the information provided by Montgomery.

Based on the preponderance of information provided by Montgomery, I conclude the level of risk to the groundwater is low, and that mining should not be prevented because of the expressed concern for groundwater.

The Havasupai are also concerned that the monitoring well was placed on the mine site without regard to information contained in the groundwater report.

The probability of needing a monitoring well is low. However, as Montgomery explained in his December 12, 1986, letter to Supervisor Lindquist, if drainage from the mine opening did reach the Redwall-Muav aquifer, the zone of downward percolation would resemble an inverted cone. The monitoring well is located within the basal area of this inverted cone of percolation.

The water monitoring well and mitigation plan for implementation of monitoring, designed for the unlikely event that any substantial quantity of groundwater is encountered percolating downward from the mine opening, are adequate to detect contaminants and prevent any degradation of groundwater. I agree with the conclusions reached by the Supervisor and with his decision as it relates to the groundwater and monitoring issues.

ISSUES: K. & L. Surface water/holding ponds

Appellants contend:

1. that there was inadequate consideration of surface water (impacts) from proposed mining, reflected in the EIS and supporting the Supervisor's decision.

COMMENT: Included in the points of appeal were concerns for the adequacy of surface water considerations in the EIS. The responsive statement contains discussions addressing eight different points on surface water and holding pond considerations.

Supervisor Lindquist retained the services of Dr. Charles F. Leaf, P.E., in the preparation of the EIS, and further consulted with Dr. Leaf in responding to the points of appeal expressed by the appellants.

The availability and evaluation of complete hydrologic and meteorologic data specific to the mine site continues to be a point of concern for some of the appellants. Again, it is rare for a manger to have complete knowledge of the meteorology and hydrology in an area before making a decision. But the predictions made by Dr. Leaf are based on all the available information, and were derived using standard practices. The determination of design flows was made using two accepted methods. The Roeske method was developed specifically for Arizona.

Reference is made to a November 12, 1986, letter from Patricia Port, the Regional Environmental Officer for the U.S. Department of the Interior. Ms. Port expresses two concerns with the hydrologic analysis. Both concerns are addressed as well in the Forest Supervisor's responsive statement (p. 57).

Since the flood channels and perimeter berms are constructed to prevent water from a 500 year storm from either entering or leaving the mine site, I am satisfied the flood mitigation measures are adequate.

Concerning the transport of contaminated sediment, Dr. Leaf estimates that the effects of both general and local thunderstorms will be diminished by 98%, approximately 13-14 miles downstream. Therefore, in the unlikely event contaminated sediment leaves the site, it can be trapped and removed from the sediment in transit long before it reaches the Havasupai Reservation or the Grand Canyon National Park.

I can find no deficiency in the surface water projections or mitigation measure designs prepared by the Forest Supervisor. There is always some uncertainty associated with decisions involving water resources. However, I conclude that the design methods used are sufficiently conservative to reduce the risk to an acceptable level.

ISSUE: M. Selenium

Appellants contend:

1. that neither the FEIS nor Forest Supervisor's decision adequately considered the possibility of contamination of soils by selenium.

COMMENT: The points concerning selenium are adequately addressed in the responsive statement (p. 60). Again, the Supervisor sought consultation with an experienced and reputable geochemist to assess the problem potential. Based on the July 15, 1986, report prepared by Mr. Allan R. Reid, Senior Geochemist with the Hantly Group, Ltd., I conclude that background selenium concentrations at the surface will not be adversely affected due to the mining operation, nor, is groundwater likely to be affected by selenium.

ISSUE: U. **Disposal of Waste**

Appellants contend:

1. that the draft and final Environmental Impact Statements do not adequately address a plan for the safe and permanent containment and disposal of waste.

2. that it is unknown whether the method of sewage treatment is safe under all circumstances. Appellants point out that sewage treatment in such a remote location is not only expensive and difficult, but critical.

COMMENT: The record supports the Forest Supervisor's conclusion on page 70 of the responsive statement that there is no information to support appellants' allegations regarding improper consideration of, and accounting for, disposal of waste.

ISSUE: V. **Air Quality**

Appellants contend:

1. that the proposed Canyon Mine is in a Class I airshed and that mining activity would result in air quality in violation of State of Arizona air quality standards.

COMMENT: The Forest Supervisor has provided an incomplete response to this contention in his responsive statement (p. 71). I will clarify this issue by saying that only the lands within the Grand Canyon National Park are in a Class I airshed. The proposed mine is in a Class II airshed.

Total estimated emissions from the proposed Canyon Mine are below the level required for the mine to be considered a major emission source under the State's Prevention of Significant Deterioration (PSD) permit regulations which apply to Class I airsheds. Even if the mine could be considered a potential minor emission source, air quality at the proposed mine would likely not exceed State of Arizona air quality standards or Class II PSD increments.

Based on the record, I conclude that there remains no basis for concern about air quality at the Canyon Mine.

ISSUE: J. **Wildlife**

Appellants contend:

1. that the EIS (and Forest Supervisor's Decision) did not identify or define critical wildlife habitats.

2. that several assumptions used in the assessment of wildlife impacts are invalid.

3. that severe damage to wildlife habitats will result from the construction and operation of the mine.

4. that two turkey flocks, of some 18-30 birds each, have been resident to the mine site, raising a question as to the Forest's data on this species.

COMMENT: In general, the record reflects proper consideration of wildlife issues in the EIS and decision by the Forest Supervisor. Specific appeal issues related to wildlife, were addressed adequately in the Supervisor's responsive statement. Comments concerning adequacy of wildlife mitigation measures are discussed in issue X. Mitigation Requirements.

I agree that it is possible that two or more flocks could have been using the meadow (mine site) complex on a seasonal basis. There appears to be a professional difference of opinion regarding species numbers and habitat effects. I don't feel that alleged discrepancies in maps and documenting, if confirmed, would affect the decision to approve the modified operating plan. However, I will direct the Forest Supervisor to immediately adopt a plan to monitor the situation to determine the current limits of occupied turkey habitat in the mine area and to establish the degree of importance of this area for winter turkey range. He will then update the Forest's range maps, if warranted. I will also direct the Supervisor to immediately seek to determine measures to enhance turkey habitat in the area through coordination with other Forest habitat development projects and resource management.

ISSUE: S. **Ore Truck Accident Analysis**

Appellants contend:

1. that the threat and consequences of uranium ore being accidently dumped or spilled during transport to the Blanding Mill have not been properly evaluated.

COMMENT: The possibilities of an ore truck accident resulting in a spill of uranium ore and the consequences of such an accident are thoroughly evaluated in the FEIS at 4.2.6 (page 4.27), Appendix E., pages 27 and 28 and Appendix G, Forest Service response 60-1 on page 70. Mitigation requirements, in the event of such an occurrence, are included in Section 2.55. A more detailed discussion is contained in the Forest Supervisor's responsive statement on pages 67-69. I agree, with the Forest Supervisor's conclusions that such a threat has no basis for concern.

ISSUE: R. **Impacts of the Milling Process**

Appellants contend:

1. that the FEIS does not address or consider the impacts from increased milling that will result from opening the Canyon Mine and subsequent mines, or the need for additional mills if more mines are developed.

COMMENT: The analysis for the FEIS is based on a site specific proposal. The Federal action specifically considered in the FEIS is the approval of a Plan of Operations for the Canyon Mine and the establishment of reasonable mitigation

measures. No proposal has been made for the construction of a new mill on the Kaibab National Forest, or in any other area in conjunction with the Canyon Mine proposal.

The Forest Supervisor considered the need for additional milling capacity, even though it is not part of the Federal action which was considered in the FEIS. He concluded that additional mills will not be necessary as a result of the operation of the Canyon Mine. The record supports his conclusion.

ISSUE: Y. **Miscellaneous Points of Appeal**

Appellants contend:

1. that the EIS omits any discussion of possible generation and spread of coccidiomycosis.

2. that the EIS does not discuss possible effects of blasting on aquifers.

3. that the EIS must include a worst case analysis of potential environmental effects.

4. that the granting of this permit will cause archaeological site damage.

COMMENT: the Forest Supervisor's responsive statement (pp. 74-76) is an accurate reply to appellants contentions. I agree with his statements regarding each of these miscellaneous points of appeal.

Other

ISSUE: O. **Impacts on Havasupai Tribal Economy**

Appellants contend:

1. That implementation of the Forest Supervisor's decision to approve the operation of the Canyon Mine would damage Havasupai Tribal economy.

COMMENT: I have reviewed the entire administrative record on this issue and conclude that the Forest Supervisor gave adequate consideration to it in formulating his decision and provided a thorough discussion of it in his responsive statement. There is no evidence in the record which would cause me to overturn or suggest a modification of the Forest Supervisor's decision with regard to this issue. He properly concluded that impacts from the mine would have no significant effect on Havasupai Tribal economy.

VII. MY DECISION

It is my decision, based on my analysis of the complete administrative record, that the current level of religious activity is not expected to be curtailed by the Supervisor's decision nor, will access to any known religious sites or areas be restricted. It is also my decision that no significant environmental impacts are expected from mining operations or ore transportation. Impacts are expected to be small and localized near the mine site. The mitigation measures adopted as part of the Forest Supervisor's decision further reduce the potential impacts to acceptable levels. Accordingly, I feel that the Canyon

Mine can be permitted consistent with our responsibilities to minimize degradation of Forest resources. The Forest Supervisor reached a correct and well supported decision when he approved a modified operating plan for EFN's Canyon Mine. His decision is affirmed.

VIII. APPEAL RIGHTS

This decision is subject to administrative review in accordance with the provisions of 36 CFR 211.18. Notice of Appeal must be made in writing and submitted to:

David F. Jolly
Deputy Regional Forester, Resources
Forest Service, Southwestern Region, R-3
517 Gold Avenue, SW
Albuquerque, NM 87102

Appeal Notices must be submitted within 30-days from the date of this decision. A Statement of Reasons to support the appeal and any request for oral presentation must be filed simultaneously with the Notice of Appeal.

DAVID F. JOLLY
Deputy Regional Forester, Resources

Attachments:
Ltr. of 5/21/87
IBLA Decision 86-1217

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3800 (920)

MAY 21 1987

Honorable Richard Shelby
United States Senate
Washington, D.C. 20510

Dear Senator Shelby:

This is in response to your letter of April 17, 1987 regarding the concerns of Mr. Harold Stowell about current and future uranium mining around Grand Canyon National Park.

We appreciate the interest and concern relative to possible impacts to the environment on the public lands in the Grand Canyon area resulting from uranium mining. We likewise are concerned about this and have been making every effort to mitigate all impacts within the framework of existing laws and regulations.

Mr. Stowell indicates an interest in expansion of the Grand Canyon National Park. Expansion of the Park has already occurred as a result of the Grand Canyon National Park Enlargement Act of 1975 (Public Law 93-620). The expansion included adjacent National Park Service lands, as well as lands formerly under the jurisdiction of the Bureau of Land Management (BLM) and the U.S. Forest Service. The Park Service lands included two National Monuments in their entirety - Marble Canyon National Monument and Grand Canyon National Monument. Portions of the Lake Mead National Recreation Area were also included in the expanded Park boundary.

Implementation of the Act required the Department of the Interior to evaluate any lands that could be included in addition to the 1975 expansion of the Grand Canyon Park. The conclusion of the study, headed by the National Park Service, was that no lands should be added to the expanded Park.

Public lands in the vicinity of Grand Canyon National Park are undergoing exploration and development of uranium deposits. BLM has written several environmental assessments of mining plans in the Arizona Strip (public lands directly north of the Grand Canyon National Park) to date, which include analysis of cumulative effects of exploration and mining and required mitigation measures and reclamation actions. We have concluded that no significant adverse impacts to the environment have occurred and that an Environmental Impact Statement (EIS) is not necessary. These conclusions have been previously appealed and the Bureau's decision upheld by that of the Interior Board of Land Appeals (IBLA).

The most recent of these Bureau decisions relative to a mining proposal was that of the Pinenut Mine by Energy Fuels Nuclear, Inc. This decision was appealed to IBLA by the Southwest Resource Council primarily on the contention that a comprehensive Environmental Impact Statement covering uranium development on the Arizona Strip should be done.

On March 10, 1987, the IBLA handed down its decision on this case (96 IBLA 105) which summarized the United States Supreme Court holding that "environment impact statements are required in two and only two instances: (1) when there is a comprehensive Federal plan for the development of a region, and (2) when various Federal actions in a region have cumulative or synergistic environmental impacts on a region."

The IBLA decision went on to state that "Clearly there is no comprehensive Federal plan for the development of the uranium resources located on the Arizona Strip, nor has the appellant shown that various Federal actions have had cumulative or synergistic environmental impacts on the region." The IBLA agreed with BLM's conclusion that a regional EIS is not now required.

BLM has worked very closely with the managers of the Grand Canyon National Park to address their concerns regarding exploration and mining on adjacent public lands administered by BLM. For example, our past efforts in regards to the Pinenut Mine resulted in a memorandum from Grand Canyon National Park stating that the final environmental assessment completely addressed any concerns that they had identified.

The National Parks and Conservation Association, a nonprofit group interested in maintaining the quality of our National Parks, has stated that the type of uranium mining currently planned and ongoing will have minimal impact to the vicinity of Grand Canyon.

We do recognize the concern and feeling of some groups and individuals that the overall impacts of mining activity in the Arizona Strip should be evaluated. We are planning to initiate a Resource Management Plan (RMP) for our Arizona Strip District this fiscal year. This is done in accordance with planning regulations to address the use and management of the public lands. As part of the process, planning issues are identified through public participation which are then addressed in the Plan. An Environmental Impact Statement is part of the RMP. We anticipate addressing the mining issue in the RMP due to the expressed interest. In the interim, we are assessing the impacts of past, present, and known future mines to determine cumulative effects as each new mining plan is submitted for development.

Sincerely,

/s/ D. Dean Bibles
State Director

cc: Your Alabama Office

cc: WO-150/WO-680
ARabinoff/sb/5-21-87/16200

IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22203

DEPARTMENT OF THE INTERIOR
RECEIVED
MAR 16 1987
OFFICE OF FIELD SOLICITOR
PHOENIX, ARIZONA

SOUTHWEST RESOURCE COUNCIL

IBLA 86-1217 Decided March 10, 1987

Appeal from a decision of the District Manager, Arizona Strip District, Bureau of Land Management, approving a plan of operations for the Pinenut Project. AS 010-86-047.

Affirmed.

1. Mining Claims: Environment—National Environmental Policy Act of 1969: Environmental Statements

A finding that a proposed uranium mining operation will not have a significant impact on the human environment and, therefore, that no environmental impact statement is required, will be affirmed on appeal when the record establishes that relevant areas of environmental concern have been identified and the determination is the reasonable result of environmental analysis made in light of measures to minimize environmental impacts.

2. National Environmental Policy Act of 1969: Environmental Statements

A regional environmental impact statement is required in only two instances: (1) when there is a comprehensive Federal plan for the development of a region, and (2) when various Federal actions in a region have cumulative or synergistic impacts on a region.

3. Federal Land Policy and Management Act of 1976: Surface Management—Mining Claims: Surface Uses

Application of the "unnecessary or undue degradation" standard presumes the validity of the use which is causing the impact and seeks to determine whether the

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3. Federal Land Policy and Management Act of 1976: Surface Management—Mining Claims: Surface Uses

Application of the "unnecessary or undue degradation" standard presumes the validity of the use which is causing the impact and seeks to determine whether the

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impact is greater than should be expected to occur if the activity were conducted by a prudent operator in the usual, customary, and proficient conduct of similar operations.

4. Federal Land Policy and Management of 1976: Surface Management—Mining Claims: Surface Uses

When BLM determines, after such notice and opportunity for hearing as may be required by due process, that a mining claim is not supported by a discovery of a valuable mineral deposit, it may declare that mining claim null and void and reject a proposed plan of operations submitted for that claim.

APPEARANCES: Lori Potter, Esq., Denver, Colorado, and Mark Hughes, Esq., Denver, Colorado, for appellant; Patrick J. Garver, Esq., Salt Lake City, Utah, for Intervenor Energy Fuel Nuclear, Inc.; Fritz L. Goreham, Esq., Office of the Regional Solicitor, Phoenix, Arizona, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE BURSKI

Southwest Resource Council (SRC) has appealed from a decision of the District Manager, Arizona Strip District Office, Bureau of Land Management (BLM), dated April 25, 1986, approving a major modification of a plan of operations submitted by Energy Fuels Nuclear, Inc. (EFN), for the Pinenut Project (AS-010-86-10P). After receipt of initial pleadings, this Board granted appellant's motion for expedited consideration by Order of October 30, 1986. Subsequent filings having been made, this case is now ripe for a decision on its merits. For the reasons set forth below, we hereby affirm the decision of the District Manager. Initially, however, it will be helpful to briefly describe the Pinenut Project and its environs.

The Pinenut Project is one of a number of uranium properties being developed by EFN on the Arizona Strip. The Arizona Strip consists of those lands in Arizona lying north of the Colorado River as it descends to its outlet in the Gulf of California. Total acreage of the Arizona Strip is approximately 3,400,000 acres. Included in this figure, however, are substantial areas within Grand Canyon National Park, Grand Canyon National Game Preserve, various wilderness areas, and Indian reservations. Thus, the amount of land open to mineral exploration and development is substantially less than the total acreage in the Arizona Strip.

A total of five mines are presently being operated by EFN on the Arizona Strip. These five, together with the Pinenut mine, are all located within a 20-mile radius in an area north of the Grand Canyon National Park and west of the Kanab Creek wilderness area. The Pinenut mine, which is closest to the park boundaries, is roughly 3.6 miles from the north boundary of the park. In addition to these facilities, EFN has a considerable exploration program ongoing in the general area.

The uranium deposits in this area are typically found in structures known as "breccia pipes." These breccia pipes were created by the action of water dissolving parts of the deep Redwall Limestone formation millions of years ago. Over the passage of time, stratigraphically higher formations have collapsed forming narrow cylinders, which have been shown to be favorable areas for mineral deposition. One of the results of this phenomenon, however, is that while high-grade mineral deposits can often be found in these pipe structures, the mineralized body is normally quite small. This is borne out by the EFN experience in the area. Thus, all production from

three mines, the Hack Nos. 1, 2, and 3, is scheduled to cease in 1987, at which point reclamation will commence. Production at the Pigeon mine commenced in 1985 and is expected to end in 1989. Commercial production is not scheduled to begin at the Kanab North mine until 1988 and based on known ore reserves, it is estimated that mining will be completed in 5 years. The Pinenut mine, itself, is not projected to go on-line until 1989, with production anticipated to last approximately 5 years from that date. It is also important to note that the nature of the ore bodies resulting from the localized breccia pipe accumulations also results in limited surface disturbances. Thus, the total surface disturbance associated with mining the Pinenut deposit (exclusive of access improvement and provision of power) is 20.1 acres.

Topographically, the area is characterized by gently sloping plateaus and mesas abruptly separated by deep canyons. Climatically, the area is semi-arid, with cool winters, warm summers, and light precipitation. However, while annual precipitation ranges only between 8 to 20 inches, the area is subject to intense localized summer showers. Historically, the inaccessibility of the Arizona Strip, occasioned by the Grand Canyon, has resulted in the remote and isolated nature of the area. To a large extent, it still retains a fundamentally remote character, though increased activities, including those associated with mining, have had some impact.

The Pinenut Project was initiated in July 1984, when EFN filed a plan of operations for purposes of exploration. Under the plan, less than 5 acres

were to be disturbed. 1/ An Environmental Assessment (EA) was prepared at that time. Upon discovery of what EFN considered to be a commercially valuable uranium deposit, it submitted a major modification of the existing plan on January 10, 1986. Accordingly, BLM proceeded to examine the new proposal. In doing so, BLM prepared a new EA (EA No. AZ-010-86-015), based upon its own analysis and those submitted by EFN and interested third parties. The resulting document contains over 117 pages of text, including maps and charts. Particular attention was paid to possible air quality and acoustical impacts on Grand Canyon National Park, as well as any radiological effects which might result from the mining and transportation of the uranium ore. In addition, BLM examined the impacts that might occur as the result of upgrading 17 miles of existing access, including the possibility that this might lead to an increase in vandalism to cultural resources made more accessible. BLM also analyzed the visual impact that would result from the construction of a 8.3-mile power line running from Hack Canyon to the Pinenut site. BLM also consulted with the State Historic Preservation Officer (SHPO), who agreed that there would be no adverse impact on a recently discovered archaeological site, AZ B:6:44 (BLM), provided a recovery plan was implemented. Based on these analyses, BLM concluded that approval of the modified plan of of operations, subject to various mitigating measures, 2/ would result in no

1/ Since less than 5 acres were to be disturbed, EFN was not required to file a plan of operations. Under 43 CFR 3809.1-3, a "notice of intent" would have sufficed. See generally Bruce W. Crawford, 86 IBLA 350, 92 I.D. 208 (1985).

2/ Among the many mitigating measures imposed were requirements that the workers be bussed to the site to avoid impacts that might be generated were they allowed to individually drive their cars, that the powerline be dismantled upon completion of mining at the request of the authorized officer, and that EFN institute a dust abatement program during any period of prolonged drought.

significant impact to the environment. This finding of no significant impact (FONSI) made it unnecessary for BLM to prepare an environmental impact statement (EIS).

On April 25, 1986, BLM approved the plan of operations subject to the various modifications set forth in its Decision Record. Notification of this decision was sent to various interested parties including appellant. On May 22, 1986, appellant filed its notice of appeal.

Appellant presents three general arguments in seeking to have the Board reverse the decision of the District Manager. First, it argues that BLM failed to consider the cumulative and synergistic impacts of adding the Pinenut mine to other past, present, and reasonably foreseeable mining and exploration activities. Second, appellant contends that BLM must prepare a comprehensive regional EIS for uranium development in the Arizona Strip, pursuant to the mandate of section 102 of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332 (1982). Finally, it argues that BLM failed to consider potential profitability of the Pinenut mine in determining that it would not result in undue or unnecessary degradation. We will discuss these contentions seriatim.

Appellant argues that BLM either failed to consider or inadequately considered cumulative and synergistic impacts of uranium mining, particularly those which might result from what appellant referred to as "reasonably foreseeable uranium actions." Appellant contends that BLM ignored EFN's

stated development plans for the area 3/ as well as concerns expressed by the Park Service relating to the problems which were being generated as additional areas on the North Rim were being made more accessible. Appellant also claims BLM's analysis of cumulative impacts associated with access roads was "utterly inadequate" (Statement of Reasons at 9).

In its answer, BLM takes issue with all of appellant's arguments. BLM notes that its entire discussion of the existing environment necessarily included consideration of cumulative past activities and their effect on the environment. Concerning reasonably foreseen future impacts, BLM notes that, for both minesite activities and general exploration, no such cumulative or synergistic impacts could be identified. This was a result of both the limited area of surface disturbance, and the fact that as all of the studies BLM had performed or commissioned had shown, such impacts as did exist dissipated dramatically over very short distances. Thus, BLM argues, only the addition of a minesite extremely proximate to the Pinenut site could be shown to have any synergistic effect. A view of the terrain and EFN's past exploration activities convinced BLM that there was no reasonable possibility of development of such a minesite in any meaningful time frame. 4/

3/ Appellant referred to a 1983 statement by the Vice-President of EFN declaring the company's hope of finding one new mine a year and also referenced a statement by the Park Service alluding to 30 to 40 additional ore deposits which EFN was said to have identified.

4/ BLM noted in its EA that the lowest probabilities for additional mining occurred south and east because of the existence of Grand Canyon Park and Game Preserve and the Kanab Creek wilderness area, areas which are closed to mineral location. Other factors, such as past exploration activities, indicated that the closest possible mining facility would be at least 3 miles west of Pinenut, a distance substantially greater than the range of effects for impacts emanating from Pinenut.

Insofar as ongoing exploration activities were concerned, BLM noted in the EA that over 90 percent of those sites had already been rehabilitated.

BLM further points out that it considered the cumulative effects of upgrading and extension of existing roads in the area. It disagrees with appellant's characterization of its analysis as "utterly inadequate." Rather, BLM argues, it carefully analyzed this problem, and as a result, a number of mitigating measures were proposed to minimize impacts on the remote nature of the area. BLM states that, far from ignoring cumulative impacts, it added the discussion of such impacts to the final EA after various parties, including appellant, had criticized the draft EA for failing to address this possibility. BLM also notes that while the Park Service did, indeed, voice some objectives to the draft EA, BLM was able to satisfy its concerns by adopting numerous mitigating measures in the final EA.

EFN also filed an answer to appellant's statement of reasons challenging appellant's its contention that the EA inadequately considered reasonably foreseeable future cumulative effects and generally reiterating the arguments advanced by BLM. Pointing to the scheduled closing and commencement of reclamation at the three Hack mines, EFN notes that, unless three new mining sites are identified by early 1987, the current mining levels will not be maintained, much less increased. EFN argues that rather than showing any synergistic effects emanating from the operation of the Pinenut mine and other existing or reasonably forseeable mines, appellant has merely indulged in argument with no supporting factual data or technical analysis. EFN contends that appellant has clearly failed to meet its burden as delineated

in prior Board decisions such as Tulkisarmute Native Community, 88 IBLA 210 (1985), and John A. Nejedly, 80 IBLA 14 (1984).

[1] At the outset of our review, it is useful to set forth the standard which the Board has developed for reviewing challenges to FONSI declarations. Thus, in William E. Tucker, 82 IBLA 324 (1984), this Board stated that:

> The reasonableness of a finding of no significant impact has been upheld where the agency has identified and considered the environmental problems; identified relevant areas of environmental concern; and made a convincing case that the impact is insignificant, or if there is significant impact, that changes in the project have sufficiently minimized such impact. Como-Falcon Coalition, Inc. v. United States Department of Labor, 465 F. Supp. 850 (D. Minn. 1978), aff'd as modified, 609 F.2d 342 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980). In such circumstances, we will affirm a finding of no significant impact. John A. Nejedly, 80 IBLA 14 (1984).

Id. at 327.

In the instant case, appellant has failed to challenge any of the site-specific studies which served as a predicate for BLM's finding of no significant impact. Rather, it has relied solely upon what it perceives as a failure to include analysis of cumulative impacts resulting from existing and reasonably foreseeable future developments. 5/ Insofar as impacts related to

5/ We recognize that appellant has also objected to the failure of BLM to consider the cumulative impact of five operating mines on surface water. The EA, however, noted that EPN had agreed to increase the capacity of its holding pond to withstand a 500-year event and further concluded that even if a discharge were to occur no significant impact could be expected because of the dilution of mineralized materials. Given the localized nature of a downpour necessary to trigger a 500-year event, the likelihood that one would occur simultaneously at all operating minesites must be considered extremely remote. Even should such a diluvian event come to pass, the dilution of minerals that would necessarily result underlines BLM's conclusion that no adverse cumulative impact will occur.

the minesite are concerned, it is clear from the scientific studies that have been performed and which are uncontradicted by any submission from appellant that there are no synergistic effects from specific minesites unless they are located in close physical proximity to each other. Moreover, the small size of the minesites (aggregating total of less than 120 acres, including the Pinenut mine) strongly supports BLM's conclusion of insignificant impacts as a result of actual mining activities. Inasmuch as there is absolutely no indication of any likelihood that a minesite will be located sufficiently close to Pinenut to generate synergistic effects, it is feckless to contend that BLM failed to adequately consider such impacts relating to minesite activities.

The possible cumulative impacts of road construction and upgrading, however, are a different matter. Clearly, as more and more roads are either constructed or improved, the possibility of adverse impact on the relatively remote nature of the area might be expected to increase. But, contrary to appellant's allegations on appeal, BLM did consider the cumulative impacts of roads in the area. See EA at 54-55. In order to minimize possible depredations associated with road upgrading (no additional roads are to be constructed), the EA recommended requiring the Pinenut access road to be returned to its original "pre-disturbed" condition at the discretion of the authorized officer when operations terminated, and also provided that the first three-eighths of a mile of the access road would be upgraded only to the minimum necessary to meet safety standards to discourage visitor use of the area (EA at 96). In the opinion of BLM, the limited nature of the road-upgrading, when viewed in conjunction with the mitigating measures adopted, resulted in no significant impact being created by the upgrading of access

to the Pinenut mine. Appellant may disagree with the conclusions which BLM reached, but simple disagreement, absent a showing of error in BLM's analysis, is insufficient to overcome BLM's determination. 6/ See In re Otter Slide Timber Sale, 75 IBLA 380, 384 (1983).

While appellant argues that BLM failed to adequately consider the effect of future roads, appellant has not advanced any means by which BLM could have attempted such an endeavor. In the absence of any indication as to the situs of future mines, it would be totally speculative and conjectural to attempt to estimate how roads to such mines might impact upon the environment. Any such analysis would be so speculative that it would serve no useful purpose, even if it could be attempted. See Glacier-Two Medicine Alliance, 88 IBLA 133, 143 (1985). In view of the above, we must reject appellant's assertions that BLM failed to adequately consider cumulative and synergistic effects of uranium mining in the area.

Appellant also argues that BLM is required to prepare a comprehensive EIS covering uranium development on the Arizona Strip, 7/ a position which

6/ We also note that while any powerline would certainly constitute a visual intrusion, the powerline from Hacks Canyon to the Pinenut mine will not be visible from the Park. See EA at 48. Furthermore, as a mitigation measure, the plan of operations was amended to include a provision authorizing BLM to direct dismantling of the line upon completion of operations. See EA at 93. We are unable to discern any significant impact from this aspect of the plan of operations.

7/ There is a clear inconsistency involved in appellant's delineation of the "region" for which it argues that an EIS is required. Thus, at times it argues that there is "a well-defined geographic area bordering the Park, Kaibab National Forest, Grand Canyon National Game Preserve and the Kanab Creek Wilderness Area" (Statement of Reasons at 19). This specific area, shown on its Exhibit C, embraces approximately one-tenth the total Arizona Strip. Yet, when it seeks to discuss impacts, it includes activities throughout the entire Arizona Strip. See Exh. L. It is by no means clear just what "region" appellant contends the EIS should cover.

appellant contends has been supported by the Park Service and members of BLM's staff. Appellant states that Federal courts have required regional EIS's in comparable situations, which it characterizes as one involving "a steady flood of similar activities in a well-defined area" marked by "the inadequacy of previous project-by-project environmental analyses" (Statement of Reasons at 23). In support for its position, appellant relies on the decisions in National Wildlife Federation v. Benn, 491 F. Supp. 1234 (S.D.N.Y. 1980), involving issuance of ocean dumping permits, and Conner v. Burford, 605 F. Supp. 107 (D. Mont. 1985), which concerned issuance of oil and gas leases in two national forests.

Both BLM and EFN contest appellant's factual predicates and legal analysis. They deny that there has been any "flood" of similar activities, EFN pointing out that only two new plans of operation were filed in 1986, one for the Pinenut and another which was subsequently withdrawn. See EFN's Response at 25-26. Both take exception to appellant's claim that the EA was inadequate. And both argue that appellant has misstated the applicable law which, they assert, clearly supports BLM's position that no regional EIS is required, citing Kleppe v. Sierra Club, 427 U.S. 390 (1976), Peshlakai v. Duncan, 476 F. Supp. 1247 (D.D.C. 1979), and LaRaza Unida v. United States, No. 80-208HB (D.N.M. Nov. 30, 1981).

[2] At the outset, we note that the controlling legal guidelines for determining when a regional EIS is required were established by the Supreme Court in Kleppe v. Sierra Club, supra. In Peshlakai v. Duncan, supra, the district court summarized the Supreme Court's holding as follows: "[S]uch

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environmental impact statements are required in two and only two instances: (1) when there is a comprehensive federal plan for the development of a region, and (2) when various federal actions in a region have cumulative or synergistic environmental impacts on a region." Id. at 1258.

Clearly, there is no comprehensive Federal plan for the development of the uranium resources located on the Arizona Strip. Nor has appellant shown that various Federal actions have had cumulative or synergistic environmental impacts on the region. We have previously discussed why the nature of the uranium developments within the vicinity of the Pinenut mine have minimal cumulative and synergistic effects. We will not repeat that discussion here. What we will focus on, however, is the nature of the "federal action" which occurs in the context of approval of mining plans of operations for unpatented mining claims.

Insofar as the location of mining claims is concerned there is, quite simply, no Federal action. Since 1866, it has been the policy of the United States that its public domain mineral lands are generally open to the initiation of claims by its citizens. Over the years, of course, Congress has seen fit both to limit the minerals which are subject to appropriation, as well as to restrict the areas in which the mining laws operate. But, the essential nature of the mining laws has remained constant, viz. individual citizens initiate rights by the discovery of valuable mineral deposits.

Soon after the passage of NEPA, this Board examined the question whether issuance of a mineral patent could constitute a "major federal action" such

as could necessitate the preparation of an EIS. In United States v. Kosanke Sand Corp. (On Reconsideration), 12 IBLA 282, 80 I.D. 538 (1973), we decided that question in the negative. The Board first reviewed the applicable law:

> The discovery of a valuable mineral deposit within its limits validates a mining claim located on public land in conformance with the statute, and its locator acquires an exclusive possessory interest in the claim, a form of property which can be sold, transferred, mortgaged, or inherited, without infringing the paramount title of the United States. * * * Such an interest may be asserted against the United States as well as against third parties, * * * and may not be taken from the claimant by the United States without due compensation. * * * The holder of a valid mining claim has the right, from the time of location, to extract, process and market the locatable mineral resources thereon.
>
> Upon satisfaction of the requirements of the statute, the holder of a valid mining claim has an absolute right to a patent from the United States conveying fee title to the land within the claim, and the actions taken by the Secretary of the Interior in processing an application for patent by such claimant are not discretionary; issuance of a patent can be compelled by court order. * * * The patent may contain no conditions not authorized by law. * * * The claimant need not, however, apply for patent to preserve his property right in the claim, but may if he chooses continue to extract and freely dispose of the locatable minerals until the claim is exhausted, without ever having acquired full legal title to the land. * * * The patent, if issued, conveys fee simple title to the land within the claim, but does nothing to enlarge or diminish the claimant's right to its locatable mineral resources. [Citations, footnotes omitted.]

Id. at 289-91, 80 I.D. at 542.

The Board then examined the statutory language of section 102 of NEPA and concluded that "[t]he plain meaning of the statutory language connotes an action proposed to be taken by a federal agency which is discretionary in character and to which there may exist a viable alternative." Id. at 294, 80 I.D. at 544. Noting that the location, perfection, and maintenance of a

mining claim were all acts performed by the mining claimant, none of which constituted Federal action, the Board declared that issuance of a patent in response to these activities (an action which admittedly was a Federal action) was not discretionary within the meaning of NEPA, and, thus, an EIS could not be required. The Board's analysis was ultimately upheld in South Dakota v. Andrus, 614 F.2d 1190 (8th Cir.), cert. denied 449 U.S. 822 (1980).

We have spent considerable time reviewing the Kosanke decision because it brings into focus two considerations which impinge upon the issue whether a regional EIS is required: the question of what "federal action" is involved and, assuming some Federal action can be delineated, the scope of discretion which may properly be exercised by the Department.

It is clear that no Federal action is involved in the act of prospecting for minerals or locating claims. These activities occur through the volition of private entities acting under statutory authority. Nor do we perceive that any "federal action" within the meaning of section 102 of NEPA occurs when BLM receives a "notice of intent" filed pursuant to 43 CFR 3809.1-3, where less than 5 acres of land are being disturbed in any calendar year. 8/ As we noted in Bruce W. Crawford, 86 IBLA 350, 391, 92 I.D. 208, 230-31 (1985), BLM neither approves nor disapproves a notice. Accord, Sierra Club v. Penfold, A-86-083 Civil (D. Alaska, Jan. 9, 1987). It may consult with a mining claimant over aspects of his activities but, under the present regulatory scheme, it may not bar his planned activities, absent a

8/ We note that a plan of operations rather than a notice of intent must be filed for any activities other than casual use involving certain categories of land, enumerated at 43 CFR 3809.1-4(b). The lands involved in the instant appeal are not such special category lands.

showing that unnecessary or undue degradation will occur. 9/ However, actions leading to unnecessary or undue degradation were never authorized under the mining laws. Id. at 366, 92 I.D. at 217-20.

When a mining claimant is required to file a plan of operations, however, BLM has considerably more leeway. It may make its approval contingent upon acceptance of various modifications designed to prevent or mitigate undesired impacts. Such modifications may make it more difficult or more expensive for the claimant to develop the property. BLM may require design changes in plant operation or in the route of access. BLM may not, however, absolutely forbid mining or totally bar access to a valid mining claim. 10/ See Utah v. Andrus, 486 F. Supp. 995, 1011 (D. Utah 1979). The reason, of course, is that such action would totally frustrate the congressional policy, as expressed in the mining laws, which accord a mining claimant rights, even against the Government, upon the discovery of a valuable mineral deposit. Thus, while BLM clearly has some discretion in the approval of mining plans of operations, there are parameters which establish the limits of its exercise. Nevertheless, because of BLM's ability to modify plans submitted, we agree that approval of a mining plan of operations is Federal action within the scope of 42 U.S.C. § 4332 (1982).

9/ Contrary to appellant's contentions, "unnecessary or undue degradation" assumes the validity of the use, such as actual mining operations, and relates only to the question whether the surface disturbance is greater than what would normally be expected when the activity was accomplished by a prudent operator performing customary and proficient operations. See 43 CFR 3809.0-5(k). This issue is explored in greater detail below.

10/ This discussion presumes the validity of the mining claim. Thus, if the claim is located on lands not subject to the operation of the mining law or for minerals which have been removed from location, BLM may prohibit mining and declare the claim invalid after providing such notice and opportunity to be heard as may be required by the dictates of due process. See Discussion, infra.

Whether or not such approval constitutes "major federal action significantly affecting the quality of the human environment," however, is a question of fact determinable only within the confines of a specific case. It is to be expected that some plans of operations might have impacts of such a nature so as to compel the preparation of an EIS, even given the fact that BLM lacks authority to totally prevent mining in the context of approving a plan of operations. Indeed, the regulations clearly contemplate such an eventuality. See 43 CFR 3809.1-6(a)(4). We agree with appellant that there may be situations in which Federal-approval of discrete mining plans of operations ultimately necessitate the preparation of a regional EIS because the mining activities result in synergistic or cumulative impacts which are best considered in a unified document. However, under the guidelines established by the United States Supreme Court in Kleppe v. Sierra Club, supra, the existence of such impacts is the mechanism which triggers the necessity of filing a regional EIS, and it is on this issue that appellant has failed to carry the day. The record establishes that there is no realistic possibility of cumulative or synergistic effects related to the actual mining operations. And, insofar as access problems are concerned, BLM's imposition of mitigating measures clearly limits any short-term impacts and provides mechanisms for totally eliminating any long-term ones. It may be that, sometime in the future, the nature or pace of uranium mining on the Arizona Strip may change to such an extent that the cumulative or synergistic impacts of proposed plans of operations might be adequately examined only within the confines of a regional EIS. However, in view of the projects actually proposed at the present time, we agree with BLM's conclusion that a regional EIS is not now required.

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Appellant's final challenge to BLM's decision is that BLM cannot determine whether "unnecessary or undue degradation" is occurring absent a determination that a valuable mineral deposit has been discovered. Thus, appellant argues that "any degradation of the federal lands caused by the development or extraction of minerals is necessarily undue and unnecessary if there exists no right to enter such lands" (Statement of Reasons at 28).

BLM responds by arguing that appellant has totally misinterpreted the thrust of the prohibition against unnecessary and undue degradation. BLM notes that the express purpose of 43 CFR Subpart 3809 is "to establish procedures to prevent unnecessary or undue degradation of Federal lands which may result from operations authorized by the mining laws." 43 CFR 3809.0-1. Operations authorized by the mining laws run the full gambit from prospecting, discovery, and assessment work to the development, extracting, and processing of the mineral. See 43 CFR 3809.0-5(f). BLM asserts that "[i]n recognition of this fact, it is not the policy of the Bureau of Land Management to determine profitability or validity of mining claims before approving plans of operations" (BLM Answer at 35-36). While we agree that determination of the question whether unnecessary or undue degradation will occur necessarily assumes the validity of the use which is causing the impact, we do not agree with BLM that it is precluded from determining the validity of a claim and, upon a proper determination of invalidity, denying approval of a plan of operations therefor.

[3] Our decision in Bruce W. Crawford, supra, examined, at considerable length, the interrelationship between the determination whether a use

was "reasonably incident to mining and the determination that a use resulted in "unnecessary or undue degradation." Therein, we concluded:

> The key distinction to keep in mind is that the "reasonably incident" standard resolves questions as to the permissibility of a use by determining whether or not the use is reasonably incident to the mining activities actually occurring. The "unnecessary or undue degradation" standard comes into play only upon a determination that degradation is occurring. Upon such an initial determination, the inquiry then becomes one of determining whether the degradation occurring is unnecessary or undue assuming the validity of the use which is causing the impact. For, if the use is, itself, not allowable, it is irrelevant whether or not any adverse impact is occurring since that use may be independently prohibited as not reasonably incident to mining. [Emphasis in original, footnote omitted.]

Id. at 396, 92 I.D. at 233. This analysis comports with the regulatory definition of "unnecessary or undue degradation," as being any

> surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations.

43 CFR 3809.0-5(k). We reiterate our earlier conclusion that application of the "unnecessary or undue degradation" standard presumes the validity of the use.

[4] However, independent of any question of degradation, BLM always retains the authority to examine the validity of claims to Federal land and, if convinced that they are not well-founded, to take steps to nullify them. As an example, if the claims involved in the instant case were determined

to be null and void because they were located after the lands had been closed to mineral entry, BLM would not be required to approve the mining plan of operations simply because it did not result in any unnecessary or undue degradation. On the contrary, the correct course of action would be to declare the claims null and void ab initio and reject the plan of operations. Similarly, if BLM determined that the claims were not supported by a discovery, the proper course of action would be to initiate a contest as to the claims' validity and suspend consideration of the plan of operations pending the outcome of the proceedings. 11/

In the instant case, appellant argues that BLM has not established that the operations will be profitable. This is not the test. The mining laws do not require a showing that a mine will be profitable but merely that there is a reasonable expectation of success in developing a paying mine. See In re Pacific Coast Molybdenum Co., 75 IBLA 16, 28-30, 90 I.D. 352, 359-60 (1983). Moreover, appellant ignores the fact that, in this appeal, it is the party alleging that the claim is invalid. See In re Pacific Coast Molybdenum Co., supra at 22, 90 I.D. at 356. Thus, it is appellant's obligation to present evidence which, at a minimum, establishes a reasonable basis for a conclusion that the claims are not supported by a discovery. Id. Appellant has submitted no information, whatsoever, that would justify such a conclusion. Fanciful speculation will not suffice.

11/ During such a period, BLM would be required to allow the performance of any operations that are necessary (including assessment work) for timely compliance with the requirements of Federal and state laws. See 43 CFR 3809.1-6(d).

We conclude, th :fore, that appellant has f-ile :o show that any unnecessary or undue degradation, as defined by 43 CFR 3809.0-5(k), will occur, or to provide any evidence in support of its allegation that these claims are not supported by a discovery.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed for the reasons stated herein.

James L. Burski
Administrative Judge

We concur:

Gail M. Frazier
Administrative Judge

R. W. Mullen
Administrative Judge

1531.12 - Management and Utilization

1531.12a - Memorandum of Understanding on Work Procedures Governing Action on Applications or Claims for Lands

57-SIE-001

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Washington 25, D.C.

MEMORANDUM OF UNDERSTANDING

Subject: Work Procedures Governing Action on Applications or Claims for Lands Within National Forests

The Bureau of Land Management, Department of the Interior, and the Forest Service, Department of Agriculture, hereby agree that the procedures set forth below shall be followed with respect to proceedings, applications, entries, or claims which involve lands within national forests, and/or the mineral resources thereof. These procedures are adopted to insure cooperative and orderly action by the Bureau of Land Management and the Forest Service with respect to such proceedings, applications, entries, or claims, consistent with the assigned functional responsibilities of each agency.

A. APPLICATIONS FOR ENTRY OR PATENT

1. Notice to Forest Service of applications filed; action by land office manager.

Upon filing in the appropriate land office of an application for entry of or patent to mineral or nonmineral lands included within a national forest, the manager will immediately forward to the forest supervisor in charge of such forest a copy of the application and of any statement or document required to be filed therewith, together with information as to the date the application was filed, the date of filing of the township plat of survey covering the land, if the application is for mineral patent a copy of the plat of the mineral survey if one has been made.

2. Land office action suspended.

The manager will suspend action on each application referred to the Forest Service pursuant to section 1 for a period of 60 days, or upon the written request of the Forest Service, where climatic or other conditions require, for such time as will enable the Forest Service to make the necessary examination of the lands involved in the claim and prepare for a contest if such action is desirable. Land office action on the application will be resumed upon expiration of the period of suspension or upon the manager's receipt at an earlier date of the Forest Service report and recommendation for a contest or notice that it does not recommend initiation of a Government contest.

3. Examination and report by Forest Service.

Upon receiving a copy of an application and of other documents and information relating thereto, as provided in section 1 hereof, it will be the responsibility of the Forest Service to make any necessary examination including mineral covering national forest lands included in the application. The regional forester will decide what action will be taken. If he concludes that he will not recommend initiation of a Government contest against the application he will so advise the land office manager. If the regional forester recommends that the application should be contested he will refer the matter to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, who will prepare, for the regional forester's signature, a recommendation to the land office manager for initiation of a Government contest. Such request shall be filed in triplicate with the manager.

4. Recommendation for initiation of Government contest; form and contents.

Recommendations of regional foresters for initiation of Government contests may be made by letter or other appropriate written form. Such recommendations and the information in support thereof need not be under oath or corroborated. Each recommendation must include, or be accompanied by, the following:

(a) All information which will be required by the land office manager in the preparation and service of a complaint initiating a Government contest pursuant to the applicable provisions of the rules of practice 43 CFR Part 221.

(b) A copy of the report of field examination, upon which the recommendation is based.

(c) Information as follows which will be supplied to the Hearing Examiner, Bureau of Land Management, for his guidance in scheduling a hearing (see Bureau of Land Management Form 4-1333, copy attached):

(1) Logical place for hearing: _____
(City or town)

(2) Suggested alternate place: _____
(City or town)

(3) Suggestions as to available space for hearing room in cities or towns named and addresses of persons or offices to contact.

(4) Estimated time (in days) the hearing will require.

(5) Preference of the Department of Agriculture, if any, as to approximate date for scheduling a hearing and reasons therefor.

(6) A statement indicating whether the Department of Agriculture has reason to believe that it will file with the Hearing Examiner, following service of a complaint initiating a Government contest and answer thereto, a motion for pre-hearing conference as provided for in 43 CFR 221.69.

(7) Any other information which will be helpful to the Hearing Examiner in scheduling and arranging for a hearing, including the number of copies of the transcript of the hearing which the Department of Agriculture desires to receive.

5. Action by land office manager on recommendation for initiation of a Government contest.

Upon receipt from the regional forester of a recommendation for initiation of a Government contest, the manager, upon determining that the elements of a contest are present, will prepare, and proceed with service appropriate as to each interested party, of a complaint conforming with 43 CFR 221.68 and the regulations referred to therein. The manager will forward a copy of the complaint to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture.

6. Action by manager upon filing of an answer or expiration of period allowed for such filing.

If an answer to the complaint is not filed as required, the manager will proceed with a decision as provided in 43 CFR 221.65. If an answer is filed, the manager will prepare BLM Form 4-1333, transmitting the contest action to the appropriate Bureau of Land Management Hearing Examiner and requesting that a hearing be scheduled. The Manager will forward three copies of the request for scheduling of hearing (Form 4-1333) and one copy of the answer to the complaint to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture.

7. Scheduling of hearings.

The Examiner to whom a contest action has been referred for hearing, will schedule a hearing as soon as practicable and serve notice of the hearing upon all parties, including the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, who will be furnished three copies of the notice of hearing.

Normally, hearings will be scheduled not less than sixty, nor more that ninety, days in advance. A hearing must be scheduled at least thirty days in advance unless all parties request or consent to an earlier hearing date (43 CFR 221.70). The scheduling of hearings sixty to ninety days in advance is intended to provide all parties, including the Government, ample time in which to prepare for hearing.

In scheduling a hearing, the Examiner will give due consideration to any recommendations as to the time for the hearing that have been made in Item 9 of Form 4-1333, transmitting the case to the Examiner.

8. Place for hearing.

Hearings in proceedings under Public Law 167 must be held in the county in which the lands involved are located, unless the mining claimant agrees otherwise. See 43 CFR, Section 185.131.

In all other types of actions involving hearings, it will be the policy to hold the hearing either in the county where the lands involved are located or at another point that will not unduly increase costs to the private parties or cause them undue difficulties in securing the attendance of witnesses or otherwise presenting their side of the case at the hearing.

9. Requests for postponements of hearings.

The provisions of 43 CFR 221.71 will be applicable to all requests for postponement of hearings, including any such request made by a regional forester. Each request for postponement must include specific reasons therefor. Requests for postponement will be filed direct with the Hearings Examiner before whom the related contest is pending.

10. Prehearing conferences.

Any motion by a regional forester for a prehearing conference (43 CFR 221.69) in any contest action involving lands within a national forest will be filed direct with the Hearing Examiner before whom the contest action is pending. The Hearing Examiner will forward to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, three copies of each notice or order issued by him pertaining to a prehearing conference, or motion therefor, in a contest action that involves lands within a national forest.

11. Officer to represent Government at hearing.

In all hearings relating to applications for entry of or patent to lands within a national forest, the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, will be entered of record as appearing in behalf of the Government, and will be responsible for conducting the Government's side of the case.

12. Reporter's service; hearing transcript.

The Hearing Examiner will arrange for stenographic reporting of the hearing and will obtain sufficient copies of the hearing transcript for Government use, and for use of private parties if they have so requested. Upon receipt of the transcript, the Examiner will forward to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, the number of transcript copies specified in the regional forester's recommendation for initiation of Government contests (see 4(c)(7) above).

13. Decision by Hearing Examiner.

As promptly as possible after the hearing and expiration of the period allowed by him for the parties to file proposed findings of fact and conclusions of law (43 CFR 221.76(a)), the Examiner will render his decision and serve it on all parties to the hearings. In cases involving lands within a national forest, the Examiner will supply the decision in 5 copies to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture.

In any case in which the Examiner may be instructed to render only a recommended decision (43 CFR 221.76(c)), he will forward his recommended decision to the Director, Bureau of Land Management, together with the case file. The Examiner will not serve the recommended decision on any party to the proceeding, or make distribution of any copies of the recommended decisions. The Director will make the initial decision in the case and will serve copies thereof on all parties in the same manner as when the Examiner has rendered the initial decision.

14. Appeals.

Any appeal to the Director, Bureau of Land Management, from the decision of a Hearing Examiner based on a Government contest and a hearing held thereon must be filed in the office of the Examiner who rendered the decision, in accordance with the regulations in 43 CFR 221.2. Any party, including the Government, adversely affected by a decision of a Hearing Examiner may appeal to the Director (43 CFR 221.77).

B. PROCEEDINGS UNDER ACT OF JULY 23, 1955, AFFECTING UNPATENTED MINING CLAIMS

1. Verified statement; referral to Forest Service.

If any verified statement, as prescribed in 43 CFR, sections 185.126 and 185.130, is filed in a land office pursuant to a proceeding under the Act of July 23, 1955 (69 Stat. 367, 30 U.S.C. 601) and applicable regulations (43 CFR 185.120-185.137), initiated at the request of the Forest Service, the manager will determine the acceptability of the verified statement and if acceptable, forward a copy of the verified statement to the forest supervisor of the national forest involved, together with information showing the date the statement was filed.

2. Examination and report by Forest Service.

Upon receiving a copy of a verified statement, the forest supervisor will make a report thereon to the regional forester. The regional forester will order an examination of the mining claim or claims covered by the verified statement and decide what action should be taken. The regional forester will promptly consider the report and will proceed in the same manner as provided in Part A, section 3, above to notify the land office manager as to whether he recommends that a hearing to be held to determine whether the Government shall have the right to manage the vegetative surface resources of the lands within a mining claim or claims involved.

3. Recommendation that hearing be held; form and content.

Recommendations of regional foresters that a hearing be held to determine the rights of the Government to manage vegetative surface resources of lands within a mining claim or claims with respect to which a verified statement has been filed may be made by letter or other appropriate written form. Such recommendations and the information in support thereof need not be under oath or corroborated. Each such recommendation will be filed with the land office in triplicate and must include, or be accompanied by, the following:

(a) Identification, by name and location, of the claim or claims involved.

(b) A specific recommendation that a hearing be held.

(c) The name and address, so far as it is known, of each person having an interest in the claim or claims.

(d) A statement setting forth in clear and concise language the matters of fact and law constituting the issues upon which the Forest Service will present evidence at the hearing (see 43 CFR 185.131).

(e) Three copies of any stipulations between the Forest Service and any party or parties having an interest in any of the claims respecting rights asserted under a verified statement (see 43 CFR 185.132).

(f) A copy of the report of field examination upon which the recommendation is based.

(g) All of the information required by Part A, section 4(c) above.

4. Referral to Hearing Examiner; action by Examiner.

Upon receipt of a recommendation that a hearing be held, conforming with the preceding section, the manager will transmit the original copy thereof to the appropriate Bureau of Land Management Hearing Examiner, using for this purpose BLM Form 4-1333 and distributing copies thereof as provided in Part A, section 6.

Upon receipt of the recommendation the Examiner will schedule a hearing. The Examiner's notice of hearing will contain a statement of the issues upon which the Government will present evidence at the hearing. The provisions in Part A, section 7 to 14, inclusive, will be applicable to scheduling of the hearing, conduct thereof, and decision thereon.

5. Stipulation that eliminates necessity of a hearing.

Where following the filing of a verified statement the Forest Service and the mining claimant enter into stipulations that eliminate the necessity of holding a hearing, the Forest Service shall file the original of such stipulation with the land office manager.

6. Waiver of rights by mining claimants; recording, supplying copy to the land office.

If the Forest Service receives or obtains a waiver of rights by mining claimants, as provided in Section 6 of the Act of July 23, 1955, and the regulations in 43 CFR 185.136, that agency will record the waiver in the office where notice or certificate of location of the mining claim or claims involved is of record. The Forest Service will also forward to the land office concerned a copy of such waiver, together with information identifying the office in which it was recorded and the date of recording.

The waiver will not be filed with the land office manager unless a verified statement has previously been filed by the claimant.

C. PROCEEDINGS UNDER ACT OF AUGUST 11, 1955, AFFECTING PLACER MINING CLAIMS.

1. Location notices and statements of assessment work; referral to Forest Service.

Upon receipt in a land office of the copy of a notice of location of a placer mining claim involving lands within a national forest which has been filed pursuant to the Act of August 11, 1955 (69 Stat. 681, 30 U.S.C. 621), the manager promptly will forward a copy thereof to the Forest Supervisor of the national forest involved together with information showing the date the notice of location was filed in the land office. The manager will also forward to the Federal Power Commission a copy of all such location notices (both lode and placer) for a report upon which the manager will determine whether the lands involved are open to mining location in accordance with Section 2 of the Act and 43 CFR 185.103.

2. Action and report by Forest Service.

Upon receipt of a copy of notice of location of a placer claim, the forest supervisor will promptly submit a report thereon, based upon such field examination or other action as he deems necessary, to the regional forester. The regional forester will consider the report promptly and will advise the land office manager of his conclusions within 40 days from the date the notice of location was filed in the land office. The report to the manager will indicate either (1) that placer mining operations will not substantially interfere with other uses of the land included within the placer claim, or (2) that placer mining operations will substantially interfere with other uses of the lands included in the claim. If the latter, the report will also include a concise explanation of why substantial interference with other uses of the land would occur and a recommendation that a hearing be held as provided by Section 2(b) of the Act of August 11, 1955. If a hearing is recommended, the report will also specify whether the Forest Service is at that time prepared to proceed with the hearing or whether it desires to make a further field examination in advance of the hearing. If the Forest Service is prepared, at the time of its report, to proceed with the hearing, its report and recommendation that a hearing be held will also include or be accompanied by (a) a copy of any report of field examination upon which the recommendations is based, and (b) all of the information required by Part A, 4(c) above.

3. Intention to hold hearing; notice by land office manager.

Where the report to the manager recommends that a hearing be held, the manager will review the recommendations and if he concurs will send to the locator by certified mail, a notice of intention to hold a hearing. The manager will forward three copies of the notice to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture. The manager may request such other information he deems necessary from the Forest Service or Field Examiners of the Bureau of Land Management prior to determination as to whether a hearing should be held.

4. Further report by Forest Service.

If the report made to the land office manager as provided in Section 2 above indicates that the Forest Service desires to make further field examination in advance of the hearing, it will proceed to do so as promptly as possible. Upon completion of the field examination the regional forester will make a further report to the land office manager, which report will include or be accompanied by the following: (a) a specific recommendation that (1) a hearing be held, or (2) that the notice of intention to hold a hearing previously served on the locator of the claim involved be withdrawn; (b) a copy of the report of field examination upon which the recommendation is based; (c) if a hearing is recommended, all of the information required by Part A, Section 4(c).

5. Referral to Hearing Examiner; action by Examiner.

If the land office manager determines from the report he receives from the Federal Power Commission that the lands involved are open to mining location he will, upon receipt of a recommendation for hearing conforming with Section 2 or 4 above, transmit the original copy of the recommendation to the appropriate Bureau of Land Management Hearing Examiner, using for this purpose BLM Form 4-1333, and distributing copies thereof as provided in Part A, section 6.

Upon receipt of the recommendation the Examiner will schedule a hearing. The Examiner's notice of hearing will include a statement of the reasons, as set forth in the Forest Service recommendation for hearing, why mining operations on placer claim involved will substantially interfere with other uses of the land included in the claim. The Examiner's notice of hearing will also specify a 30-day period during which any other parties desiring to protest mining operations on the claim may file their protests in the land office. The Examiner will supply a copy of the notice of hearing to the manager who will post it in the land office for a period of 30 days prior to the date set for the hearing. The Examiner's decision following the hearing will embody an appropriate order as provided in Section 2(b) of the Act of August 11, 1955. In all other respects the provisions of Part A, sections 7 to 14 inclusive, will be applicable to scheduling the hearing, conduct thereof, and decision thereon. Any party to the hearing, including the Forest Service, if adversely affected by the Examiner's decision, will have a right of appeal to the Director.

6. Protests; distribution of copies.

If any protests against the placer claim involved are filed in the land office in response to posting of the notice of hearing in the land office or local publicity concerning the hearing, the land office manager will transmit the original of the protest to the Hearing Examiner, one copy to the forest supervisor, and one copy to the locator of the placer mining cliam, with information showing date of filing.

7. Recording of final order.

Following decision by the examiner and disposition of any appeals therefrom, the land office manager will file a certified copy of the final decision embodying an appropriate order as provided in Section 2(b) of the Act of August 11, 1955, in the same State or county office in which the locator's notice of location is filed.

D. ADVERSE PROCEEDING UNDER BASIC MINING LAWS.

1. Applicable procedures.

When the Forest Service desires to recommend adverse proceedings against an unpatented mining claim on lands within a national forest under authority of the basic mining laws of 1872, it will do so by filing with the appropriate land office a recommendation for initiation of Government contest. The filing of such recommendation, form and content thereof, and all other matters relating to scheduling and conduct of a hearing and decision thereon will follow the procedures in Part A, section 4 to 14 inclusive, of this Memorandum of Understanding.

E. HEARINGS ARISING FROM APPEALS TO THE DIRECTOR

1. Hearings in cases involving lands within national forests.

Where the Director, Bureau of Land Management, pursuant to the Rules of Practice (43 CFR, Subpart A of Part 221), orders a hearing on issues of fact relative to a decision before him on appeal, which involve lands within a national forest, three copies of the order directing the hearing and specifying the issues of fact upon which evidence will be received will be forwarded to the appropriate attorney in charge, Office of the General Counsel, Department of Agriculture, for advice to the Forest Service and such action by that agency as may be appropriate in the specific case involved.

2. Applicable procedures.

All reports, recommendations, or requests submitted by the Forest Service pursuant to the preceding section will be filed with the Director. Insofar as consistent for this purpose, the provisions of Part A, sections 3 and 4, relating to preparation, form, content, and filing of documents will be followed.

The scheduling of hearings and other matters relating thereto will be governed by the provisions of Part A, sections 7 to 12 inclusive.

In any hearing on issues of fact relating to decisions on appeal to the Director, the Hearing Examiner who conducted the hearing will submit to the Director proposed findings of fact on the issues presented at the hearing (43 CFR 221.20). The examiner's proposed findings of fact will not be served on the parties.

F. GENERAL

1. Costs.

Costs of publication pursuant to surface rights determination under the Act of 7/23/55 on Forest Service lands will be paid by the Forest Service. Costs incurred by the Bureau of Land Management in its actions on proceedings, applications, entries, or claims covered by this Memorandum of Understanding, including all costs incurred by Hearing Examiners, and costs for stenographic reporting services chargeable to the Government, will be paid from funds appropriated to the Bureau of Land Management.

2. Estimates of costs.

The Forest Service will supply, as may be requested by the Bureau of Land Management on an annual or quarterly basis, such estimates as may reasonably be required by the Bureau in programming, budgeting for, and administering its work relating to the proceedings, applications, entries, or claims covered by this Memorandum.

3. Instructions to field personnel.

The Bureau of Land Management and the Forest Service will issue to their respective field staffs such instructions as are necessary to implement the provisions of this Memorandum.

4. Effective date; previous procedures superseded.

The provisions of this memorandum will become effective as of date revised regulations under 43 CFR Part 205, are published in the Federal Register. Upon such effective date, the provisions of this Memorandum will supersede all prior procedures observed by the Bureau of Land Management and the Forest Service with respect to the matters covered by this Memorandum.

(Signed) /s/ V.L. HARPER
Acting Chief, Forest Service

April 1, 1957

(Signed) /s/ EARL J. THOMAS
Acting Director
Bureau of Land Management

May 18, 1957

canyon
wildlife plan of operation
MDU
RBS

United States Department of Agriculture
Forest Service
Kaibab National Forest
800 S. 6th Street
Williams, AZ 86046

1950

Date: December 22, 1989

Ace Peterson, Conservation Chairman
Arizona Wildlife Federation
4330 North 62nd Street, Suite 102
Phoenix, Arizona 85251

Dear Ace:

This is in response to your inquiry of December 12th regarding the implementation of wildlife mitigation for the Canyon Mine. Energy Fuels (EF) has not yet been required to complete the habitat replacement and improvement measures prescribed in the Canyon Mine EIS, however, they have been very active in other wildlife projects on the Tusayan District. Since 1986, EF has contributed a total of $12,000 for the reconstruction and sealing of nine earthen wildlife and livestock tanks on the District (Bear, R7, Donaldson, Sage, Lost, Jackson, Airport, Owl and Java tanks). We believe EF will participate in other wildlife projects this coming field season. The positive effect of these projects is substantial, and may exceed the total scope of the work specified in the Canyon Mine EIS. This, of course, does not relieve EF of their responsibility to complete the required wildlife mitigation. However, with the ultimate fate of the Canyon Mine as yet undetermined, we feel it is not reasonable to require EF to undertake this work.

We are directing the Tusayan District to complete the analysis and preliminary field work prescribed on page 2.34 of the EIS so these projects can be undertaken as soon as a final decision on the lawsuit is reached.

Please feel free to call me if you have any questions.

Sincerely,

LEONARD A. LINDQUIST
Forest Supervisor

cc: Tusayan Ranger District
RO, Division of Minerals

FOREST SERVICE MANUAL
NATIONAL HEADQUARTERS (WO)
WASHINGTON, DC

FSM 2800 - MINERALS AND GEOLOGY

CHAPTER 2810 - MINING CLAIMS

Amendment No.: 2800-2007-2

Effective Date: April 4, 2007

Duration: This amendment is effective until superseded or removed.

Approved: GLORIA MANNING
Associate Deputy Chief

Date Approved: 03/29/2007

Posting Instructions: Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 2800-2007-1 to 2890.

New Document	2810	42 Pages
Superseded Document(s) by Issuance Number and Effective Date	2810 (Amendment 2800-2006-5, 08/31/2006)	42 Pages

Digest:

2817.23a - Adds new code and caption "Compliance with the Clean Water Act." Provides direction for approving new Plans of Operations and complying with the Clean Water Act.

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This chapter is concerned with the administration of the laws relative to locatable or hard rock minerals on public domain land. The administration of the mineral leasing laws is covered in FSM 2820 and mineral materials are covered in FSM 2850.

2810.1 - Authority

See FSM 2801, 2817.1, and FSH 2809.15, chapter 10.1 for further direction on the Forest Service's surface management authorities for locatable minerals.

2810.4 - Responsibility

2810.41 - Chief

The Chief has the responsibility to determine whether or not decisions of the Department of the Interior Administrative Law Judges on mining claims shall be appealed to the Interior Board of Land Appeals and/or whether to seek review of mining claim decisions by the Secretary of the Interior.

2810.42 - Deputy Chief, National Forest System

The Deputy Chief, National Forest System, has the responsibility to advise the Chief on matters relating to decisions on mining claims by the Department of the Interior Administrative Law Judges and whether or not to appeal decisions to the Interior Board of Land Appeals and/or to seek review of decisions by the Secretary of the Interior.

2810.43 - Washington Office, Director of Minerals and Geology Management

The Washington Office, Director of Minerals and Geology Management has the responsibility to advise the Chief, Deputy Chief for National Forest System, and Regional Foresters on matters relating to appeals of decision of the Department of the Interior Administrative Law Judges to the Interior Board of Land Appeals and for procedures for reviewing mining claim decisions by the Secretary of the Interior.

2810.44 - Regional Foresters

Regional Foresters have the responsibility to forward to the Director of Minerals and Geology Management, Washington Office, recommendations, background materials, and rationale for appeals of decisions of Department of the Interior Administrative Law Judges to the Interior Board of Land Appeals and/or reviews by the Secretary of the Interior.

2811 - BASIC ELEMENTS OF GENERAL MINING LAWS

2811.1 - Lands Open to Mineral Entry

All National Forest System lands which:

1. Were formerly public domain lands subject to location and entry under the U.S. mining laws,

2. Have not been appropriated, withdrawn, or segregated from location and entry, and

3. Have been or may be shown to be mineral lands, are open to prospecting for locatable, or hard rock, minerals (16 U.S.C. 482).

In prospecting, locating, and developing the mineral resources, all persons must comply with the rules and regulations covering the national forests (16 U.S.C. 478).

2811.2 - Locatable Minerals

In general, the locatable minerals are those hard rock minerals which are mined and processed for the recovery of metals. They also may include certain nonmetallic minerals and uncommon varieties of mineral materials, such as valuable and distinctive deposits of limestone or silica.

Locatable minerals may include any solid, natural, inorganic substance occurring in the crust of the earth, except for the common varieties of mineral materials and leasable minerals. Mineral materials include sand, stone, gravel, pumicite, cinders, pumice (except that occurring in pieces over 2 inches on a side), clay, and petrified wood. Leasable minerals are coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur (in Louisiana and New Mexico), and geothermal steam.

2811.3 - Types of Mining Claims

2811.31 - Lode Claims

Lode claims may be located only for veins or lodes or other rock in place, bearing metallic or certain other valuable deposits. Lode claims may not exceed 1,500 feet in length along the vein or lode and may not be more than 300 feet on each side of the middle of the vein at the surface. No mining regulation shall limit a claim to less than 25 feet on each side of the middle of the vein at the surface. The endlines of each claim shall be parallel (30 U.S.C. 23).

2811.32 - Placer Claims

Placer claims may be located only for valuable minerals that occur in other than vein or lode form, such as the gold contained in gravels and deposits or uncommon varieties of mineral materials. No placer claim shall include more than 20 acres for each individual claimant or up to a maximum of 160 acres for an association of eight locators. Placer claims shall conform to legal subdivisions when located on surveyed lands, unless the claim cannot be conformed to legal subdivisions, in which case a survey or plat is required, as in a gulch of shoestring placer (Snow Flake Fraction, 37 L.D. 250), with a metes-and-bounds description (30 U.S.C. 35, 36).

2811.33 - Millsite Claims

A millsite claim may not exceed 5 acres and must be described by metes-and-bounds or by legal subdivisions. When nonmineral land not contiguous to a vein or lode is used or occupied by the proprietor of the vein or lode for mining or milling purposes, the nonadjacent surface ground may be included in an application for patent for such vein or lode (30 U.S.C. 42(a)).

Where nonmineral land is needed and used, or occupied by a proprietor of a placer claim for mining, milling, processing, beneficiation, or other operations in connection with such claim, the nonmineral land may be included in an application for patent for the placer claim (30 U.S.C. 42(b)). The number of millsites that may be legally located is based specifically on the need for mining or milling purposes, irrespective of the types or numbers of mining claims involved (30 U.S.C. 42).

2811.34 - Tunnel Site Claims

A person who excavates a tunnel acquires for a distance of 3,000 feet from the face of the tunnel in a straight line and limited to the width of the tunnel, the right of possession of all veins or lodes not previously known to exist and discovered in the tunnel. After discovery, the owner may locate a lode claim on the surface extending 1,500 feet along the lode (Enterprise Mining Co., v. Rico-Aspen Consol. Mining Co., 167 U.S. 108). No rights are initiated to a vein until a lode location is properly marked on the ground. Failure to prosecute the work on the tunnel for 6 months is an abandonment of the right to all undiscovered veins on the line of such tunnel (30 U.S.C. 27).

2811.4 - Qualifications of Locators

Citizens of the United States, or those who have declared their intention to become such, including minors who have reached the age of discretion and corporations organized under the laws of any State, may make mining locations. Agents may make locations for qualified locators (30 U.S.C. 22; 43 CFR 3832.1).

2811.5 - Requirements for Valid Mining Claim

The general mining laws impose certain obligations on a claimant who wishes to take advantage of the privileges those laws provide. A claimant must:

1. Discover a valuable deposit (FSM 2815.1, para. 1) of a locatable mineral in federally owned public domain land open to the operation of the mining laws. Satisfaction of other requirements of the 1872 act does not make a claim valid absent a discovery of a valuable deposit (30 U.S.C. 21-54).

2. Locate a claim on the valuable deposit.

3. Identify and monument the claim in the manner required by State law.

4. File in the appropriate office of the Bureau of Land Management a copy of the official record of the notice of location or certificate of location, including a description of the location of the mining claim or mill or tunnel site sufficient to locate the claimed lands on the ground. The copy must be filed within 90 days after the date of location of the claim(s).

5. Perform annual assessment work or annual labor worth at least $100 on, or for the benefit of, the claim.

6. File a copy of an affidavit of assessment work or notice of intent to hold in the county office where the location notice or certificate is recorded.

7. File in the appropriate office of the Bureau of Land Management a copy of the affidavit of assessment work or notice of intent to hold. The copy must be filed by December 30 of each year following the calendar year in which the claim was located.

With the fulfillment of these requirements, a claimant obtains a valid mining claim. So long as such conditions continue to exist, the claimant is entitled to possession of the claim for mining purposes. It is optional with the claimant whether to apply for a patent. Patent procedures and requirements, are described in FSM 2815.

The term "valid claim" often is used in a loose and incorrect sense to indicate only that the ritualistic requirements of posting of notice, monumentation, discovery work, recording, annual assessment work, payment of taxes, and so forth, have been met. This overlooks the basic requirement that the claimant must discover a valuable mineral deposit. Generally, a valid claim is a claim that may be patented.

Although the statues require the discovery of a valuable mineral deposit prior to the location of a claim, the courts and the Department of the Interior have recognized a right of possession, in the absence of the discovery required by statute, if the claimant is diligently prospecting. The Forest

Service recognizes this principle, and in keeping with the policy of encouraging bona fide prospecting and mining, will not discourage or unduly hamper these activities. Rather, the Forest Service should aid the legitimate activities of a prospector making bona fide efforts to obtain a discovery on a good prospect. On the other hand, the Forest Service should oppose attempts by prospectors to build permanent structures, cut timber, build or maintain roads, unless authorized by a special use permit or approved operating plan.

A mining claim may lack the elements of validity and be invalid in fact, but it must be recognized as a claim until it has been finally declared invalid by the Department of the Interior or Federal courts.

A claim unsupported by a discovery of a valuable mineral deposit is invalid from the time of location, and the only rights the claimant has are those belonging to anyone to enter and prospect on National Forest lands.

2811.6 - Abandonment of Mining Claim

Abandonment of a mining claim may be made by a formal relinquishment of the claim by the owner, informally as a statement to that effect to others, failure to record the mining claim, or failure to file the notice of assessment work or notice of intention to hold a mining claim by December 30 of each year in accordance with Bureau of Land Management regulation (43 CFR part 3833).

2812 - PROVISIONS OF 1955 MULTIPLE-USE MINING ACT

The 1955 Multiple-Use Mining Act (69 Stat. 367; 30 U.S.C. 601, 603, 611-615) amended the United States mining laws in several respects. The act provides that common varieties of mineral materials shall not be deemed valuable mineral deposits for purposes of establishing a mining claim.

The act also provides that:

1. Mining claims located subsequent to the act shall not be used, prior to patent, for purposes other than prospecting, mining, or processing and uses reasonably incident thereto;

(a) Mining claims located subsequent to the act are (prior to issuance of patent) subject to the right of the United States to manage and dispose of vegetative surface resources, and to the right of the United States, its permittees and licensees to use so much of the surface for such purposes or for access to adjacent land. Such other activities shall not endanger or materially interfere with prospecting, mining, and mineral processing; and

(b) Prior to patent, a claimant may not remove or use vegetative or other surface resources except to the extent required for prospecting, mining, or processing operation, or uses reasonably incident thereto (30 U.S.C. 612).

2. The Forest Service, in cooperation with the Secretary of the Interior, or such officer as the Secretary of the Interior may designate, is responsible for determining the existence and status for unpatented mining claims. The act provides procedures by which a claim located before July 23, 1955, may become subject to the restrictions set forth in paragraph 1 (30 U.S.C. 613).

3. The owner(s) of any unpatented mining claim located prior to the act may waive and relinquish all rights there under which are contrary to limitations in paragraph 1 (30 U.S.C. 614).

4. The act may not be construed as restricting any existing rights on any valid mining claim located prior to the act, except as a result of proceedings pursuant to Title 30, United States Code, section 613 (30 U.S.C. 613) or as a result of a waiver pursuant to 30 U.S.C. 614 and 615.

2813 - RIGHTS AND OBLIGATIONS OF CLAIMANTS

2813.1 - Rights of Claimants

By location and entry, in compliance with the 1872 act, a claimant acquires certain rights against other citizens and against the United States (FSM 2811).

2813.11 - Rights of Possession Against Other Citizens (Third Parties)

A valid mining claim creates a possessory interest in the land, which may be bartered, sold, mortgaged, or transferred by law, in whole or in part, as any other real property. A locator acquires rights against other possible (peaceable) locators when the locator has complied with the applicable Federal and State laws. Where more than one locator is involved on the same land, Forest Service actions should be impartial to all known locators of that land, as the controversy is the responsibility of the locators, not the Forest Service, to settle.

Fee simple title to a mining claim passes only with issuance of patent and, when patent is limited by some special provision of law, only to the extent provided in that law (FSM 2815).

2813.12 - Rights to Minerals (Against United States)

The claimant has the right to see or otherwise dispose of all locatable minerals, including uncommon varieties of mineral materials, on which the claimant has a valid claim. Rights to common variety mineral materials depend upon the status of the claim on July 23, 1955, and on subsequent actions taken under Title 30, United States Code, Section 613 (30 U.S.C. 613).

1. For claims which are verified as being valid prior to July 23, 1955, the claimant may dispose of common variety mineral materials for which marketability had been established as of July 23, 1955.

2. For claims located after July 23, 1955, or otherwise made subject to 30 U.S.C. 612, the claimant may not sell or otherwise dispose of common varieties but may use them for mining purposes on the claim from which they are obtained.

2813.13 - Surface Rights

Surface rights depend to some degree on the status of the claim on July 23, 1955, and on subsequent actions under Title 30, United States Code, Sections 613-614 (30 U.S.C. 613-614).

2813.13a - Claims Which Are Verified as Being Valid Prior to July 23, 1955

Such claims on which rights have not been waived and which otherwise do not come under the terms of Title 30, United States Code, Section 612 (30 U.S.C. 612), carry the following rights under the General Mining Laws:

1. Right to exclusive possession and occupancy for mining purposes, including control of the surface. Permission must be obtained from the claimant to cross the claim with a road. The Forest Service must obtain a claimant's permission to harvest timber from the claim, except for removal of dead or diseased trees which constitute a menace to the Forest.

2. Right to cut timber on the claim to use for mining purposes and to provide clearance required to conduct mineral operations.

3. Right to remove timber for conversion to lumber to be used for mining purposes, provided that the same species and substantially equivalent volume is returned for use on the claim or group of claims from which it was cut.

4. Right to sell or otherwise dispose of timber required to be cut in conducting actual mining of the mineral deposits or for clearing for surface facilities needed for mining or processing of the mineral, provided that the rate of cutting is with equal pace to the actual mining or need of surface facilities.

5. Right to cut timber from a millsite for building milling or mining facilities on the millsite.

2813.13b - Claims Validated Subsequent to Act of 1955

Such claims which otherwise come under Title 30, United States Code, Section 612 (30 U.S.C. 612) carry the same surface rights as those described in section 2812, except for the following modifications:

1. Right to occupancy and use necessary for prospecting, mining, and processing, but not the exclusive right to the surface. Lands containing such claims are subject to the rights of the United States to manage and dispose of the vegetative resources, to manage other resources except locatable minerals, and to the right of the United States, its permittees and licensees, to use so much of the surface area necessary for such purposes and for access to adjacent lands.

2. Right to cut timber on the claim for mining uses and for necessary clearing, except that timber cut in the process of necessary clearing cannot be sold by the claimant. The United States has the right to dispose of timber and other vegetative resources.

3. Right to additional timber required for mining purposes, if timber was removed from the claim by the Forest Service after claim location. The quantity and kind of timber to be provided, free of charge from the nearest available source which is ready for harvesting, will be substantially equivalent to that previously removed from the claim.

2813.14 - Right of Access to Claim

The right of reasonable access for purposes of prospecting, locating, and mining is provided by statute. Such access must be in accordance with the rules and regulations of the Forest Service. However, the rules and regulations may not be applied so as to prevent lawful mineral activities or to cause undue hardship on bona fide prospectors and miners.

2813.2 - Obligations

In order to successfully defend rights to occupy and use a claim for prospecting and mining, a claimant must meet the requirements as specified or implied by the mining laws, in addition to the rules and regulations of the Forest Service. These require a claimant to:

1. Comply with the provisions of Title 36, Code of Federal Regulations, Part 228 - Minerals, Subpart A - Locatable Minerals (36 CFR part 228, subpart A, 1872 Act Use Regulations, FSM 2817).

2. Discover a valuable mineral deposit.

3. Perform appropriate assessment work.

4. Record notice of location and either an affidavit of assessment work, a notice of intention to hold, or the detailed report provided by the Act of September 2, 1958 (30 U.S.C. 28-1) in the appropriate Bureau of Land Management office.

5. Comply with applicable laws and regulations of Federal, State, and local governments.

6. Maintain claim corners and boundaries so that the claim may be found and identified.

7. Be prepared to show evidence of mineral discovery.

8. Not use the claim for any purposes other than prospecting, mining, or processing operations and uses reasonably incident thereto.

In addition, a claimant must recognize the lawful rights of other users of the National Forest.

2814 - RIGHTS AND OBLIGATIONS OF UNITED STATES

2814.1 - Rights of United States

The United States has, through Congress, the right to control the disposition of resources on the public lands and to develop all necessary rules and regulations. In regard to mining claims on National Forest System lands, the Forest Service and the Department of the Interior may exercise the rights discussed in FSM 2814.11 - 2814.16.

2814.11 - Right To Examine Claims for Validity and To Contest If Appropriate

The general authority of the Secretary of the Interior with respect to public lands, is described in Cameron v. United States, 252 U.S. 450 (1920) where the court said:

> **By general statutory provisions the execution of the laws regulating the acquisition of rights in the public lands and the general care of these lands is confided to the Land Department, as a special tribunal; and the Secretary of the Interior, as the head of the Department is charged with seeing that this authority is rightly exercised to the end that valid claims may be recognized, invalid ones eliminated, and the rights of the public preserved . . . (cases cited):**
>
> **. . . the power of the Department to inquire into the extent and validity of the rights claimed against the Government does not cease until the legal title has passed . . . (The Department's) province is that of determining questions of fact and right under the Public Land Laws, or recognizing or disapproving claims according to their merits, and of granting or refusing patents as the law may give sanction for the one or the other . . .**

By interdepartmental agreement (FSM 2810.4), the Forest Service shares in administering the mining laws on National Forest System lands. FSM 2819 describes the Forest Service role and procedures in validity examinations and contests.

2814.12 - Right To Regulate Prospecting and Mining Activities

This right is contained in Title 16 United States Code, Section 551 (16 U.S.C. 551), and exercised in, among other regulations (36 CFR part 228, subpart A).

2814.13 - Right To Manage and Dispose of Vegetative Surface Resources

The right to manage other resources (except mineral deposits subject to location under the mining laws) and the limitations on such rights on claims validated prior to July 23, 1955, are found in FSM 2812 and 2813.

2814.14 - Right To Manage and Dispose of Common Varieties of Mineral Materials

Common varieties may be sold and are not locatable (FSM 2850) except for certain claims established prior to July 23, 1955 (FSM 2812). Uncommon varieties are locatable. See FSM 2813.12 for more information on uncommon varieties of mineral materials. The most troublesome problem of mineral materials is to determine whether a particular deposit is common (and salable) or special (and locatable). This matter, in case of question, should be referred to the Forest Service mineral examiner.

2814.15 - Right To Enter and Cross Claims

The law includes the right of the United States to manage and protect national forest resources.

2814.16 - Right To Authorize Uses by Third Parties

The United States has the right to authorize uses by third parties, if it will not conflict with prior rights of a claimant.

2814.2 - Obligations

2814.21 - Respect Claim and Claimant's Property

The Forest Service must respect claims and claimants' property by using precautions to avoid damage to claim corner markers, excavations, and other mining improvements and equipment.

2814.22 - Allow Mining Claimants To Obtain Timber

(See FSM 2813.13.)

2814.23 - Prevent Violations of Laws and Regulations

Prevention of such violations regarding uses of National Forest System lands and resources includes an obligation to ensure that unauthorized uses of mining claims are eliminated, including unlawful use of buildings and other structures and the taking of common varieties of mineral materials.

2814.24 - Provide Reasonable Alternatives

Forest officers should provide bona fide prospectors and miners reasonable alternative access routes, exploration methods, special use permits, and operating plan provisions in order that they may carry out necessary mineral associated activities without violation of laws and regulations.

2815 - ACQUISITION OF TITLE

2815.01 - Authority

The 1872 Mining Act (30 U.S.C. 22) is the authority for the patenting of valid mining claims. Requirements and procedures are found in 43 CFR 3860.

2815.04 - Responsibility

The responsibility for processing applications and passing title is primarily with the Department of the Interior (USDI). A USDI-U.S. Department of Agriculture (USDA) Memorandum of Understanding (FSM 1531.12) provides for the Forest Service to share in that responsibility regarding patent applications for National Forest System lands.

2815.05 - Definitions

Patent. A document which conveys title to land. When patented, a mining claim becomes private property and is land over which the United States has no property rights, except as may be reserved in the patent. After a mining claim is patented, the owner does not have to comply with requirements of the General Mining Law or implementing regulations.

2815.1 - Requirements for Claimant

In order to obtain a patent, a claimant must:

1. Substantiate the claim of a discovery of a valuable deposit of a locatable mineral on land open to mineral entry. The concept of valuable mineral has implications of suitable quality, sufficient quantity, relative scarcity (contrasted to common variety materials), recoverability, and marketability. The standard ordinarily applied to determine whether a discovery has been made is the prudent-man test which states: "Where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met."

2. Have a mineral surveyor make a patent survey, adjust claim boundaries, and correct errors, after which an amended location should be made.

3. Have made at least $500 worth of mineral-related improvement per claim.

4. Make application to the Bureau of Land Management which will review for adequacy of assertions, title, posting of notice, and other technical requirements.

5. Pay the purchase price for the land ($2.50 per acre for a placer claim and $5 per acre for a lode claim).

2816 - MINING ACTIVITIES IN SPECIAL AREAS

2816.1 - Wilderness and Primitive Areas

The National Wilderness Preservation System was established by the Wilderness Act of 1964 (88 Stat. 163, as amended, 16 U.S.C. 1131-1140).

2816.11 - Rights and Restrictions in Wilderness

1. Authority. Pursuant to Section 4(d)(3) of the Wilderness Act of September 3, 1964 (16 U.S.C. 1133), and subject to valid existing rights, the minerals in lands designated as wilderness were withdrawn from all forms of appropriation under the mining laws of January 1, 1984. Subsequent wilderness acts have later effective dates for withdrawal.

2. Administration of Activities. Claimants may conduct on-the-ground mining or mining related activities on valid mining claims in designated wilderness. However, before authorizing such activities under a plan of operations, the authorized officer must ensure that the claimant:

a. Has complied with the filing for record requirements of Section 314(a)(1) and (2) of the Federal Land Management Policy Act of 1976.

b. Made a discovery of a valuable minerals deposit before the date of withdrawal, and thus has a valid existing right as of that date.

The authorized officer must schedule an appropriate on-the-ground validity investigation by a qualified Forest Service mineral examiner when a claimant/operator files a Notice of Intention to Operate or Plan of Operations in accordance with Title 36, Code of Federal Regulations, section 228.4 (36 CFR 228.4).

In addition, the authorized officer should schedule validity investigations in response to mineral patent applications, in cases involving suspected occupancy misuse of mining claims, and for protection of Federal capital investment (such as administrative sites, trailheads, and airfields).

In accordance with 36 CFR 228.5(b), the authorized officer may approve operations for the sole purpose of performing requisite annual assessment work only when proposed activities will not cause significant impact to wilderness values and such activities are not specifically prohibited by the Wilderness Act. However, if proposed assessment work will cause significant impact and

the operator is unable or unwilling to propose acceptable alternatives that will not cause significant impact, the authorized officer must first determine that a valid claim existed before the date of withdrawal before approving the operation.

If assessment work is not the purpose and/or the issue of validity has not been determined, 36 CFR 228.5(a)(3) provides a basis for requesting changes in the proposed plan of operations to include supporting evidence from the claimant/operator that a claim is valid. This evidence may include, but is not limited to, reports by mining engineers or geologists, data regarding grade and tonnage, production records, and assay reports, and must be verified by a Forest Service mineral examiner.

2816.12 - National Forest Primitive Areas

The same basic management concepts and procedures apply to primitive areas as to wildernesses, except the patent restrictions do not apply.

2816.2 - National Recreation Areas

The National Recreation Areas (NRA's) listed in exhibit 01 have been established by specific acts of Congress. There are certain restrictions concerning 1872 mining law activities for each national recreation area. All of the acts withdraw the minerals in the areas from location, entry, and patent under the United States mining laws.

2816.2 - Exhibit 01

National Recreation Areas

States	National Forest(s)	National Recreation Area Name	Reference
California	Shasta-Trinity	Whiskeytown Shasta-Trinity	Public Law 89-336 (11/8/65) 79 Stat. 1295, 16 U.S.C. 460q-460q-9 (See 16 U.S.C. 460q-5)
Idaho	Sawtooth	Sawtooth	PL 92-400 (8/22/72) (86 Stat. 612) 16 U.S.C. 460aa-460aa-14 (See 16 U.S.C.460aa-9-460aa-11)
Oregon and Idaho	Wallowa-Whitman Nezperce Payette	Hells Canyon Hells Canyon	PL 94-199 (12/31/75) 89 Stat. 1117; 16 U.S.C. 460gg-460gg-12 (See 16 U.S.C. 460gg-8)
Siuslaw	Oregon	Dunes	PL 92-260 (3/23/72) 86 Stat. 99; 16 U.S.C. 460z-460z-13 (See 16 U.S.C. 460z-8)
Oregon	Siuslaw	Cascade Head Scenic Research Area	PL 93-535 (11/22/74) 88 Stat. 1732; 16 U.S.C. 541-541h (See 16 U.S.C. 541f)
Utah and Wyoming	Ashley	Flaming Gorge	PL 90-540 (10/1/68) 82 Stat. 904; 16 U.S.C. 460v-460v-8 (See 16 U.S.C. 460v-4)

2816.3 - Wild and Scenic Rivers

All prospecting, mining operations, and all other activities on mining claims which are not perfected before inclusion of a river in the Wild and Scenic River System are subject to such regulations as the Secretary of Agriculture may prescribe to effectuate the purposes of the Wild and Scenic Rivers Act (16 U.S.C. 1280).

Subject to valid existing rights, the perfection of, or issuance of patent to, any mining claim affecting lands within the System shall confer or convey a right or title only to the mineral deposits and such rights to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of Agriculture.

The regulations referred to in this section shall, among other things, provide safeguards against pollution of the river and unnecessary impairment of the scenery within the designated area.

Subject to valid existing rights, the minerals in Federal lands which are part of the System and constitute the bank or bed are situated within one-quarter mile of the bank of any river designated as wild and withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws as of October 2, 1968, the date of the Wild and Scenic Rivers Act, or as of the date of inclusion of a river into the system.

The minerals in any Federal lands which constitute the bed or bank or are situated within one-quarter mile of the bank of any river designated for study as a potential addition to the System is withdrawn from all forms of appropriation under the mining laws during the periods specified in 16 U.S.C. 1278(b). This does not preclude prospecting in such a study area subject to such conditions as the Secretary of Agriculture finds appropriate to safeguard the area in the event it is subsequently included in the System.

2816.4 - Power Site Withdrawals

Mining Claims Rights Restoration Act of August 11, 1955 (Public Law 84-359; 69 Stat. 682-683; 30 U.S.C. 621-625).

1. General Provisions of Act. The Mining Claims Rights Restoration Act of 1955 provides, with certain restrictions, for mining, developing, and utilizing the mineral resources of all public lands withdrawn or reserved for power development. The Act:

a. Requires that a mining locator file a notice of location with the appropriate Bureau of Land Management office within 60 days after the location is made.

b. Suspends placer mining to allow the Secretary of the Interior to hold a public hearing and to consider whether to permit or prohibit placer mining.

c. Provides for public hearings to determine whether proposed placer mining operations will substantially interfere with other uses of the land. The Secretary's order is based upon the findings from the public hearings. The act also provides for rules and regulations to govern bonds and deposits to insure restoration of lands involved in permitted placer mining operations.

The Bureau of Land Management has 60 days from the filing of a notice of a placer location to notify the claimant of any intention to hold a public hearing and thereby further delay mining activities.

2. Cooperative Case Actions. For claims on National Forest system lands, the Forest Service cooperates with the Bureau of Land Management in decisions about mining claims.

a. Action by State Director (BLM). Upon receipt of a notice of location of a placer or lode mining claim on National Forest System lands open for location under the Act of August 11, 1955, the State Director, immediately notifies the appropriate Regional Forester. At a minimum, the notification must include a copy of the notice of location, show the date it was filed in the Bureau of Land Management office, and, if it is a placer claim, must request a report.

b. Action by Forest Service. Upon such notification of a placer claim, the Forest Supervisor promptly prepares and submits a report including an environmental analysis and recommendations to the Regional Forester. The report must be based upon such field examination or other action as deemed necessary.

The Regional Forester sends a report to the State Director containing specific recommendations for or against a public hearing and for or against permitting the placer operations, setting forth clearly and concisely the reasons for the recommendation.

The Forest Service should be prepared to make a factual statement supporting its recommendation at any public hearing. Potential hazards of the proposed placer mining operations to other uses of the land, including damages from erosion and stream pollution, should be treated fully.

By the memorandum of understanding of April 1957 between the Bureau of Land Management and the Forest Service, the Forest Service has only 40 days, from the filing of a notice of a placer location in the BLM district office, to submit its report to the BLM district office manager through the State supervisor (FSM 1531.12a).

2816.5 - Reclamation Withdrawals

The Reclamation Act of June 17, 1902, as amended and supplemented (43 U.S.C. 416), provided for withdrawal from all uses, other than those provided for by the act, of lands of two categories:

1. Lands possibly needed for the construction of irrigation works.

2. Lands which may possibly be irrigated from such works. The withdrawal authority of that act was repealed by the Federal Land Policy and Management Act of 1976 (Public Law 94-579, sec. 704, 90 Stat. 2743.) No withdrawal may be made for any purpose except under the provisions of section 204 of that act.

2816.6 - Municipal Watersheds and Other Special Areas

See FSM 2806.7 for direction on municipal watersheds and other areas which are withdrawn or in which restrictions on mining law activities exist.

2817 - SURFACE MANAGEMENT PROCEDURES UNDER 36 CFR PART 228, SUBPART A

The regulations require that operations conducted under the authority of the mining laws which might cause significant surface resource disturbance must be covered by an operating plan approved by an authorized officer of the Forest Service, generally the District Ranger. Certain activities of little impact are specifically exempt from the operating plan requirement. Operators who are uncertain that their operations require an approved plan may submit a notice of intention to operate. Based on that notice, a determination is made by the District Ranger that a plan is or is not required. All notices and plans are submitted to the local District Ranger.

2817.01 - Authority

2817.01a - Statutory Authority

1. Organic Administration Act of June 4, 1897 (16 U.S.C. 473-475, 477-482, 551). This act authorizes the Secretary of Agriculture to issue rules and regulations for the use and occupancy of the National Forests and to protect them from unnecessary environmental impacts.

2. Multiple Use Mining Act of 1955 (30 U.S.C.611-615). This Act authorizes the Forest Service to restrict mining operations on National Forest System lands to only those uses reasonably incident to mining and in a manner that minimizes adverse environmental impacts.

2817.01b - Regulations

Title 36, Code of Federal Regulations, Part 228, Subpart A. This subpart provides direction for administering locatable mineral operations on National Forest System lands.

2817.02 - Objectives

In managing the use of the surface and surface resources, the Forest Service should attempt to minimize or prevent, mitigate, and repair adverse environmental impacts on National Forest System surface and cultural resources as a result of lawful prospecting, exploration, mining, and mineral processing operations, as well as activities reasonably incident to such uses. This should be accomplished by imposition of reasonable conditions which do not materially interfere with such operations.

2817.03 - Policy

The statutory right of the public to prospect, develop, and mine valuable minerals and to obtain a patent shall be fully honored and protected. Proprietary information relating to those rights and obtained through the administration of the agency's mineral regulations shall be protected to the full extent authorized by law.

The regulations at 36 CFR Part 228, Subpart A apply to all unpatented millsites, tunnel sites, and mining claims, including those not subject to 30 U.S.C. 612, and to activities, primarily prospecting, which may be conducted under the mining laws but not on claims.

The regulations at 36 CFR Part 228, Subpart A shall be administered in a fair, reasonable, and consistent manner and not as a means of inhibiting or interfering with legitimate, well-planned mineral operations.

The primary means for obtaining protection of surface resources should be by securing the willing cooperation of prospectors and miners. The willingness of the majority of prospectors and miners to comply with regulations, reasonably administered, is a principal key to the protection of environmental quality in the National Forest System. Face-to-face dialog with operators is encouraged.

However, when reasonable efforts have been made to obtain compliance with the regulations and the noncompliance is unnecessarily or unreasonably causing injury, loss, or damage to surface resources, authorized officers shall take enforcement action (FSM 2817.3(5)).

In the evaluation of a plan of operations, the certified minerals administrator should consider the environmental effects of the mineral operation, including whether the proposed operation represents part of a logical sequence of activities, and whether the proposed activity is reasonable for the stage proposed. For example, consider if the volume of material to be extracted as a sample is reasonable. A 10,000 ton bulk sample may not be reasonable prior to geochemical sampling and assaying.

Additionally, questions sometimes arise as to whether a proposed or existing use or activity is required for or reasonably incident to mining operations conducted under the 1872 Mining Law (FSM 2817.23, 2817.25, and 2818.1.)

When questions about the logical sequence of activities or whether an activity or proposed use is reasonably incident occur, the authorized officer should request the assistance of a Forest Service mineral specialist or certified mineral examiner to evaluate the situation on the ground, and advise the officer whether the proposed or existing surface use is logically sequenced, reasonable, and consistent with existing laws and regulations.

The advice should be used to help with negotiations to secure willing cooperation. If negotiations fail, the advice should be formalized using surface use determination procedures (FSM 2817.03a and FSH 2809.15, ch. 10).

2817.03a - Surface Use Determinations

If questions arise about the logical sequence of a proposed or existing activity, or whether the activity is reasonably incident, the authorized officer should request a surface use determination. Surface use determinations are investigations conducted by certified mineral examiners (FSM 2892), and formally documented in a report. Their purpose is to provide information, recommendations, and conclusions about reasonableness and justification for proposed or existing operations to the authorized officer.

The report can be as short or as long as necessary to address the issues. The level of detail for any particular section should only be as much as is relevant to supporting any conclusions and recommendations in the report, as determined by the specifics of each case. FSH 2809.15, chapter 10, provides procedures, instructions, and guidance for conducting surface use determinations and report writing.

2817.04 - Responsibility

1. Forest Supervisors. Forest Supervisors are designated to act as "authorized officers" for the administration of regulations in 36 CFR part 228, subpart A. This authority may be redelegated to District Rangers except for approval of plans of operations for Research Natural Areas, Experimental Ranges, and Experimental Forests. Before a Forest Supervisor can approve a plan of operations in one of these areas, consultation and concurrence of the Station Director is necessary.

2. Station Directors. Station Directors have authority and responsibility to review and concur in or withhold concurrence from, a plan of operations affecting Research Natural Areas, Experimental Ranges, and Experimental Forests prior to the authorizing officer's approval of such a plan.

2817.1 - Notice of Intent to Operate

Subject to certain exceptions (36 CFR 228.4(a)(1)), a notice of intent to operate is required from any person proposing to conduct operations which might cause significant disturbance of surface resources and who has chosen not to file an operating plan. A notice of intent to operate is not

intended to be a regulatory instrument; it is a notice given to the Forest Service by an operator which describes the operator's plan to conduct operations on National Forest System (NFS) lands. The trigger for a notice of intent is the operator's reasonable uncertainty as to the significance of the potential effects of the proposed operations (70 FR 32713, June 6, 2005).

The notice of intent must include or describe:

1. Name and address of the operator.

2. Information sufficient to identify the area on the ground with reasonable certainty, preferably with maps.

3. The route of access to the area of operations.

4. The nature, in some detail, of the proposed operations, especially of surface disturbing activities, such as trenching, drill road and drill site construction, or tree cutting.

5. The proposed method of transport to the area of operations.

6. The date the operation is expected to begin and approximately the length of time to be required.

The notice is to be submitted to the District Ranger. The proposed operation described in the notice must be evaluated by the District Ranger. The District Ranger must inform the operator within 15 days after the notice is received either that the operation is exempt from the requirement for an operating plan or that one is required. If no operating plan is required for operations, that notification must be documented with a copy to the operator as promptly and simply as is feasible. The documentation should include the basis for the determination that a plan is not required. The documentation is part of the administrative record and may be helpful in subsequent administrative or judicial review. If the District Ranger determines that significant disturbance of the surface resources will likely result from the operations, the District Ranger will inform the operator of the requirement to prepare a plan of operations.

2817.11 - Determination of Significant Resource Disturbance

The determination of what is significant can come only from a fair, reasonable, and consistent evaluation of proposed operations on a case-by-case basis. The term, significant, is site-sensitive. A particular surface resource-disturbing activity in one area, such as flat sage brush-covered ground, might not be significant, while the same operation in a high alpine meadow could be highly significant.

The phrase "will likely cause significant disturbance of surface resources", which triggers the requirement of submission and approval of a proposed plan of operations (36 CFR 228.4 (a)(3)) means that, based on past experience, direct evidence, or sound scientific projection, the District

Ranger reasonably expects that the proposed operations would result in impacts to National Forest System lands (NFS) and resources which more probably than not need to be avoided or ameliorated by means such as reclamation, bonding, timing restrictions, and other mitigations measures to minimize adverse environmental impacts on NFS resources (70 FR 32713, June 6, 2005).

2817.2 - Plan of Operations

Submission of a proposed plan of operations is required from all operators who will likely cause a significant disturbance of surface resources. Plans involving mining claims subject to Title 30, United States Code, section 612 (30 U.S.C. 612) are also subject to the restrictions of that act, and those restrictions should be incorporated in the approved plan. The plan must be submitted to the District Ranger. Prior submission and approval of a proposed plan of operations is not required if the proposed operations will be confined in scope to one or more of the exempted operations listed in Title 36, Code of Federal Regulations, section 228.4(a)(1) (36 CFR 228.4(a)(1)).

2817.21 - Required Content of a Plan of Operations

To properly serve its intended purpose, the proposed plan of operations must include the information described in paragraphs 1-8. Frequently needed information, but not required by the regulations, is enclosed in double parentheses.

1. Name, legal address and (telephone number) of the operator and of any lessees, assigns, or designees (and their duly appointed field representatives).

2. Names, legal mailing addresses, and (telephone numbers) of all owners other than the operator.

3. Name of mining district or mineralized area and the name of the claim(s) and/or property(ies) on which operation(s) will take place or will be based.

4. A location map of appropriate scale to show the general area in which operations will take place (location of claim(s) and/or property) and proposed route of access. In general, a forest recreation map should be adequate.

5. A surface disturbance map of the area within which onsite and offsite surface resource disturbing activities will, or could, take place. The scale and accuracy of the map must be adequate to permit identification of the site on the ground. A Geological Survey 7-1/2 minute topographic quadrangle map or its equivalent should suffice in most cases and should be tied to the general area location map.

6. The probable beginning and ending dates within which the proposed operation will be conducted (and, when appropriate, whether the operation will be intermittent or continuing).

7. The type and magnitude of the proposed operations. This should be documented and closely tied to the information on the maps. The Forest Service requires sufficiently detailed information, especially on earthmoving and site clearance operations, to identify the precautions which the operator needs to take to reasonably prevent and/or minimize adverse environmental impacts on national forest surfaces during and after the proposed operations.

8. Plans for reclamation of disturbed areas not required for further operations and for erosion control, including provisions for filling excavations, grading of spoil banks, blocking of access roads, reseeding areas, and so forth. Although improvement of surface resource conditions, above those existing prior to the mining operations or preparations for future use, are desirable goals, they cannot be forced on operators as an added cost.

2817.22 - Proprietary Information

Proprietary information generally should be required only for determining the reasonableness of proposed operations. Access to, interpretation, and evaluation of necessary information identified as proprietary and secret by the operator should be on a need-to-know basis insofar as Forest Service personnel are concerned. Generally, Forest Service mining experts are best qualified to evaluate such data, and insofar as possible the information should remain under the operator's control. When, at the request of the Forest Service, the operator includes and identifies such information in a proposed operating plan, said information should be labeled "For official use only" and kept securely and separate from the rest of the operating plan.

Common types of proprietary information may include geological and geophysical interpretations, maps and directly related interpretations, other data relating to the competitive rights of the operator, and privileged commercial and financial information.

When the public requests an operating plan, a determination must be made as to whether or not the plan contains proprietary information which must be withheld. The date of the information is relevant to this determination. Trade secrets or privileged commercial or financial information will ordinarily not be disclosed if such a disclosure is: (1) likely to cause substantial harm to the competitive position of the party from which it was obtained or (2) if furnished voluntarily, is likely to impair the Government's ability to obtain further information (FSH 6209.13, sec. 11, ex. 01).

2817.23 - Review and Approval of Plans

When possible, the authorized officer or duly appointed representative shall review the plan of operations with the operator, on a person-to-person basis, to facilitate joint development of a reasonable agreement relative to the proposed operations. Consistent with the objectives in FSM 2817.02, negotiations may be needed to effect changes in the proposed operations in order to avoid unnecessary surface resource damage but without undue interference with the proposed

operation. This may, in turn, reduce the amount of the surety bond which the operator must file with the appropriate Regional Director of Fiscal and Accounting Management before the plan of operations is approved (36 CFR 228.13(a)). In some cases, the operator and authorized officer may be able to totally eliminate the bond requirement.

The authorized officer must be fair, reasonable, and consistent in reviewing plans of operations and in determining the need for and amount of bonds required for reclamation purposes. Furthermore, the authorized officer shall bear in mind that the Forest Service function is the management and protection of surface resources in a manner compatible with reasonable and logical mining operations and not the management of mineral resources. In evaluating a proposed operating plan the authorized officer is expected to utilize mining geologists, mineral examiners, civil engineers, hydrologists, foresters, fisheries and wildlife biologists, cultural resource specialists, and landscape architects, where and when necessary.

Within 30 days after receipt of a plan of operations which meets the requirements of Title 36, Code of Federal Regulations, part 228, subpart A, (36 CFR part 228, subpart A) the authorized officer shall review the plan, prepare an environmental analysis according to instructions in FSM 1950, and notify the operator that the operating plan is:

1. Not required. (The plan of operations will serve as the "Notice of Intent to Operate").

2. Approved.

3. In need of changes or additions (to be specified).

4. Being reviewed, but that more time is necessary (for specified reasons) to complete the review. (Up to 60 additional days are allowed, but days during which the area of operations are inaccessible for inspection are not included when computing the 60-day period.)

5. Such that approval must be deferred until a final environmental statement has been prepared and filed by the Forest Service with the Council of Environmental Quality as provided in 36 CFR 228.4(f) (FSM 1950).

6. Cannot be approved because the area is not open to location and entry under the 1872 mining law.

In paragraphs 3, 4, and 5, pending approval of the plan, the authorized officer must approve any operation which will meet the environmental protection requirements of the regulations and which must be completed in order for the operator to comply with Federal and State laws.

Approval of a plan of operations by the Forest Service shall be accompanied by the following statements:

Approval of this operating plan does not constitute recognition or certification of ownership by any person named as owner herein.

Approval of this operating plan does not constitute now or in the future recognition or certification of the validity of any mining claim to which it may relate or to the mineral character of the land on which it lies.

2817.23a - Compliance With the Clean Water Act

All newly approved Plans of Operations for mining operations on National Forest System lands must comply with the Federal Water Pollution Control Act of 1972, 33 U.S.C §§ 1251-1387 (Clean Water Act or CWA). Proposed mining activities, which can reasonably be expected to result in any discharges into waters of the United States are subject to compliance with CWA Sections 401, 402, and/or 404 as applicable.

1. CWA § 401 - Water Quality Certification: Pursuant to CWA § 401, both the Forest Service and the mining operator have CWA requirements to meet. If the mining activity "may result in any discharge into the navigable waters," (CWA, Title IV, § 401(a) (1), 33 U.S.C. 1341(a), 1972) the mining operator must obtain a 401 certification from the designated CWA federal, state or tribal entity, typically the state. This 401 certification from the designated entity certifies that the operator's mining activities and associated best management practices (BMPs), mitigation and/or reclamation are in compliance with applicable provisions of state, federal and/or tribal water quality requirements of the CWA. The mining operator must give a copy of this 401 certification to the Forest Service prior to the Agency approving the Plan of Operations. Pursuant to CWA, the Forest Service cannot authorize a Plan of Operations until the 401 certification has been obtained or waived by the designated entity. Finally, the Forest Service may not authorize a Plan of Operations if the designated entity denies the certification.

2. CWA § 402 - National Pollutant Discharge Elimination System (NPDES) Permit: During the analysis of a mining proposal, if the Forest Service determines that a point source discharge into a stream or other water body can reasonably be expected to occur, the Agency should inform the proponent that a CWA § 402 NPDES permit will be required. The Forest

Service has no authority over the issuance of CWA § 402 NPDES permits. The state is usually the designated CWA entity for these permits, although a tribe or the U.S. Environmental Protection Agency may be responsible in some areas.

3. CWA § 404 - Dredge & Fill Permit: If proposed mining operations will result in dredged or fill materials being discharged into waters of the United States, the Forest Service should inform the proponent that a CWA § 404 permit may be required. The Army Corps of Engineers district in which the proposed activities are to take place should be consulted by the proponent to obtain an appropriate permit.

The Forest Service should request that the operator provide the Agency with a copy of the operator's 401 certification request made to the designated CWA entity. If the Forest Service does not receive a copy of the CWA § 401 certification from either the operator or the designated CWA entity within 60 days (or other reasonable time frame according to the entity's own CWA implementing regulations and/or guidance) of the operator's submittal, the Forest Service should then send a letter (and require delivery confirmation) to the designated CWA entity and:

a. Identify the operator and the proposed activities,

b. Provide a copy of the operator's requested certification, and

c. Notify the designated CWA entity that the Forest Service has not received the agency's decision on the 401 certification. Request that the designated CWA entity respond to this letter with a decision within 30 days from its receipt. Inform the designated CWA entity that if no response is received, the Forest Service will consider the certification to be waived with respect to the proposed Plan of Operations.

If the designated CWA entity issues any of the above permits or certifications to the mining operator, the substantive provisions of these water quality instruments that have not already been included in the Forest Service terms and conditions of the plan approval should be noted in the case file as additional state, federal or tribal requirements of the operator's Plan of Operations.

In addition, if the Forest Service has a CWA agreement with the state in which operations are to occur, the Agency may be a "designated management agency" (DMA) for CWA implementations on NFS lands and have responsibilities to ensure that water resources are protected using nonpoint source controls. Therefore, a Plan of Operations may also include measures the Agency determines necessary to protect water resources, e.g. BMPs, in addition to any others listed by the state, tribe or federal entity. Ideally the terms and conditions necessary to protect water quality on NFS land would be an interactive process with the state, and would include preventive, protective and/or restorative measures for both point and nonpoint pollution sources. This cooperation is particularly important when dealing with impaired waters as defined by the CWA § 303(d), where no further water resource degradation is allowed.

2817.24 - Bonds

Prior to approval of a plan of operation, the operator may be required to furnish a guarantee to perform reclamation work in an amount equal to the estimated cost of that work. Guarantee may be in the form of approved surety bonds, cash bond, or irrevocable letter of credit (FSM 6562). If security in lieu of surety bond is received, the security will be sent to the Regional Director of Fiscal Management. If the guarantee is cash, the check or money order should be drawn payable to the Forest Service, U.S. Department of Agriculture. If a surety bond is submitted, the surety must be among those appearing on the quarterly list of acceptable sureties furnished by the Treasury Department and authorized to do business in the state in which the operation occurs.

Whenever a bond furnished under an approved plan of operations shall be found unsatisfactory, a new bond that is satisfactory must be furnished within 15 days from the date the operator is notified that the bond in question is not satisfactory.

The release of the surety bond or equivalent cash deposits is conditioned upon the Forest Service's acceptance of the operator's reclamation of the disturbed surface resources in accordance with Title 36, Code of Federal Regulations, section 228.8(g) (36 CFR 228.8(g)).

The authorized Forest Service officer must, in writing, promptly relieve the operator from any further reclamation responsibilities on those areas on which such reclamation requirements agreed upon in the approved plan of operation have been completed and accepted by the Forest Service. This may occur piecemeal, if the reclamation takes place in approved stages.

All reasonable effort should be made, through agreements with States which require bonds for reclamation disturbances in National Forests, to avoid double bonding.

2817.24a - Reclamation Bond Estimates

Obtain performance bonds to cover the estimated reclamation costs for prospecting, mining, and other mineral operations on National Forest System lands (FSM 6561.4). When estimating such bonds, estimators should follow the guidance found in the Forest Service's *Training Guide for Reclamation and Administration,* adopted in April 2004 for plans of operations authorized and administered under Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A).

2817.24b - Reclamation Bond Reviews

All reclamation bonds will be annually reviewed for adequacy, considering such factors, for example, as changing site conditions and unforseen disturbances.

2817.25 - Access

The term, "access," as used in Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A), is limited to operations under the 1872 mining law and refers to means of ingress and egress, such as roads, trails, bridges, tramways, and landing fields for aircraft. It refers also to modes of transport, such as any type of wheeled or tracked vehicle, whether used on or off roads; to any type of aircraft and boat; and to saddle and pack animals. Access to patented mining claims, mineral leases, and private property inholdings are not subject to 36 CFR part 228, subpart A nor to the access provisions as discussed herein.

Not all means or modes of access in connection with operations under the 1872 mining law require advance approval (36 CFR 228.4(a) and 228.12).

Any person prospecting, locating, and developing mineral resources in National Forest System lands under the 1872 mining law has a right of access for those purposes. Such persons need not have located a mining claim to exercise that right.

Operations are defined as "[a]ll functions, work, and activities in connection with prospecting, exploration, development, mining or processing of mineral resources and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations in this part, regardless of whether said operations take place on or off mining claims." (36 CFR 228.3(a).) Unless modified by the Forest Service and agreed to by the operator/claimant, approval of an operating plan includes approval of the means of access and modes of transport described in the plan. Road construction or restoration on mining claims covered by an operating plan requires no separate permit or written authorization and neither are subject to charge.

An approved operating plan is not required for use of vehicles on existing public roads and Forest Development Roads. However, use of existing Forest Development Roads is subject to the road regulations, 36 CFR part 212, and to control in accordance with FSM 7770.

Commercial hauling on existing roads requires a road use permit if the road is posted with this requirement under 36 CFR 212.7(a)(2). Such use may require deposits for maintenance or reconstruction work to accommodate the planned use.

An operator must receive advance approval to use existing roads that have been closed by or with the approval of the Forest Service. Use of such closed roads must be authorized through the plan of operations approval process.

If no operating plan is required under 36 CFR 228.4(a)(1), as would be the case if after receiving a notice of intent the authorized officer determines that significant disturbance of surface resources is not likely to occur, no special authorization is necessary. For instance, in the situation where the road is closed only by a locked gate, the operator/claimant should be provided access through the gate as necessary to accomplish the proposed activity.

Reasonably necessary use of vehicles off roads by persons operating under the 1872 mining law in areas closed to off road use of vehicles does not in itself automatically require an operating plan. An operating plan is required when such use will likely result in significant disturbance of surface resources. Operators intending to use vehicles off roads in areas closed to such use are required to file a notice of intent with the authorized officer when the activity or use might cause significant disturbance of surface resources.

Provisions in an operating plan for regulating means of access should be evaluated in comparison with existing criteria in FSM 7721.1 governing similar uses for other purposes. This helps to maintain consistent treatment of National Forest System users.

The Forest Service is not obligated to approve access if the proposed means of access or mode of transport is not reasonably necessary for the work to be performed for prospecting, locating, and developing mineral resources. An operator who proposes means or modes of access that will result in significant disturbance of surface resources will be required to justify the proposal. Forest Service minerals geologists or mineral examiners should be consulted in evaluating such justification. The primary consideration is that the means and modes of access must be reasonably necessary for the particular situation. Road building, for instance, should no longer be condoned or accepted simply to satisfy the first year's assessment requirements or to get a bulldozer to a claim so that baseless "discovery" cuts can be made that are not justified by actual mineral evidence. Use the guides in paragraphs 1-4 to help in judging whether certain modes of access are reasonably necessary:

1. Construction of a road will not ordinarily be necessary for:

   a. The mere acts of locating and establishing the boundaries of mining claims.

   b. Geologic mapping, surface sampling (including geochemical), and most geophysical work.

   c. Bulldozer work of minor scope that may be justifiable for surface mapping and sampling on mining claims, but the terrain is such that a road is not needed to get the equipment to the site.

   d. Moving drills, accessory equipment, and personnel to drill sites if the terrain is such that a road is not needed.

2. Road construction, reconstruction, or restoration may ordinarily be justifiable for:

   a. Controlling and mitigating surface resource disturbance when there is an intensive drilling program involving a number of drills or frequent passage of personnel, supply trucks, water trucks, and similar repetitive travel.

   b. Underground exploration and development work requiring frequent access to the property for personnel, equipment, and supplies.

3. Under some circumstances, pack animals, helicopters, and even boats, might be justifiable alternative modes of transport.

4. The activities in paragraphs 1, 2, and 3 apply mostly to mineral exploration. Development, construction, and operations of mines, mills, and related facilities usually require good road access.

Evaluations of proposals for construction, reconstruction, or restoration of roads should include possible alternatives. Construction to a different standard than proposed, or of a different means of access, or other modes of transport may in some situations prove less damaging to surface resources and still serve the intended purpose as well or better without adding unbearable or unjustifiable economic burdens on the operator.

2817.26 - Operations in Wilderness

FSM 2323.7 through 2323.75 cover prospecting and mining in wilderness under the authority of the mining laws. Where the direction in these sections requires permits or other authorization for prospecting, mining, and associated uses, the operating plan required by Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A), and by the direction in this chapter would meet those requirements. The operating plans must include provisions for protection and management of surface resources, environment, and wilderness character.

The sensitive nature of wilderness requires an approved operating plan for those operations in wildernesses. Those activities otherwise generally prohibited within wilderness--including the use of mechanized transport, aircraft, or motorized equipment--shall be authorized only when proven to be the best management practice and to be essential (36 CFR 228.15(b)). An approved operation plan shall serve as authorization for such otherwise prohibited activities on mining claims in wilderness.

Access across wilderness to a claim or to areas in which an operator has no mining claims, which will result in any disturbance of surface resources or which is otherwise generally prohibited by the Wilderness Act, shall be authorized only by issuance of a special-use permit (FSM 2817.25).

2817.3 - Inspection and Noncompliance

1. Under Approved Operating Plan. When activities are being conducted under an approved operating plan, regular compliance inspections must be conducted to ensure reasonable conformity to the plan and to guard against unforeseen detrimental effects. The frequency, intensity, and complexity of inspection shall be commensurate with the potential for irreparable and unreasonable damage to surface resources.

2. Without Operating Plan. When operations are being conducted without an operating plan because it was determined none was required, the need for regular inspections shall be determined on a case-by-case basis. Timely inspections shall help assure conformance to the environmental protection requirements of the regulations, as well as identify operations that vary from those described in the notice of intention and which may require an operating plan.

3. Detection. Forest officers shall make note of, and report on, all operations for which neither notices of intention to operate or operating plans have been submitted. Such operations shall be identified and inspected as soon as practicable to determine if a plan of operations or a notice of intent is required.

4. Inspector Qualifications. Inspections shall be conducted by Forest Service mineral administrators who are familiar with the equipment and methods needed to find and produce minerals and who can accurately assess the significance of surface resource disturbance. Inspectors should be capable of identifying those activities of an operator which:

a. Are reasonably necessary to the operation,

b. The activities could perhaps be done differently with less effect on surface resources without endangering or hindering the operation, and

c. Activities that are unreasonable or unnecessary.

Employees who perform administration of locatable mineral operations shall be certified as a Locatable Minerals Administrator or work under the guidance and oversight of a certified Locatable Minerals Administrator (FSM 2891.03).

5. Noncompliance. Wherever practicable, acts of noncompliance should be discussed with the operator, either in person or by telephone, in an attempt to secure willing and rapid correction of the noncompliance. Such discussions shall be made a matter of record in the operator's case file. Where the operator fails to take prompt action to comply and the noncompliance is unnecessarily or unreasonably causing injury, loss, or damage to surface resources, the authorized officer must take prompt noncompliance action. See FSM 2818 for direction on resolving unauthorized residential occupancy on mining claims.

a. Notice of Noncompliance. The first step in any noncompliance action is to serve a written notice of noncompliance to the operator or the operator's agent, in person, by telegram, or by certified mail. This notice must include a description of the objectionable or unapproved activity, an explanation of what must be done to bring the operation into compliance, and a reasonable time period within which compliance must be obtained. Continued refusal of the operator to comply after notice would usually require enforcement action.

b. Enforcement Action. Civil or criminal enforcement, or a combination of both, are available for enforcement of Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A). The decision on which procedure, or combination, to use shall depend upon the particular facts in each case and the probability of success and possible consequences. The regional mineral staff or the local Office of the General Counsel shall be consulted for advice prior to any enforcement action to ensure consistency and conformance with mineral law and regulation. The appropriate U.S. Attorney shall be consulted to coordinate the criminal and civil actions.

(1) Civil Action. Two types of civil relief in Federal District Court are available: damage recovery and injunctive. An action to recover costs of repairing damages or to compensate for irreparable damages would be appropriate for those cases where such damages have already occurred and no further operations were being conducted or likely to be conducted. Such damage suits require extended periods of time for completion. Injunctive relief can be obtained quickly when the facts of a particular case warrant such action. There must be strong justification that the party requesting relief is suffering or would suffer irreparable harm and that harm must usually be incompensible. Moreover, it must be likely that the complainant would actually succeed on the merits of the case.

(2) Criminal Action. In cases where unnecessary and unreasonable damage is occurring and where reasonable attempts fail to obtain an operating plan or to secure compliance with an approved operating plan, the operator may be cited for violation of the appropriate section of 36 CFR part 261 or part 262, according to existing delegation of authority.

2818 - OCCUPANCY ON MINING CLAIMS

One of the most difficult problems of the Forest Service in regard to minerals is that of unauthorized residential occupancy on mining claims. The problem arises primarily out of:

1. Imprecision in the law regarding occupancy,

2. Historical laxity of the Government in taking action against suspected unauthorized occupancy, and

3. The difficulty in legally determining intent, which is at the heart of the issue.

The basis of the occupancy issue is the 1872 Act which states, "Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, . . . shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase; . . ." (30 U.S.C. 22). The meaning of that statute has been broadened and clarified by court decisions and legal interpretations. For example, it is generally accepted that a claimant to an unpatented mining claim is entitled to uses of the surface that are reasonably necessary to the accomplishment of bona fide prospecting, exploration, mining, and processing of locatable minerals. On the other hand, it follows that a claimant to an unpatented claim is not entitled to certain uses of the surface where such uses are not reasonably necessary or where the claimant is not actually involved in bona fide minerals-related activities.

In order for structures, including residences, to be authorized under the United States mining laws and laws requiring the management of surface resources, two conditions must be met:

1. The structure must be reasonably necessary for use in prospecting, mining, or processing of locatable mineral resources and,

2. The structure must be covered by an approved operating plan or special use permit. Generally, a structure is not necessary for annual assessment work.

2818.01 - Authority

Judicial decisions rendered in the 30 years since Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A), was promulgated, gave content to the meaning of the term "significant disturbance." For example, it is well established that the construction or maintenance of structures, such as cabins, mill buildings, showers, tool sheds, and outhouses on National Forest System lands constitutes a significant disturbance of National Forest System resources. United States v. Brunskill, 792 F.2d 938. 941 (9th Cir. 1986); United States v. Burnett, 750 F. Supp. 1029, 1035 (D. Idaho 1990). (70 FR 32713, June 6, 2005.)

2818.02 - Policy

The Forest Service must prevent and eliminate unauthorized use and occupancy of National Forest System lands.

2818.1 - Actions Under 1872 Act Use Regulations

Title 36, Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A) provides a logical and effective means of controlling new occupancy problems through the requirements for an operating plan. If the mining laws are used as justification for a new structure, the structure must be covered in an approved operating plan, in which the reasonable necessity is explained--unless the structure is authorized by a special use permit due to other considerations.

1. Potential For Need of Structures. The necessity for structures in regard to mineral activities depends upon several factors:

a. The stage of mineral activities,

b. The expected size and life of the proposed operations,

c. The remoteness of the site,

d. The amount and kind of equipment requiring protection and storage, and so forth. For example, a tool-storage structure may be a reasonable necessity if the plan of operations is for a long period of active exploration or development, and it is inconvenient to transport tools to and from the claim. On the other hand, a residence

will not be necessary to conduct minimal assessment work on a mere indication of mineral. The area of operations will seldom be so remote, or other "needs" so compelling, as to justify residential occupancy on the claim.

2. Potential for Residential Occupancy. When it appears that residential occupancy, may be, an issue on an unpatented claim, the District Ranger shall take timely action to inform the claimant in writing of:

a. Rights regarding use and occupancy,

b. The requirements of 36 CFR part 228 subpart A, and

c. The Forest Service responsibility for surface resource management and protection. Exhibit 01 is a sample letter for this purpose. The claimant should be encouraged to demonstrate the facts, reasons, and purpose for use or occupancy. The Forest Service must make a diligent effort to resolve differences through agreement and document all communications and actions relative to the requirements in paragraphs 2a-c.

Except in the most clear cut cases, the District Ranger should request the assistance of a Forest Service mineral specialist or certified mineral examiner (FSH 2809.15, sec. 10.5) to evaluate the situation on the ground, and advise the officer whether the proposed or existing surface use is logically sequenced, reasonable, and consistent with existing laws and regulations.

The advice should be used to help with negotiations to secure willing cooperation. If negotiations fail, the advice should be formalized using the surface use determination procedures (FSM 2817.03a and FSH 2809.15, ch. 10).

As stated in FSM 2817.03, willing cooperation should be sought, but legal remedies are available through the Department of Justice.

2818.1 - Exhibit 01

Sample Letter

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

2810
(Date)

(Name and address of claimant)

Dear_____:

(Introductory statement)_____. As District Ranger, I must inform you of Forest Service policy regarding mining activity and uses of the surface on a mining claim.

The mining laws give the public the right to prospect and to locate and claim valuable mineral deposits which they may discover on certain lands. On the other hand, the mining laws prohibit a claimant from using unpatented mining claims for purposes other than for mineral-related activities. Forest Service policy is to encourage bona fide prospecting and mining and to allow uses that are reasonably necessary for these purposes, but we must oppose unauthorized uses of a claim. This policy applies to the use of claims for residences. If we determine that a claim is being used for unauthorized uses, we are required by law to take steps to end such uses.

The Federal regulations found in 36 CFR part 228, subpart A provide procedures to follow regarding mineral related activities under the mining laws on National Forest lands. Specifically they require that any activity by an operator which might cause significant surface resource disturbance must be conducted according to a plan of operations approved by the Forest Officer. (Your cabin) (Any structure which you may plan to build) (The building which you have under construction) must be covered by such a plan of operations. In order for that structure to be authorized under a plan, you must be able to show a reasonable necessity resulting from planned prospecting, exploration, or mining activities. If you have any questions about the requirements of a plan of operations or the justification for a structure, please come to see us so we can discuss it.

Sincerely,

District Ranger

2818.2 - Uninhabitable Cabin on Mining Claim

An uninhabitable cabin on National Forest land is an administrative problem, because it may easily be repaired and used for purposes unrelated to mining. The mining claimant may give permission to have the cabin removed when the claimant realizes that is represents a hazard to the administration of the area. Until an unoccupied cabin is removed, it is the District Ranger's responsibility to question any activity involving its repair or use (36 CFR 228.10). If repairs are started on a cabin, the District Ranger shall proceed as stated in FSM 2818.1.

2818.3 - Use of Surface Use Determinations and Validity Determinations

Historically, residential occupancies which appeared to be unauthorized under the mining laws have been resolved through the use of validity determinations by the Department of the Interior. However, the regulations in Title 36 Code of Federal Regulations, part 228, subpart A (36 CFR part 228, subpart A) are believed to be the best tool--ultimately--for preventing unauthorized uses.

As is the case with policies regarding surface management procedures (FSM 2817.03), the use of face to face negotiations is the preferred method of resolving unauthorized occupancies. As part of those negotiations, the authorized officer should request the assistance and advice of a Forest Service mineral specialist or mineral examiner. If negotiations fail, the officer should request that the advice be formalized according to surface use determination procedures of FSH 2809.15, chapter 10.

Generally, the use of validity determinations should be limited to those rare occasions where the certified mineral examiner believes that it would be useful given the specific details of the case. Otherwise, the use of validity determinations should be limited to situations where valid existing rights must be verified where the lands in question have been withdrawn from mineral entry (FSM 2811.5, para. 1) or meeting Forest Service interagency agreement obligations regarding patent applications (FSM 2815).

2819 - MINING CLAIM CONTESTS

The validity test is based on the legal concept that a mining claim is not valid without a discovery of a valuable mineral deposit. Title 43, Code of Federal Regulations, section 3831. (43 CFR 3831.1) states that "Rights to mineral lands, owned by the United States, are initiated by prospecting for minerals thereon, and upon the discovery of minerals, by locating the lands upon which such discovery has been made."

1. The order of action by regulation is:

    a. Prospecting,

b. Discovery, and

c. Location of a claim.

This procedure entitles the claimant to the minerals discovered, the right to mine them, and, under certain circumstances, the right to a patent to the surface of the claim. Prior to obtaining a patent, a claimant's rights on the land are limited to those reasonably necessary in connection with prospecting, mining, or processing operations. Prior to a discovery, a claim cannot be valid. In practice, most claims are staked and located prior to discovery on the basis of a prospect or mere indication of a mineral deposit. This practice protects the claimant's rights from other prospectors, but it does not grant any rights against the United States. Department of the Interior decisions have upheld the right of a claimant to hold and work a claim prior to "discovery," provided the claimant is diligently seeking a discovery on a promising prospect. However, it remains a legal fact that a claim is not, and cannot be, valid prior to the discovery of a valuable mineral deposit.

Accordingly, if a claim is found to lack a discovery of a valuable mineral deposit by the Department of the Interior or in a Federal court, the claim is null and void. The Forest Service then is in a better position in trespass actions against a claimant for unauthorized residences or other uses. While, in fact, a claimant with a valid discovery does not have more surface rights than one without a valid discovery, judges have tended to depend heavily on validity findings because of the implications of good faith of the claimant.

2. The mining laws are comprised of two parts:

a. The statutes themselves, which are general in nature; and

b. The decisions of the courts and of the Department of the Interior, which interpret and apply the statutes to specific cases.

In considering whether to contest the validity of a mining claim or to challenge questionable mining claim occupancy and use, the Forest Service is guided by the pertinent statutes and decisions.

No adjudicative power has been given to the Forest Service. Thus, statements about validity are statements of belief and not formal determinations. The conclusions reached by a Forest Service mineral examiner are based on physical facts interpreted in the light of professional expertise. Consistent with those conclusions and beliefs the Forest Service should attempt to resolve conflicts without resort to legal action. If those attempts are unsuccessful, appropriate legal action is required. The facts should be referred to the Office of the General Counsel before deciding if legal action is appropriate.

2819.1 - Forest Service Role

1. Request for Mineral Examination. When administrative problems of a mineral nature arise or unauthorized use of a mining claim is believed to exist which cannot be satisfactorily resolved, the District Ranger should submit a request to the Regional Office via the Forest Supervisor on Form FS-2800-4, Request for Mineral Examination--Mining Location. A Forest Service mineral examiner, who has been properly authorized, may go on an unpatented mining claim to make a mineral investigation. Every effort should be made for amicable entry and examination of the claims, preferably accompanied by the mining claimant or the claimant's duly appointed representative.

2. Use of Force. If the mining claimant threatens or uses force to prevent the mineral examiner from going on the land, the Forest Supervisor and regional office Mining Geologist should be notified. If the forest is unable to get the claimant to agree to the examination, it may be necessary to work through the U.S. Attorney to secure the participation and protection of a U.S. Marshal.

3. Report of Mineral Examination. The mineral examiner's findings, conclusions, recommendations, together with pictures and maps, will be compiled in a Report of Mineral Examination, and sent to the Regional Office for technical review and approval by the Regional Mineral Examiner. This report will be the basis for a decision on whether or not to contest the claim. In situations where the mineral examiner's conclusions are urgently needed, the examiner will, when possible, inform the District Ranger at the time of examination or soon thereafter.

4. Problem Resolution. Concerted effort should be made to resolve problems, or terminate unauthorized use, through reasoning, persuasion, and agreement. The knowledge that, in the opinion of a Forest Service mineral examiner, a claim is not valid can be of assistance in this respect. When this fails, contest action may be required.

2819.2 - Department of the Interior Role

Although adverse proceedings might be required for a variety of reasons, such as trespass, patent application, land classification, land clearance, and so forth, each case is initiated with a request from the Regional Forester that the land office issue a complaint. (Assuming, of course, that the claim is not supported by a verifiable discovery of a valuable mineral deposit and the action meets with the approval of the Regional Attorney.)

The most common legal action is a contest of claim validity which is conducted by and under the regulations of the Department of the Interior. To that Department, Congress has given adjudicative powers in matters relating to all the land laws, including the mining laws. The decision in a mining claim contest is a formal determination of validity. The authority of the Department of the Interior to rule on claim validity was confirmed by the Supreme Court in Best v. Humboldt Placer Mining Co., 371 US 334 (1963).

2819.3 - Actions Before Magistrates and in Federal Court

1. Initiating Action. Action is initiated by the filing of a Forest Officer's sworn complaint with supporting affidavits (if appropriate), setting forth the nature of the offense. If probable cause appears, the complaint is followed by a summons to appear, or less frequently, a warrant of arrest. On arraignment, a not guilty plea is followed by trial. A guilty plea or decision can result in imprisonment or a fine. Typical mining claim related cases tried by magistrates have involved continuing occupancy after a mining claim is declared invalid, and off-claim road construction without a permit. Another sort of case which potentially could be tried is nonmineral occupancy of a claim, the validity of which has not been determined formally.

2. United States District Court. Numerous cases have been resolved in the Federal courts and should continue to be resolved there. Actions are initiated in the U.S. District Court and can be brought by claimants as well as by the United States.

3. Review. Suits by claimants generally seek review of decisions resulting from contests. Forest Service participation is extremely limited, since the review is to Department of the Interior decisions.

No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, et al.,
Plaintiffs/Appellants,

v.

HEATHER PROVENCIO, et al.,
Defendants/Appellees

and

ENERGY FUELS RESOURCES (USA) INC., et al.,
Intervenor-Defendants/Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-cv-8045 (Hon. David G. Campbell)

DEFENDANT-APPELLEES' SUPPLEMENTAL EXCERPTS OF RECORD VOLUME 2 OF 3 (SER 231 - 501)

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UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MANUAL TRANSMITTAL SHEET	Release 3 - 332 Date SEP 11 2007

Subject: H-3890-1 - HANDBOOK FOR MINERAL EXAMINERS – (Internal)

1. Explanation of Material Transmitted: This release updates and revises the text of the Handbook for Mineral Examiners, H-3890-1. The revised Appendices were previously issued as release 3-322 of 09/01/2004. The Handbook and its components are being issued in both an 8 ½ x 11 desktop edition and in a pocket edition for effective use in the field.

2. Reports Required: None.

3. Material Superseded: The Material superseded by this release is listed under "REMOVE" below. No other directives are superseded.

4. Filing Instructions: The field pocket edition is filed in the "red binder" Manual sets with Manual Section 3890. Use the existing special binders previously provided to house the pocket edition of the Handbook. The 8 ½ x 11 edition is to be filed behind Manual Section 3890.

REMOVE:	INSERT:
Title Page (rel. 3-322)	Title Page
Table of Contents (rel. 3-322)	Table of Contents
Text (All rel. 3-234)	Text (All)
	Appendix VI A
(Total: 37 Sheets)	(Total: 64 Sheets)

Assistant Director
Minerals, Realty, and Resource Protection

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

H – 3890 -1 - HANDBOOK FOR MINERAL EXAMINERS

Policies, Procedures and Standards for Conducting Mineral Examinations of Mining Claims and Sites on Federal Land

and

Appearing as an Expert Witness in an Administrative Hearing before the Department of the Interior

Third Edition (Revised) 2006

by

The Mineral Examiner's Certification Panel [1]

1 Burrett Clay, Chairman; Matthew Shumaker, Executive Secretary; Roger Haskins, Member, BLM; Roy Drew, Member, BLM; Victor Dunn, Member, BLM; Glenwood Kerestes, Member, BLM; John Burghardt, Member, National Park Service.

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Chapter 1 -- Introduction

A. The Authority of the Secretary of the Interior under the Mining Laws.

1. The Secretary of the Interior.

The authority of the Secretary of the Interior with respect to public lands is described in Cameron v. United States, 252 U.S. 450 (1920), where the U. S. Supreme Court said:

"By general statutory provisions the execution of the laws regulating the acquisition of rights in the public lands and the general care of these lands is confided to the Land Department, as a special tribunal; and the Secretary of the Interior, as the head of the department, is charged with seeing that this authority is rightly exercised to the end that valid claims may be recognized, invalid ones eliminated, and the rights of the public preserved.

* * * * * * * * * * *

"[T]he power of the department to inquire into the extent and validity of the rights claimed against the government does not cease until the legal title has passed. * * * [The Department's] province is that of determining questions of fact and right under the public land laws, of recognizing or disapproving claims according to their merits and of granting or refusing patents as the law may give sanction for one or the other."

* * * * * * * * * * *

Additional plenary authority is found at 43 U.S.C. § 1457:

"[T]he Secretary of the Interior is charged with the supervision of public business relating to the following subjects and agencies:

* * * * * * * * * *

13. Public lands, including mines."

and at 43 U.S.C. § 2:

"[T]he Secretary of the Interior or such officer as he may designate shall perform all executive duties appertaining to the surveying and sale of the public lands of the United States, or in anywise respecting such public lands, and, also, such as relate to private claims of land, and the issuing of patents for all grants of land under the authority of the government."

2. The Authority of the Director of the Bureau of Land Management.

The authority to administer the mining law program has been delegated to the Director of the Bureau of Land Management (BLM) by the Secretary of the Interior.[1]

The BLM's authority originates from its succession to the duties and responsibilities of the General Land Office and the Grazing Service.[2]

3. Mining Claims and Property Rights.

A mining claim constitutes a possessory interest in the land, authorized by the Mining Law of 1872 (30 U.S.C. §§ 21- 54) (hereinafter "Mining Law"). If a mining claim is valid, the mining claimant has a possessory interest in the mineral and the surface for mining or milling purposes. This property right may not be extinguished arbitrarily.[3]

4. Memoranda of Understanding with Other Agencies.

The U.S. Forest Service and the National Park Service may perform mineral examinations on lands they administer under Memoranda of Understanding (MOU) and Interagency Agreements (IA) they have entered into with the BLM. We retain responsibility for final review and approval of mineral examination work conducted by other agencies. For the purposes of 18 U.S.C. § 1905 and 43 C.F.R. Part 2, subpart C, (proprietary and confidential information handling), the non-BLM agency is a secondary office of control for the Department of the Interior for handling the proprietary and confidential information of a mining claimant whose mining claim is being investigated.

B. Definition of a Mineral Examiner.

A mineral examiner is a federal employee who through education, training and experience has met the requirements as defined within Manual Section 3895 and received certification as a mineral examiner (CME), or review mineral examiner (CRME) by the Director of the Bureau of Land Management. The National Park Service uses our certification process to certify its mineral examiners. The U.S. Forest Service (USFS) also maintains a certification program for its mineral examiners. Employees certified by the USFS as a CME may conduct mineral examinations for BLM under an interagency MOU. Only a BLM CRME may conduct final technical review of a mineral report if BLM is required to act upon the recommendations in the mineral report.

1 135 DM 1.1A(1)(c)(v); 235 DM 1.1A
2 Reorganization Plan No. 3 of 1946 (60 Stat. 1095-1102); Reorganization Plan No. 3 of 1950 (64 Stat. 1262).
3 Best v. Humbolt Placer Mining Co., 371 U.S. 334, 337 (1963).

C. Duties of the Mineral Examiner.

1. Role of a Mineral Examiner.

Your role as a CME is to conduct all validity determinations, common variety determinations, surface rights determinations, and mineral-in-character determinations. In order to make these determinations, you must have a working knowledge of the mineral industry, mineral property evaluation methodologies, geology, and mining engineering. You must also understand and be able to apply the standards established in public land laws, regulations, case law, and Departmental policy.

2. Conducting the Mineral Examination.

You must do a thorough, objective, and professional examination and evaluation of each mining claim, mill site, and tunnel site. Although you are required to work in an objective manner, you work on behalf of the United States, and have no fiduciary obligation to the claimant. Throughout this handbook the terms, "mining claims" or "claims" refer to lode claims, placer claims, mill sites and tunnel sites, unless otherwise noted.

3. Functions of a Mineral Examiner.

You apply the legal and technical standards for mining claim validity established by the Department and give an opinion regarding whether the examined mining claim has met those standards. If you conclude that the standards have been met, then the mining claim will be considered valid. If a mineral patent application is at issue, the mining claim will be recommended for patent. If you conclude that the standards have not been met, then you will recommend a contest. If a contest action is initiated, you will be required to testify as an expert witness for the Government (See Chapter 7).

a. Discovery of a valuable mineral deposit. Your must verify whether the mining claimant has, in fact, found a valuable mineral deposit. You should not explore or sample beyond those areas exposed by the claimant or perform discovery work for the claimant. Your examination is not intended to determine if additional unexposed mineralization might be found somewhere within the limits of the claim that might constitute a valuable mineral deposit.[4] However, you have the discretion to do additional sampling to obtain a proper sample suite to characterize the deposit.

b. Common (or uncommon) variety determinations. The purpose of your examination is to determine if the claimant has found a mineral that is subject to location under the Mining Law, as amended. If you verify the mineral is subject to the mining laws, it is thereafter subject to the discovery requirements of the mining laws.

4 Hallenbeck v. Kleppe, 590 F.2d 852, 859 (10th Cir. 1979); United States v. Porter, 37 IBLA 313, 315 (1978).

4. Obligations of a Mineral Examiner.

A mineral examiner is obligated to make a careful and competent inspection of a mining claim in order to be able to testify meaningfully on the presence or absence of mineral discovery there.[5]

5. Expert Opinion of a Mineral Examiner Establishes a Prima Facie Case.

An expert is defined as "A person who, through education or experience, has developed skill or knowledge in a particular subject, so that he or she may form an opinion that will assist the fact finder."[6]

"[W]here a Government mineral examiner offers his expert opinion that discovery of a valuable mineral deposit has not been made within the boundaries of a contested claim, a prima facie case of invalidity has been made, provided that such opinion is formed on the basis of probative evidence of the character, quality, and extent of the mineralization allegedly discovered by the claimant. Mere unfounded surmise or conjecture will not suffice, regardless of the expert qualifications of the witnesses. * * * The admissibility of expert testimony in a mining claim contest is determined by the hearing examiner, who exercises a wide latitude of discretion in making these determinations."[7]

6. Market Expertise.

In order to testify as an expert witness, the

"...testifying mineral examiner must be an expert as to the marketability or value of the particular mineral."[8]

7. Alternate Approaches.

The procedures set forth in this handbook do not address all possible situations. You may encounter situations where handbook and manual guidance do not assist you or where rigid application of that guidance will create an incorrect or indefensible result. In such situations you are expected to draw upon your professional knowledge of accepted industry practices, and case law, as well as the scientific method, to develop a workable solution. If you must deviate from handbook and manual guidance, be certain to document the reasons for doing so, the methodology employed, and the results in the final product. The final product is usually a mineral report that will undergo technical review by a Bureau CRME.

5 United States v. Hess, 46 IBLA 1, 7 (1980).
6 Black's Law Dictionary 600 (7th ed. 1999).
7 United States v. Winters d/b/a/ Piedras Del Sol Mining Co., 78 Interior Dec. 193 (1971) (emphasis added).
8 Rodgers v. Watt, 726 F.2d 1376, 1380 (9th Cir. 1984) (emphasis in original) and cases cited therein.

D. How to Conduct Yourself with the Public.

1. Do Not Give Legal Advice.

Members of the public, including the mining claimant, may ask you to give advice and opinions on many topics. You are not an attorney or a professional consultant working on behalf of the claimant. Do not give legal advice. When asked legal questions, you should suggest that the person contact an attorney. You should avoid giving information, advice, or suggestions that are not within the scope of your authority.

2. Educating the Claimant.

It is important for you to educate the claimant about the mineral examination process. When mining claimants ask you questions about your investigation of his or her mining claims or mill sites, you should limit your answers to an explanation of the procedures you will follow during the course of the examination. This is especially true in talking to mining claimants who have mining claims on land under the jurisdiction of other federal agencies. Your job is to collect the relevant facts, make a professional judgment, and to form an opinion as to the validity of the mining claim. You then document the process and results in a mineral report and make a recommendation regarding the claim validity.

3. Contacts with Claimants.

Please be friendly and courteous at all times. Exercise patience and be a good listener. The mining claimant's primary contact with the Department may be you, the mineral examiner. The mining claimant's impression of the agency will depend on your manner and professionalism during the examination.

a. Invitation to join the mineral examination.

You must invite the mining claimant to accompany you during the validity examination. You must give the mining claimant the opportunity to identify the discovery points and other places from which he or she wishes you to take samples. You must not allow the claimant to collect the samples for you or in anyway handle the samples. It is not your job to perform exploration for the claimant. Your job is only to verify the claimant's data and results. It is important that you explain to the claimant that you will collect only a reasonable number of samples. You may also exercise your professional judgment and take samples from locations not selected by the mining claimant, in order to adequately evaluate the mining claim.

b. Expressing opinions.

Before the report is final, you should not express or imply any opinions or conclusions to the claimant or other outside parties about the value of the minerals present or the validity of the claim. A mineral report is not final until it has undergone all necessary agency

review (See Chapter 6). It is entirely appropriate for you to discuss your opinions and conclusions with other Bureau personnel or the Solicitor's Office.

c. Professional discretion in communications with a claimant.

After the mineral report is final discuss the general outcome with the claimant. In some cases, if the recommendation of the mineral report is to initiate a contest against all or some of the mining claims at issue, you may ask the claimant if he or she is interested in relinquishing those claims.

d. Suspected fraud.

If you suspect that the mining claimant has engaged in fraudulent or other potentially criminal activities, you should contact the Solicitor's Office and BLM Law Enforcement. Likewise, if the claimant has relied on unproven technology, unusual or proprietary assay methods, or you have reason to believe the claimant has salted the samples, you should consult with the Solicitor's Office.

Chapter II – Mineral Investigation Types

A. Valid Locations under the Mining Laws.

1. Locations – Generally.

a. Lode or placer mining claims. A mining claim must be properly located, maintained, and contain a discovery of a valuable mineral deposit subject to location under the Mining Law, as amended.[1]

b. Mill sites.

(1) A dependent mill site must be properly located, maintained, and not exceed 5 acres in size. It must be located on non-mineral land that is not contiguous to a vein or lode. It must be used or occupied for mining or milling purposes in conjunction with an associated mining claim or claims, or for other uses reasonably incident to a mining or milling operation.[2] A claimant may locate more than one mill site per mining claim, as long as they are properly used or occupied.[3]

(2) Independent or custom mill sites may also be located and maintained for the custom tolling and processing of ores and concentrates from several mines.[4]

c. Tunnel sites. A tunnel site is located and maintained for the development of an existing vein or lode, or for the discovery of blind or undiscovered valuable mineral deposits. A tunnel site may not exceed 3000 feet length, as measured from the beginning of the portal. It must be worked diligently as required by law.[5] This requires advancing the working face or improving the tunnel every six months.[6]

A tunnel site is a subsurface right-of-way and intended as an exploration tool for the discovery of blind veins or lodes. A tunnel site cannot be patented. However, lode mining claims may be located over the surface trace of blind veins or lodes discovered within the tunnel. This right of location extends outwards for a radius of 1,500 feet from the centerline of the tunnel.[7] The date of location of the lode claim is retroactive to the date of the location of the tunnel site.[8]

1 30 U.S.C. §§ 22-54 and 43 C.F.R. § 3832.11 (2006).
2 30 U.S.C. § 42; Solicitor's Opinion M-37010 "Mill Site Location and Patenting under the 1872 Mining Law," (Oct. 7, 2003); 43 C.F.R § 3832.30 (2006).
3 43 C.F.R. Part 3832, Subpart C (2006).
4 Id.
5 30 U.S.C. § 27; 43 C.F.R. § 3832.40 (2006).
6 43 C.F.R. § 3832.44(c) (2006).
7 43 C.F.R. Part 3832, Subpart C (2006).
8 Enterprise Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108, 113 (1897); United States v. Parker, 91 Interior Dec. 217, 292 (1984).

2. Determination of a Discovery of a Valuable Mineral Deposit.

a. The Prudent Person rule.

The "Prudent Person rule" defines what constitutes a discovery of a valuable mineral deposit. The "Prudent Person rule" was first mentioned in Castle v. Womble,[9] and has been repeatedly affirmed by the Federal courts.[10]

The "Prudent Person rule," as stated in Castle v. Womble, is:

"[W]here minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby 'all valuable mineral deposits in lands belonging tothe United States . . . are . . . declared to be free and open to exploration and purchase.' For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do."

b. Marketability.

The "Marketability Test" is a refinement of the prudent person rule. It applies to all mining claims and was first enunciated in Layman v. Ellis.[11] The standard was affirmed and clarified in 1933:

". . . [a] mineral locator or applicant, to justify his possession, must show that by reason of accessibility, bona fides in development, proximity to market, existence of present demand, and other factors, the deposit is of such value that it can be mined, removed, and disposed of at a profit."[12]

This supplemental requirement has been affirmed by the Federal courts.[13]

9 19 Pub. Land Dec. 455 (1894).
10 Chrisman v. Miller, 197 U.S. 313 (1905); United States v. Coleman, 390 U.S. 599 (1968).
11 52 Pub. Land Dec. 714 (1929).
12 See Taking of Sand and Gravel from Public Lands for Federal Highways, 54 Interior Dec. 294, 296 (1933).
13 Foster v. Seaton, 271 F.2d 836, 838 (D.C. Cir. 1959); Converse v. Udall, 399 F.2d 616, 619 (9th Cir. 1968); United States v. Coleman, supra.

c. Considering the validity of a claim block.

The validity of mining claims that make up a mine may be considered together as a group, so long as the claimant shows that valuable minerals exist on each claim.[14]

d. Geochemical or geophysical information.

A mining claimant's geophysical or geochemical data[15] alone is an insufficient basis for proving a discovery of a valuable mineral deposit. A physical exposure of the valuable mineral is still necessary.

e. Drill core and cuttings.

Evidence of a discovery of a valuable mineral deposit collected from drill holes is adequate. You may verify the exposure by reviewing the drill sites, drill logs, core samples, and/or drill cuttings. Chapter IV-2D explains how you should handle and secure drill core samples and cuttings.

f. Discovery cannot be inferred.

Geological inference, no matter how strong or convincing, cannot be used as the basis for a discovery in lieu of a physical exposure of a valuable mineral deposit in place.[16]

You must be objective and exercise good professional judgment in evaluating the data that is pertinent to a discovery. Based on the mineral showing and its relationship to the geologic setting of the mineral district, you must decide if there is a discovery under the prudent person rule and marketability requirements.

3. Mineral Patent Applications.

Although the regulations at 43 C.F.R. § 3862-1 (2006) require patent applicants to designate the point of discovery on the mineral survey plat, it is not necessary for the discovery to be found within the "discovery working" that is marked on the plat. When the Mining Law was first enacted, many state laws required that a discovery working had to be identified by the erection of a monument. This monument did not necessarily mark the location of valuable minerals. Most states have discontinued this requirement. Nevertheless, there must still be an exposure of valuable minerals within the boundaries of each claim.[17]

14 United States v. Foresyth, 94 Interior Dec. 453, 488 (1987); Schlosser v. Pierce, 93 Interior Dec. 211, 223 (1986).
15 United States v. Feezor, 90 Interior Dec. 262 (1983); United States v. Feezor, 130 IBLA 146,148 (1994).
16 McCall v. Andrus, 628 F.2d 1185, 1188 (9th Cir. 1980), cert. denied, 450 U.S. 996 (1981); United States v. Feezor, 90 Interior Dec. 262 (1983).
17 United States v. Foresyth, 15 IBLA 43, 58 (1974).

B. Mineral-in-Character Determinations.

Make mineral-in-character determinations following the standards described in Southern Pacific Co.:[18]

"It is sufficient to show only that known conditions are such as reasonably to engender the belief that the land contains mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end. Such belief may be predicated upon geological conditions, discoveries of minerals in adjacent land, and other observable external conditions upon which prudent and experienced men are shown to be accustomed to act."

Lands examined that do not meet the above criteria are nonmineral-in-character.

1. Placer Mining Claims.

When examining placer mining claims, you must answer two questions:

a. Is there a discovery of a valuable mineral deposit?

b. Is each square ten-acre legal subdivision of a placer claim mineral-in-character?

The second question relates to the "ten-acre rule", which has been followed by the Department since 1899.[19]

These two requirements are discussed further in Chapter III, section G.

2. Mill Sites.

A mill site must be located on non-mineral land. Each square $2^1/_2$ acre subdivision of a mill site must be used or occupied for mining, milling or activities reasonably incident thereto. These requirements are discussed further in Chapter III, section H.

3. Mineral Potential Reports and Conveyances under the Federal Land Policy and Management Act (FLPMA).

The preparation and review of mineral potential reports and those for "known mineral values" under FLPMA are not covered by this Handbook, as they are not actions related to the Mining Law. Please refer to Manual Section 3060 Mineral Reports. Preparation and Review for further information.

18 71 Interior Dec. 224, 233 (1964).
19 United States v. Henrikson, 70 Interior Dec. 212 (1963); United States v. Lara, 67 IBLA 48 (1982); United States v. Lara, on recon., 80 IBLA 215 (1984); Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987); 30 U.S.C. § 36.

C. Common Variety Determinations.

Not all mineral commodities are locatable. Common varieties of sand, stone, gravel, pumice, pumicite, or cinders are not locatable.[20] Mining claims that are located on or after July 23, 1955, for common variety minerals are not valid. Common variety minerals may be disposed only through sales contracts. When a notice or plan of operations is filed over a suspected common variety mineral deposit, a common variety determination must be made be we can accept or approve the notice or plan. Common variety determinations are discussed further in Chapter V.

D. Evaluation of Mineral Properties for Purchase or Condemnation.

Public lands that contain valid mining claims are occasionally needed for other federal purposes that would conflict with the mining claims. In such situations, mining claims may be appraised for purchase or for condemnation. The Department must determine the validity of the mining claims before the claims may be appraised for condemnation. An invalid mining claim has no property rights to appraise.[21] Please note that a patent or validity examination report does not appraise the value of the mining claims at issue.

E. Public Law No. 84-167.

The Surface Resources Act of July 23, 1955, Public Law No. 84-167,[22] allows the United States to manage the surface resources on unpatented mining claims located on or after enactment of the Act. The Act also provides a procedure whereby the United States may assert the right to manage the surface resources on unpatented mining claims located before enactment of the Act. Mining claims located on or after July 23, 1955, are subject to the provisions and limitations of the Surface Resources Act, including the right of the United States to manage the surface and vegetal resources.

Even though the Surface Resources Act authorizes the United States to manage the mineral materials and vegetative surface resources on unpatented mining claims, the mining claimant does not lose any possessory rights to the locatable minerals or to the use of as much of the surface as is reasonably necessary for mining operations. Furthermore, any permittee or licensee of the United States or user of the public land, including the government, may not endanger or materially interfere with authorized prospecting, mining, or processing operations or uses reasonably incident thereto.

20 30 U.S.C. § 611; 43 C.F.R. § 3830.12 (2006).
21 Best v. Humbolt Placer Mining Co., 371 U.S. 334, 337 (1963), Forbes v. Gracey, 94 U.S. 762 (1877); "A Procedural Guide for the Acquisition of Real Property by Governmental Agencies" Department of Justice, Land and Natural Resources Division (2000).
22 30 U.S.C. §§ 611-615.

F. Multiple Use Conflicts.

Mining claims and mill sites may conflict with other resource uses, such as land disposals, desert land entries, material sale sites, range-improvement projects, timber sales, or rights-of-ways. We may exercise our discretion to conduct validity examinations to clear invalid mining claims that conflict with other resource uses, especially if the lands have been withdrawn from mineral entry.

Validity examinations are not normally required to resolve occupancy trespasses on mining claims located under the guise of the Mining Law. The regulations at 43 C.F.R. Part 3715 are designed to cover most occupancy trespass situations. BLM may institute an administrative action against an unauthorized surface use of a mining claim without first conducting a validity examination.[23]

G. Surface Management Requirements.

A validity examination is required for notices and plans of operations in withdrawn areas before acceptance or approval may be given to proceed.

H. Mining Claim Administration.

There is no need to conduct any of the determinations described in this chapter if the mining claimant has not properly recorded and maintained the mining claims at issue. Be certain to check the status of each mining claim before beginning any mineral examination work.

1. Recording and Maintenance of Mining Claims or Sites.

Under the FLPMA, all mining claims or sites must be recorded with BLM within 90 days of location or they are forfeited.[24] Mining claims and sites located before October 21, 1976, must have been recorded with BLM by October 22, 1979, or were abandoned and void.

Mining claimants must pay an annual maintenance fee for each mining claim that is due each September 1st.[25] Owners of ten or fewer claims or sites may elect to file a waiver from the fee, perform the assessment work that is required by the Mining Law and make the annual filing that is required by FLPMA.[26]

2. Records Administration. Contact the State Office adjudication staff to ensure that the mining claim or site has been filed properly, is in good standing, and that

23 United States v. Henderson, 243 F.3d 1168 (9th Cir. 2001); United States v. Noguira, 403 F.2d 816 (9th Cir. 1968).
24 43 U.S.C.§ 1744.
25 30 U.S.C. § 28f.-k; 43 CFR Part 3834 (2006).
26 43 C.F.R. Parts 3830, 3834, 3835 (2006).

the mining claimant has paid applicable location and maintenance fees or has complied with the small miner waiver requirements under 43 C.F.R. Part 3834 or 43 C.F.R. Part 3835, respectively.

Chapter III – Mineral Examination Procedures

A. Preparation for a Validity Examination.

1. Case File Review.

Examine the mining claim case file for essential information such as: recordation of the location notice, chain of title, identification of critical dates (such as conveyance of an association placer claim, segregation or withdrawal of the lands or consideration of a patent application), location amendments, and continuous filings of affidavits of labor or notices of intent to hold, and payment of the location fees and annual maintenance fees.

a. Land status. Obtain land status information from the proper BLM State Office. Examine the Historical Index (HI) and Controlled Document Index (CDI) for Public Land Orders, classification actions, and other pertinent data that may show that the mining claim is null and void ab initio, in whole or in part. If available, obtain a copy of the mineral survey plat and notes.

b. Ownership. Identify the current owners and their last known address so that you can notify them of the field examination and any related issues.

2. Notification of the Mining Claimant.

a. Notification policy. You must notify the claimant at least 30 days before a planned mineral examination. If possible, contact the mining claimant directly to try to establish a date that is mutually agreeable. You must invite the mining claimant to accompany you for the field examination and give the claimant the opportunity to point out discovery point(s), claim corners and other essential features of the mining claim or mill site. The mining claimant may designate an agent to act in his/her place. You must confirm the arrangement in writing.

b. Notification requirements. The written notification must state the agreed upon date or must give a proposed examination date. You must send the notification by certified mail, return receipt requested. The field examination may take place even if the certified letter is returned as refused or returned as undeliverable.[1] Failure to give written notification does not prevent the examination or disqualify the Government's case.[2]

3. Mineral Property Information.

a. Public information.

(1) You should review all essential literature concerning the geology, mineralization, mining history, and economics of the property and the mineral commodities being investigated. Examine the information collected by the U. S. Geological Survey,

1 43 C.F.R. § 1810.2 (2006).
2 United States v. Grigg, 8 IBLA 331, 339 (1972).

local State geological surveys, and the former U. S. Bureau of Mines (these records are now with the U. S. Geological Survey). In addition, consult university libraries and any local geological societies. Do not disregard old scientific literature and records, as they will often provide considerable information about mining conditions and production records.

(2) For publicly owned or traded entities, or those properties that are being worked by a publicly owned or traded entity, you should request copies of prospectuses, annual reports, and related documents that they are required to file with the Securities and Exchange Commission (SEC), especially the company's 10K reports. These documents will include documentation of the reserves on the property and must be backed up by evaluation reports by the company. The documents are available from the SEC's EDGAR website **http://www.sec.gov/edgar.**[3]

b. Claimant information.

(1) Request the mining claimant or his agent to make available any data concerning the geology, mineralization, structure, and any other physical attributes that will allow you to evaluate the mineral deposit. This includes, but is not limited to: geologic, geochemical, geophysical and mineral maps; drill hole information, assays, resource or reserve estimates, engineering studies, and any other information that will assist you in verification of the claimed valuable mineral deposit.

(2) Request copies of any feasibility or pre-feasibility studies, capital and operating cost information. Obtain copies of any economic studies, production records, marketing and sales information.

(3) You must keep a written record of the requests, whether made by telephone, e-mail, or other means.

B. Field Equipment.

Carefully check all field equipment before going into the field to ensure that everything is functioning properly.

1. Calibration of Directional Equipment.

a. Compass Calibration. Set your compass to the proper magnetic declination. Declination is variable through time. Old USGS topographic and other maps often do not reflect the current declination, but do give the annual drift of the magnetic field. It may be necessary to calculate the current declination for the subject area.

3 For additional information contact the SEC's Office of EDGAR and Information Analysis at 202-942-2930 and SEC's Natural Resources and Food Division at 202-942-1870.

b. Global Positioning Satellite units. When you use Global Positioning Satellite (GPS) mapping systems, you must ensure that the GPS equipment is accurate. Calibrate the instrument prior to use in the field according to the manufacture's instructions. When extreme precision is required, you must consult with the Bureau Cadastral Survey staff. You must be proficient in the use of GPS equipment and understand its limitations.

2. Field and Safety Equipment.

Inspect your field equipment. It must be in good working order. Carefully inspect and test the appropriate safety equipment, which is described below. Clean all equipment you plan to use for sampling prior to use.

3. Cameras and Photography.

You must photograph all significant features of the mining claim or mill site (discovery point, sampling points, improvements, and equipment). Use film with a good color contrast rating. Prints should be produced as opposed to slides.

a. Prints and negatives. Your report may include scanned or photocopied prints, but your original prints and negatives must be retained in case the accuracy of any reproduced photographs is questioned in judicial proceedings.

b. Digital and electronic images. The federal courts do not universally accept digital images as evidence. You must print the images as hard copy, on photographic paper that you intend to use in your report. This hard copy is kept as the official record. After making the hard copy, you may incorporate the digital images into your report.

c. Images as evidence. A factual foundation is required to admit any photograph into evidence. That foundation requires that you state under oath, that your photograph, whether a color print or a digital image, accurately portrays what it is intended to represent.

C. Field Safety.

You must complete all required safety training and all required job hazard analyses. Mine safety training is conducted by the National Training Center (NTC) and by most State Mine Inspection offices.

1. Mine Safety and Health Administration Safety Regulations.

Read and be familiar with the Mine Safety and Health Administration (MSHA) regulations, especially those in 30 CFR Chapter I, subchapters B, H, K, and M. You are required to follow these regulations when on a mining property.

2. Safety Handbooks.

U. S. Bureau of Mines Information Circular 7479 (This is a 1948 publication entitled, Hazards of Entering Old Mine Workings).

3. Underground Safety Policy.

Always file a safety plan before going underground.

YOU MUST ADHERE TO BLM'S UNDERGROUND SAFETY POLICY. See BLM Handbook 1112 - Safety.

4. Entry into Mine Workings.

NEVER ENTER UNDERGROUND MINE WORKINGS ALONE or go onto any areas around surface mine workings in a haphazard manner. BE ALERT AND REMAIN ALERT. Do not enter any areas you suspect are being used for criminal activities. Always carry and wear appropriate equipment.

5. Decision to Not Enter a Mine.

If you believe that it is unsafe to enter underground mine workings or go onto areas around surface mine workings, do not do so. **THE DECISION NOT TO ENTER IS SOLELY AT YOUR DISCRETION AS THE MINERAL EXAMINER.**

DO NOT ENTER UNDERGROUND WORKINGS ALONE.

6. Safety Equipment.

The following is a recommended checklist of items that are normally required for field safety in the examination of a mining claim:

- An MSHA approved hard hat.

- Sturdy over-the-ankle boots. Steel toes are required. Rubber boots with toe and metatarsal reinforcement are preferable where wet conditions may be encountered, and are usually required by the mine operator. BLM must provide safety boots for employees who need them. For hygienic reasons employees must not share boots, dust masks or similar items of a personal nature.

- When entering underground mine workings, at least three different suitable sources of light should be carried (e.g., head lamp, flashlight, penlight, chemical light stick). If there is any possibility that inflammable gas may be encountered, only MSHA-approved non-sparking light sources may be carried. Flame safety lamps are no longer MSHA-approved for underground use.

- When entering an underground mine, carry an oxygen detector, or preferably, a multiple gas detector inclusive of oxygen, combustibles, carbon monoxide, hydrogen sulfide, or other toxic gases known to occur in the particular mining district.

- Safety glasses or goggles for general underground and surface wear, and for use in rock breaking and sampling.

- An MSHA-approved Self-Rescuer (Respirator W 65 for self-rescue from carbon monoxide) for underground work.

- A personal first-aid kit.

D. Field Notes.

Adequate, accurate and legible field notes are critical. Geologic shorthand should use the standard abbreviations given in Compton (1962) or Dietrich (1982). You should use an engineer's field book with water resistant pages for taking field notes. You must keep a reserve copy of the field notes in the event the file copy is lost. If more than one mineral examiner participates in the examination, one mineral examiner should be designated as the official note recorder. However, all examiners should take notes to avoid any confusion that may occur in the office when the mineral report is being written.

Notes taken in the field should be recorded in sequence as the examination proceeds. Use the checklist below to guide the examination, as well as to help standardize note taking. It will also help minimize the possibility of overlooking essential data that should be recorded while in the field. Your mineral report must be written in conformance with Handbook H-3890-3 Validity Mineral Reports. You should review this handbook before entering the field and use the handbook's criteria to further guide you in the collection of data in the field.

Field notes may be subject to discovery requests in a mineral contest proceeding. Write all entries in a professional manner.

1. General.

a. Identify each participant. Identify each person involved in the field examination, and the dates that they are present.

b. Field notes. Date and number each page of the field notes.

c. Checklist for field notes. Appendix VI - A is a checklist for field note contents.

2. Field Maps

Before leaving for the field, gather and take with you all necessary maps, including:

a. Location map. A general location map for determining access and finding the mining claim.

b. Mineral survey plats. A mineral survey plat, where applicable.

c. A U. S. Geological Survey topographic map.

d. Enlargement of topographic maps. You may enlarge topographic maps to highlight mining claim features and assist in the detailed mapping of the mining claims. Keep in mind that enlarging a topographic map will not increase its on-the-ground precision.

e. Base maps.

(1) Prepare a base map of the mining claim(s) by enlarging a topographic map, preferably a 7.5 minute series (scale 1:24,000 or 1 inch to 2,000 feet) to a scale of one inch to 400 feet or better. This will be your base map for your work on the mining claims. Unless you have no other options, you should not map mining claim features directly on the 7.5 minute topographic map as the scale is too large for accurate placement of features being mapped. It may help to use a copy of the Mineral Survey Plat enlarged to an appropriate scale.

(2) Aerial imagery is an important tool for field examinations.[4] Air photos can be enlarged and used as base maps if topographic maps are not available. Aerial photographs at scales of one inch to 1,320 feet and one inch to 660 feet are preferred, as they may be enlarged 2-3 times without significant distortion of on-the-ground features.

f. Mapping procedures.

(1) All mapping should be done with the use of standard topographical, geologic, and mining symbols. Standard symbols are given in Dietrich et al. (1982), Compton (1962), Lahee (1951), and Appendix I, and should be used in all mineral reports.

(2) You should pencil in claim corners and boundaries in advance of your site visit, as given in the location notice(s). In addition, pencil in the claimant supplied geologic information. You must verify your draft map by comparing it to the actual

4 Coverage is available for most of the continental United States and can be obtained through the BLM's Cadastral Survey office, from the national aerial photograph library at the EROS Data Center in Sioux Falls, South Dakota, or from the U. S. Department of Agriculture Aerial Photography Field Office in Salt Lake City, Utah.

features on the ground while on field location. This will allow you to catch any errors before they can be compounded and allow geologic inferences to be made as the work progresses. Simply collecting notes and map coordinates for later compilation offsite is not considered proper professional practice.

(3) Do not use the Master Title Plat as a base for field mapping because it is not to scale.

3. Sampling Field Notes.

a. Sample numbers. You must number samples with a unique identifier, which can be numeric, alpha-numeric, or alphabetic. Use the same unique identifier in the sample field notes, on the sample bag or other container, and on the maps to correlate the locations, data, and notes.

b. Sample descriptions and photographs. You must describe and photograph each sample site before and after collecting the sample. For some sample locations it may be worthwhile to take photographs while sampling to document the process and people involved. Your field notes should contain enough information to later caption the photographs. Describe your sample collection procedure in detail, including dimensions of sample cut, the relationship of the sample to the mineral deposit, and the location of the sample on the mining claim.

c. Description of sample sites. Describe the geologic setting of the sample site, including structure and lithology. Clearly state the reasons for why you collected the sample at that site. Plot the sample site on the base map using the unique identifier.

d. Chain of custody and sample security.

(1) Briefly outline the sample chain of custody, the security employed, and how samples were transported and stored. This information will be needed in the mineral report. Your samples must be held in secured storage until sent to a laboratory for analysis. The rejects and pulps from the laboratory must be returned to you and retained in secured storage until the case has been fully adjudicated. Secured storage requires limited access locks and a sign in and out sheet record when the cabinets are accessed. Do not allow the claimant to gather or handle the samples. Only you are allowed to collect and handle the samples.

(2) Never allow the claimant, the claimant's family members, employees, representatives, or other related parties near enough to the sampling and processing areas to potentially salt or otherwise tamper with the samples.

e. Special measures when you suspect sample tampering or other fraudulent activity. In some cases, you may suspect fraud or criminal activity. These may include evidence of salting in the sample, such as the presence of bi-modal gold particles, gold

shavings, or gold with highly variable fineness or silver content. These may also include unusually uniform assay results over the breadth of the property, minerals in the samples that normally do not occur together for the deposit type being investigated, and any other unusual item that concerns you. If you suspect fraud or other criminal activity, you should consult Bureau law enforcement staff for advice on handling and storage of evidence that may be used later in a criminal trial.

4. Other Essential Data to be Included in Notes.

a. For all mining claims, take note of the following:

(1) Existence and position of mining claim or mill site monuments.

(2) Orientation of lode claims to the vein or lode, where appropriate.

(3) Posting on the mining claim of mineral survey plat and notice of mineral patent application, as applicable. Take a photograph of the posting. Posting is only required during the 60-day publication period for a patent application.

(4) Conflicts between mining claims.

(5) Compliance with applicable State and local laws.

(6) Notes for each photograph indicating what was photographed, showing date, location, direction the camera was facing, names of persons in the frame, photographer's name, and other specific information to facilitate producing a complete caption.

(7) Names of persons interviewed. Give names, addresses, telephone numbers, and the interview date.

b. For placer mining claims, take note of the following:

(1) Evidence of the use of dummy locators.

(2) Placer mining claims not conforming to legal subdivisions.

(3) Mineral-in-character status of each square ten-acre legal subdivision of placer claims (the "ten- acre rule").

c. For mill sites and tunnel sites, take note of the following:

(1) Mill site use and relationship to associated mining claims. See 43 CFR Part 3832, Subpart C for qualifying uses.

(2) Current viability of associated mining claims or patented mining claims.

(3) For custom or independent mill sites, describe the milling equipment, its operational capability, and identify the source and type of minerals proposed to be processed. Independent mill sites may only process materials from lode claims and not placer claims. See 43 CFR Part 3832, Subpart C for qualifying uses.

(4) Whether the mill site is being used to process minerals from lands that were previously patented under the agricultural land laws. Use of mill sites for such processing is prohibited.

(5) Any tunnel site activity, contrasting current activity from activity that is clearly historic.

E. The Field Examination.

1. Entering a Mining Claim.

Try to gain access to the mining claim or mill site with the claimant's consent. If the mining claimant threatens you or uses force to prevent you from going onto the mining claim or mill site, do not promote an angry confrontation. Leave the claim and contact your supervisor from another location to discuss the situation. On BLM-administered lands, also notify the BLM Law Enforcement Staff. If these officials are unable to get the mining claimant's consent for a mineral examination, request that BLM Law Enforcement Staff to accompany you and protect you while you are on the claim or site to conduct the field examination. Do not re-enter a claim for a field examination under any circumstances without law enforcement if there is concern for your safety.

2. Initial Reconnaissance.

Your field examination should start with a reconnaissance of the mining claim. This acquaints you with the area and facilitates planning and execution of an efficient mineral examination. The reconnaissance includes locating the claim corners and boundaries. Record major features on the base map. Record the geology and cultural features on the map as you walk around the claim. You should compare the mineral survey plat (if one exists) and associated survey notes with the actual location of monuments and workings on the mining claim.

3. Verification of Discovery.

Verify whether the claimant has exposed a mineral deposit on the mining claim. You must record and document all exposures of mineralization and all geologic attributes associated with each exposure. You will use this information when you have returned to the office to determine whether the claimant has discovered a valuable mineral deposit. When examining a mining claim, you are there to verify whether the claimant has discovered a

potentially valuable mineral deposit. You are not to "make a discovery" for the mining claimant. It is the responsibility of the claimant to have physically exposed the mineralization upon which the assertion of a discovery is based.

4. Discovery Points Must Be Open and Safe to Enter.

The discovery points must be open, available, and safe for examination. If the alleged valuable mineral exposure is in a surface or underground working which is inaccessible or unsafe to enter, **do not** try to make it accessible or enter under unsafe conditions.[5] If the mining claimant refuses to make the discovery points accessible or reveal their location, exercise professional judgment and sample where you can to adequately characterize the mineral deposit on the claim. Note the claimant's failure to identify a discovery point, but collect a sufficient number of samples to confirm the presence or absence of any mineral deposit, as well as to evaluate wall rock and barren zones. If the claimant proposes an excessive number of sample sites, you must use professional judgment to limit the sampling program to a reasonable number of samples to adequately evaluate any mineralization found.

5. Document Geologic Features.

Carefully examine and map all accessible geologic features. Show all important geologic structures, and their attitudes, and plot all sample points. If the discovery point is underground, map all safely accessible subsurface features. Use the symbols for plats, maps and surveys in Appendix I.

F. Lode Mining Claims.

1. Workings and Infrastructure.

It is essential that you prepare a detailed description of all workings and improvements on each mining claim. Draw all workings and infrastructure on the base map. Map all exposed geologic structures and correlate with geologic structures that may be visible in shafts, cuts, pits and other workings. Use the symbols for plats, maps and surveys in Appendix I. Include a description of the valuable minerals, gangue minerals, vein and wall rock alteration, and the country rock. Be certain to note whether the deposit is similar to others in the general area. Published data of the mines in the district can be helpful in evaluating the mineral deposit under investigation.

2. Potential for Extra-lateral Rights.

If the side or end lines of a lode claim extend or project onto land not open to mining claim location, the discovery must be on that portion of the land open to mining claim location in order to obtain extra-lateral rights to the lode deposit, to the extent the extra-lateral rights

5 United States v. Pool, 78 IBLA 215, 225 (1984), and cases cited therein. ("The mineral examiner has no obligation to either imperil himself or retimber the shaft.")

are to ores within the ground which has not been withdrawn.[6] A lode claim is limited by statute[7] to a length of 1500 feet along the vein and a width of 300 feet on each side of the vein. The rights asserted by one claimant against another under the extra-lateral rights provision of the mining law is a question of possessory right, and the issue must be decided between the parties in a court of competent jurisdiction.[8]

G. Placer Mining Claims.

1. Physical Exposure Required.

You must determine whether the claimant has a physical exposure of a potentially valuable mineral deposit within each placer mining claim. Draw all infrastructure and workings on the base map. Map the geologic formations or units carrying the recoverable values or commodities.

2. Each Ten-Acre Parcel Must Be Mineral In Character.

a. Claims located by legal subdivision. For placer mining claims located by legal subdivision, you must determine whether each square ten-acre aliquot part is mineral in character.[9] Placer mining claims not located in conformance with the public land survey (such as bench or gulch placers) are permitted under special rules.[10]

b. Claims located by metes and bounds. For placer claims of irregular shape, the ten-acre tracts, for purposes of determining whether each ten-acre parcel is mineral in character, are created by dividing the claim in half down its long axis and forming ten-acre parcels from the divided portions. This is done by establishing dividing lines at right angles to the base line. (The base line runs down the long axis of the claim). The ten-acre parcels do not have to be square if claim geometry will not permit it, but should approximate ten-acres within each area, to the extent possible.[11]

c. Ten-acre rule applied to mineral patent applications. If you are determining the validity of placer claims for which a patent application has been filed and conclude that one or more ten-acre parcels are nonmineral in character, ask the applicant to withdraw the nonmineral-in-character parcel(s) from the patent application. If the applicant refuses to withdraw the parcel(s), you must recommend those parcels for contest. You must not recommend for patent any nonmineral ten-acre parcels of a placer claim.

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6 Marilyn Dutton Hansen, 79 IBLA 214, 216 (1984); Santa Fe Mining, Inc., 79 IBLA 48, 50 (1984).
7 30 U.S.C. § 23
8 For further reading on the subject, see The Hidee Gold Mining Co., 30 Pub. Lands Dec. 420 (1901), and II Lindley on Mines § 363a.
9 United States v. Lara (On Recons.), 80 IBLA 215 (1984), aff'd by, Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987).
10 Snow Flake Fraction Placer, 37 Pub. Lands Dec. 250 (1908); United States v. Henrikson, 70 Interior Dec. 212 (1963); 43 C.F.R. § 3832.12(c) (2006)
11 Lara cases, supra.

3. Technical References.

a. Alluvial placers. You should consult McCulloch (2003), Macdonald (1983), Peele (1959, p. 533-640), and Wells (1989), for the appropriate evaluation techniques, equipment, and processing methods for alluvial minerals from placer mining claims. These minerals include, but are not limited to, gold, diamonds, sapphires, cassiterite, garnet, monazite, ilmenite, and other minerals usually recovered using gravity methods.

b. Industrial minerals. Many types of industrial minerals may be located as placer mining claims. There are several good sources of information on industrial minerals that should be consulted.[12]/

H. Mill Sites.

1. Uses of Mill Sites.

All uses of a mill site must be reasonably incident to mine development and operation, except for uses exclusively supporting reclamation or mine closure. [13]/ Each mill site is limited to a maximum of 5 acres in size and must be located on nonmineral land. Mill sites may be located by legal subdivision or by metes and bounds. The claimant's use and occupancy of the land must be reasonably necessary for efficient and reasonably compact mining or milling operations.[14]/

2. Types of Mill Sites.

a. Associated or dependent mill sites. An associated or dependent mill site is one associated with lode or placer mining claims, either patented or unpatented. For a dependent mill site to be valid, the mining claim with which it is associated must be either a mineable patented or a valid unpatented claim. If there are no mining operations occurring on an associated mining claim, the claimant cannot claim that a mill site is necessary for mining or milling operations for that associated mining claim.[15]/ A dependent mill site cannot be patented unless the associated mining claim is being patented concurrently or has been previously patented and remains economically viable.[16]/

b. Independent or custom mill sites. A custom or independent mill site is not associated with a particular mining claim and is a stand alone operation. Custom mill

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12 LeFond (1983); Industrial Minerals and Rocks (2 vols.), AIME; Barksdale (1991); The Aggregate Handbook, National Stone Association, Washington, D.C.; Maley (1996), Mineral Law (6th ed.), Mineral Lands Publications, Boise, ID.

13 43 C.F.R. § 3832.34 (2006).

14 United States v. LeFaivre, 138 IBLA 289, 293 (1997); Solicitor's Opinion M-37010, "Mill Site Location and Patenting under the 1872 Mining Law," (Oct. 7, 2003); 43 C.F.R. § 3832.32 (2006).

15 United States v. Dean, 14 IBLA 107, 109 (1973).

16 United States v. Dean, 14 IBLA 107, 109 (1973); Pine Valley Builders, Inc., 103 IBLA 384, 388-89 (1988).

sites[17] contain a "quartz mill or reduction works." In modern terms this means any milling (grinding or crushing), flotation, or beneficiation facility (smelters, heap leach pads, carbon-in-pulp mills, etc.) for the custom processing of ores.[18] Independent mill sites may be used or occupied for processing metallic minerals from lode claims.[19] Reasonably incidental uses in conjunction with mineral processing may be acceptable, as provided in 43 CFR subparts 3715 and 3809. You must plot all buildings, settling ponds, waste piles, and other structures associated with the operation on the map, and tie them to the mill site or mineral survey corners. The claimant may hold more than one custom mill site in a contiguous block if needed for the proper operation of the custom mill.

I. Tunnel Sites.

1. Tunnel Sites, Generally.

The Mining Law of 1872 authorizes subsurface exploration by tunneling.[20] It grants to the owner of the tunnel site the possession of all blind or previously undiscovered veins or lodes that are intersected by the tunnel.[21] The commencement of a tunnel is a prerequisite to the location of a tunnel site claim.[22] Tunnel sites are subsurface rights-of-way and, therefore, cannot be patented, but may be held indefinitely if the work on the tunnel is being diligently prosecuted.[23] Failure to perform work on the tunnel for over 6 months results in an abandonment of the owner's rights to any undiscovered veins or lodes in the tunnel.[24] Tunnel sites are rarely encountered in modern practice.

2. Rights Associated With a Tunnel Site.

Tunnel sites are located and recorded in the same manner as mining claims.[25] The maximum length of a tunnel site is 3000 feet from its point of origin.[26] A claimant may acquire the right to any blind veins, ledges, or lodes cut, discovered or intersected by the tunnel, if they are located within a 1500-foot radius from the center line of the tunnel.[27] While the tunnel site gives a claimant the right of possession or right to appropriate blind veins, ledges or lodes, the claimant must locate a lode claim on the surface of the trace of the lode or vein discovered in the tunnel to acquire a right to those blind veins, ledges, or

17 30 U.S.C. § 42(b).
18 43 C.F.R. § 3832.34(b) (2006) for what qualifies as proper use and occupancy of an independent mill site.
19 Id.
20 30 U.S.C. § 27.
21 43 C.F.R. § 3832.41 (2006).
22 United States v. Parker, 82 IBLA 344, 381 (1984).
23 43 C.F.R. §§ 3832.40, 3832.44 (2006).
24 Enter. Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108 (1897); 43 C.F.R. § 3832.44(c) (2006).
25 43 C.F.R. § 3832.42 (2006).
26 43 C.F.R. § 3832.42 (2006).
27 43 C.F.R. § 3832.44(a) (2006).

lodes.[28] In United States v. Parker,[29] the Board held that if a tunnel is located before a withdrawal, and a discovery is made in the tunnel after the withdrawal, the discovery relates back to the location date of the tunnel site. Therefore, a lode claim located many years after the effective date of a withdrawal would predate the withdrawal because the claim would be based on a right of appropriation that relates back to the tunnel site location date, assuming that work on the tunnel site was diligently prosecuted.

J. Mineral Patent Applications.

1. Development and Expenditure Requirements.

When you are evaluating a mining claim or mill site for a patent application, in addition to verifying the necessary elements of validity, the mineral examiner must also verify that a reasonable estimate of the value of improvements for each mining claim totals at least $500. If a mining claim is located over an earlier or abandoned mining claim, and a patent application is made for the new location, any improvements or labor made for the prior location **cannot be applied** toward the $500 expenditure for patent. If there is more than one mining claim included in the patent application, the total development expenditure must be equal to at least $500 times the number of claims in the application. The required expenditures may be concentrated on a portion of the claim group in the application. In modern situations, the total expenditures are usually far in excess of $500 per claim. The improvements made must clearly benefit the development of the claim group as a whole. Mill sites are not subject to the $500 expenditure requirement.

2. Survey Requirements.

You must ensure that the Mineral Survey Plat agrees with the actual location of the mining claims, mill sites, and their improvements. If the placer mining claim or mill site is located by legal subdivision, verify the location of the claims. If irregularities exist between the mineral survey or the legal subdivisions claimed and the situation on the ground, you are to notify the appropriate State Office Cadastral Survey and adjudication personnel. The Cadastral Survey staff will take your information and work with the deputy mineral surveyor that performed the original mineral survey to resolve the matter.

28 Enter. Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108 (1897).
29 82 IBLA 344, 379 (1984).

Chapter IV —Sampling and Assay Procedures

A. General Sampling Procedures.

1. A Mineral Examiner Works for the United States.

The purpose of sampling in a validity examination is to allow the United States to verify the presence of a discovery of a valuable mineral deposit on a mining claim. You are required to work in an objective manner. Remember that you work for the United States. You do not have any fiduciary obligation to the claimant.

2. Confirmation and Corroboration of Discovery.

a. Confirmation. Your objective is to verify whether the claimant has made a discovery based on existing mineral exposures. A physical exposure of the locatable mineral(s) is required from within the boundaries of each mining claim. The exposure(s) may take various forms, including a mineral outcrop, trenches, shafts, adits, or drill holes. In older workings, the exposures may be partially hidden by weathering or vegetation. If a property has considerable sample data available, devise a sampling program to verify the claimant's sampling and analytical results.

b. Lack of exposures. There may be little or no evidence of any prior sampling on the claims. You must remember that it is not the government's responsibility to make a discovery for the claimant, only to verify what the claimant has done on the mining claim(s). As a general rule, you should not sample a mining claim where there is neither physical exposure nor evidence of historic mining or exploration activity. You must document the fact that the claim(s) are undisturbed and therefore you have nothing to verify.

c. Claimant obligations. Except for mineral patent applications, the claimant is under no obligation to provide geologic or economic information to the examiner.

3. Limitations on Mapping and Sampling a Deposit.

a. Exploration verses development. You are to verify the existence of a valuable mineral deposit and not to explore the mining claim(s) for the mining claimant. The dividing line between mapping and sampling adequately to understand the mineral deposit that is being prepared and engaging in an inadvertent exploration program for the mining claimant, is not always obvious. This issue was examined by the Interior Board of Land Appeals, where the Board discussed the issue at length:[1]

> The mining industry, itself, has no difficulty in distinguishing between prospecting, exploration, and development. Thus, Peele defines prospecting as "the search for minerals," exploration as "the work of exploring a mineral deposit when found * * * undertaken to gain knowledge of the size, shape, position, characteristics, and value of the deposit" and "development" as "the driving of openings to and in a proved deposit, for mining and handling the product

1 United States v. Willie White, 118 IBLA 266, 319-320, 98 Interior Dec. 129, 157 (1991).

economically." Peele, *Mining Engineers' Handbook* 10-03 (3d ed. 1941).

Based on the criteria given in White, supra, if the mineral deposit is not "proved," it must still be in the exploration stage and a discovery of a valuable mineral deposit has not been made. For a mineral deposit to be "proved" or "proven," it must meet the criteria given for a positive and/or probable mineral reserve. These terms are defined and explained in depth in chapter V of this handbook. If there are workings, it may be necessary for you to sample beyond the areas of existing workings to establish a defensible conclusion. You must exercise your professional judgment.

4. Chain of Custody.

a. Custody and control.

(1) It is your responsibility to maintain custody and control of the samples, also known as maintaining the "chain of custody." You have the responsibility to protect the samples and must take all appropriate steps to guard against contamination or salting from the time of sampling until the end of all administrative and legal proceedings. This includes the sampling process itself. You must take adequate precautions to detect any contamination or salting of your samples. IT IS EXPRESSLY FORBIDDEN FOR ANYONE OTHER THAN YOU OR A CO-EXAMINER, TO COLLECT OR OTHERWISE HANDLE THE SAMPLES.

(2) UNDER NO CIRCUMSTANCES will you allow the claimant, the claimant's family, employees, representatives, or other associates near enough to the sampling and processing areas to potentially salt or otherwise tamper with the samples.

(3) Plan for the handling, splitting (when technically appropriate), and secure storage of the samples in advance. Properly store splits, pulps, and rejects to assure availability of uncontaminated sample material for re-analysis. This is especially important if the assay results are questioned later, or if the case is involved in litigation.

b. Shipping samples. Maintaining the chain of custody of samples simply means that you are keeping track of who has possession of the samples at each stage of the process, from collection to delivery to the assayer. It is not necessary for you to hand-carry samples to the assayer to maintain the chain of custody. Using the U.S. Postal Service or an express delivery service is acceptable. If you use the U.S. Postal Service, send the samples via certified mail, with return receipt requested. If you use an express service (such as Federal Express), record the tracking number for each package. Be certain to get confirmation from the express service that each package was received at the destination to which you sent it. Place the receipt confirmation in the case file.

5. Joint Sampling With Claimant Prohibited.

When you collect samples during the field examination, you are collecting them on behalf of the United States. You must not allow the claimant to handle or touch the official samples at any time. Joint sampling is not permitted even if the claimant requests it to somehow "reconcile" widely disparate assay results. The claimant is welcome to collect a duplicate sample after you have collected an official sample. If the claimant disputes the results of the official samples, the claimant's remedy is to present his or her own evidence at a contest hearing based on the duplicate samples.

6. Mineral Examiner May Give Sample Split to Claimant.

You have the discretion to give the claimant a split of an official sample, unless it is a detrital (placer) mineral sample. Because you cannot assure the integrity of the split after it has been given to the claimant, the claimant's split cannot be considered an official sample for determining validity. If you provide the claimant with a sample split, it must be fully documented in the mineral report. The documentation must include the reasons for providing the split, a listing of the sample splits provided, and a disclaimer of further official status for the split.

7. Interim Discussion of Results.

In general, you should not share interim analysis or assay results with the claimant, because the mineral report is not a final document until technical review is completed and, in the case of a mineral patent application, until the Solicitor's Office completes its legal review. Discussion of the work in progress with the claimant may be appropriate at times, such as when evaluating a unique mineral deposit, or where a preliminary analysis of data indicates that it may be to the claimant's benefit to withdraw all or part of a patent application or to relinquish a mining claim.

8. When Fraud or Salting are Suspected.

If you suspect that the claimant has salted the claim or any samples, or engaged in any other type of fraudulent behavior, consult with the Solicitor and BLM Law Enforcement personnel before taking any actions regarding the suspected fraud.

B. Sampling of Lodes or Other Rock in Place.

1. Determination of Sampling Method.

You must determine the method by which you will take samples using methods and techniques that are currently recognized as standard practice in the minerals industry and appropriate to the deposit you are examining. For a porphyry copper/molybdenum deposit, empirical data shows that a maximum distance of 400 feet between drill holes is the limit for reliable grade control. In the same manner, a vein gold deposit should be sampled at 50 foot intervals. Other deposits have similar recognized confidence limits on the sample collection intervals.

2. Sampling Heterogeneous Material.

Where the material to be sampled shows a distinct variation in composition such as banding, bedding, or changes in hardness, each major variation should be sampled separately. Doing so reduces the chance of under collection of very hard portions of the structure, and over collection of relatively soft portions. Large, representative samples are to be taken whenever possible. This reduces sampling error if mineralization is not uniformly distributed in the host rock.

3. Sample Site Preparation.

Regardless of the type of sample you take, you must carefully prepare the area to be sampled to minimize the effects of dilution, oxidation, concentration, or any potential salting. You should expose a fresh surface when sampling material that has been weathered. You must clean the sample site to remove all salts, oxides, or any contaminants. Whenever possible, use a plastic tarp under the area to be sampled to ensure that you collect all of the sample material. Use the sampling tarp only once, to prevent cross-contamination of samples.

4. Sample Location and Spacing.

Determine the sample location and spacing by considering the topography and condition of the land and the nature of the material to be sampled. Controlling factors include vein dimensions, number of veins, hanging wall, footwall, variations in composition, outcrop, exposure, workings, claim boundaries, and the number of mineral exposures identified by you and the claimant.

5. Documenting Samples.

a. Information to be recorded. You must thoroughly document all samples using a proper reference number. In every instance, you must complete a sample card. BLM Form 3890-3 is a sample collection form, printed on cardstock. A locally produced form or commercial equivalent is also acceptable. Most sample collection cards, including BLM Form 3890-3, have room for notes and sketches. The sample collection card is not intended to replace the field notes. Sample locations, including any irregularities or contingencies, should be fully explained in the field notes, with the proper reference number for the sample. Describe the geologic feature sampled, the location and dimensions of the area sampled, and record in the notes any other information that will help in the evaluation.

b. Photograph the sample point. Photograph the sample point before and after you take the sample. Photograph a card on the sample point with the following information on the card, in large, thick, dark lettering:

(1) A unique sample number that can be used to identify the specific location.

(2) The date of sampling.

(3) A notation regarding whether you are taking the photograph before or after taking the sample.

c. Sketch the sample site. If the case results in a contest hearing or litigation, a sketch along with a photograph of the sample point, before and after sampling, can be a strong influence when establishing your credibility and expertise. If the assay results are unusual or erratic, the sample site sketch may assist in the interpretation of the results. If re-sampling is necessary, the sketch will assist in the location of a confirmation sample.

6. Deviations from Standard Sample Methods.

Local conditions may require sampling procedures that deviate from the industry norm. If you choose to deviate from the industry norm, you must fully document the methods you chose in the mineral report. You must include in the mineral report an explanation of why the standard methods were not suitable, a detailed description of the methods actually used, and an explanation of why the alternative methods were chosen. Consult McKinstry (1948), Parks (1957), or Peters (1987), for the appropriate sampling methods.

7. Preventing Sample Bias.

a. The nugget effect. The nugget effect can have a severe impact on any kind of sampling. Section 7 of this Chapter deals with the nugget effect as it pertains to placer samples. The nugget effect may also affect sampling of lode claims. Before taking any samples, you should become familiar with the problems caused by the nugget effect and the techniques for minimizing this effect.

b. Collect equal amounts across geologic structures. Channel or chip samples must often cross geologic structures of varying hardness. You must collect equal amounts by weight of each portion to prevent over-representing one part of a vein over another. It is preferable to take several short chip or channel sample segments, end to end, instead of collecting one long one. Shorter sample lengths will often reveal variations in mineral grade within a structure which must be taken into account when calculating resource tonnage and grades.

C. Types of Lode Samples.

1. Channel Samples.

Channel sampling requires the cutting of a uniform channel two or more inches wide and one or more inches deep across the feature to be sampled, amounting to at least two pounds per foot of the feature being sampled. Channel samples are preferred if conditions permit, especially where mineral distribution is erratic. Where possible, catch the sample on a tarp or ground cloth.

2. Chip Samples.

a. Methodology. Grid chip sampling is appropriate for broad geologic features where mineralization is homogenous. As the name indicates, grid chip sampling involves collecting a series of chips at regular intervals in a broad area across a feature. Sampling should be done in a regular pattern and spread over the entire feature.

b. Application of chip sampling. Chip sampling is normally used in particularly hard material, or where the mineralized area is homogenous and uniform over a wide feature. Be certain to obtain a representative sample, especially in hard material and/or where mineralization is not uniform. Properly done, the results of chip sampling should closely approximate the results of a channel sample. Progressive chipping across the feature should amount to at least one pound per foot of the feature being sampled. Care must be taken that no material is lost. A tarp or ground cloth can be used to catch the chips.

3. Grab Samples.

Grab sampling may yield interesting anecdotal information, but grab sampling is not systematic or statistically valid. Grab samples are occasionally useful at a reconnaissance level to aid in developing an appropriate sampling program. Grade and tonnage figures cannot be calculated from grab samples, and they carry little or no probative value.[2]

4. Drill Core and Cuttings.

Choose sample intervals that represent the character of the deposit. It is advisable to sample both mineralized and non-mineralized intervals to obtain a good evaluation of the claimant's assay information. This will also allow you to determine if the claimant's assay laboratory is providing accurate data on the distribution of the mineral of interest.

a. Government does not normally conduct drilling. The government does not typically conduct its own drilling to confirm validity. You may use data from a claimant's drilling program. This data may be used in validity determinations only after you have verified the data. The verification process is described in detail in Chapter IV, Section 3A.

b. Retention and storage of cuttings and core by claimants. Core and cuttings are usually retained and stored by mining companies. Core is typically stored in boxes with each drill interval identified, whereas cuttings from rotary and reverse circulation drills are normally bagged and stored in 5-foot intervals.

c. Examination of cuttings and core. When planning to examine core or cuttings, you must not give the claimant any advance notice regarding the specific intervals you will evaluate. This is intended to prevent sample tampering, or the appearance of tampering. Make certain that you have the driller's log and geologist's sample log available

2 United States v. Parker, 82 IBLA 344 (1984).

to examine concurrently with the core or cuttings, noting gaps or discrepancies between the logs and the core or cuttings. Examine assay and geophysical logs of the hole and note any correlations or discrepancies. Do not use core or cuttings that do not match the log or that appear to have been rearranged from their proper order. If an unresolved problem exists with respect to the core or cuttings, you may ask the claimant to drill a confirmation hole in your presence.

d. Collecting samples from drill cuttings. Obtaining a sufficient sample from stored cuttings can usually be accomplished by the use of a riffle splitter.

e. Collecting samples from core.

(1) New or stored drill core should be cut in half lengthwise. This may entail cutting a core that has already been split one or more times. Use a core splitter, if one is available. Clean the splitter before each sample is split. If no core splitter is available, obtain a length of channel or angle iron, place the core into it, and split the core with a hammer and a sharp chisel. If the core is sheared or foliated, try to split the core along the major axis of deformation. Assay lengths will be governed by the mineral distribution, geology, and structure in the core.

(2) Drill core may occasionally resemble angular gravel rather than a rock cylinder. This situation is common in oxide or supergene zone metallic mineralization or where the rock in that interval is heavily fractured. It is particularly vexing when the only core available is of small diameter. You should be aware that the nugget effect can easily occur in these situations. When it is impossible to obtain an exact split, you should select a different core interval to verify, if possible, or use other available means to obtain a representative sample. In every case, photograph the core, and thoroughly describe the situation in your notes and in your report.

(3) As a general rule, individual assay lengths should be one to five feet. If the mineralized portion of the drill hole is greater than five feet, assay each five foot unit separately and then mathematically combine the assay units together (See Chapter V, section 4). For porphyry copper and molybdenum deposits, where the mineralized zones may exceed 1,000 feet in width and depth, a 20 to 50 foot assay length is commonly used.

D. Sampling Low Grade Disseminated Deposits.

1. Sampling Methodology Where Abundant Claimant Data Exists.

a. General considerations. If a property has considerable sample data available, devise a sampling program to verify the claimant's sampling and analytical results. You should ask the claimant about their sampling procedures and any variability they have experienced. You must not take samples that cannot be compared with the claimant's data for correlation. If possible, restrict your sampling to existing cores, rotary cuttings, split rejects, pulps, concentrates, slurries, or shot hole cuttings in the ore and other production zones. Review the claimant's drill logs, analytical reports, and sampling intervals before field sampling.

b. Selecting confirmation samples. If the claimant has a large sample retention program, the possibility of being salted is remote, barring a well-organized fraud.[3] You must still use normal precautions. Make arrangements with the claimant to have all stored samples available on the date of the visit to the storage facility. Give the claimant a list of the samples and intervals you plan to examine when you need them at the storage facility, but not before. At the storage site, the claimant may retrieve for you the appropriate closed core boxes or bags of cuttings, but the claimant must not directly handle the material to be sampled. You must take control of the stored samples, and retain custody of them until after you have collected the sample split. Mining claimants, who are familiar with due diligence property evaluations, will be accustomed to this process and will understand why you are doing so.

c. Selecting sample intervals. When you review the claimant's drill and analytical logs, look for sizeable intervals where the lithology and grades appear to be reasonably consistent. For example, a minimum of three intervals together with 10% or less variance would meet this requirement. Sample the middle interval. If you cannot find this situation, then look for two intervals together, avoiding high grade zones if possible. Try to pick intervals with grades similar to the average grade of the deposit, as these will normally give the least variance. It is advisable to sample several sections that the records indicate have low assay values to see if the claimant's assay laboratory is able to consistently report the lower values as well as the higher values from the mineralized intervals.

d. Number of confirmation samples required. The number of samples you should take depends on the number of claims you are examining. At least one sample per claim is required. However, in an evaluation of a small claim group associated with a large deposit, more samples are needed to reduce variability.

Standard statistical textbooks indicate that a minimum of 20 samples from a given sample population (the mineral deposit) are required to show a reliable trend.[4] Typically, 20% of the individual samples will have more than the traditionally acceptable 10-15% variance. Thus in a 20-sample program, there should be 17 closely conforming samples, which would reduce the overall variance to an acceptable limit. The more samples taken, the lower the overall variance will be.[5]

2. Compromised Claimant Data.

If you suspect sample tampering or believe that collecting samples from the claimant's existing cores, cuttings, rejects and pulps may not produce an accurate result, you will have to conduct an appropriate sampling program, which may involve drilling confirmation holes.

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3 Danielson and Whyte (1998).
4 Levinson (1974), Introduction to Exploration Geochemistry; Rose, Hawkes, & Webb (1979), Geochemistry in Mineral Exploration (2nd ed.).
5 Levinson (1974); Davis (1986), Statistics and Data Analysis in Geology; Beus and Grigorian (1975), Geochemical Exploration Methods for Mineral Deposits

E. Sampling Methodology Where Samples or Records Are Unavailable.

1. Assessing the Need for More Sampling.

In some cases, the claimant may have extensive sampling records but no remaining samples. In such cases, you should review the claimant's sampling data and then try to confirm that data by conducting a sampling program that will allow for a reasonable comparison. Confirmation drilling may be required. In other instances, samples may be available (core splits, drill cuttings, etc.) but documentation of the analysis may be lacking. Sampling remnant material would be appropriate. Where the claimant's data is spotty, more samples will be required than in situations where the examiner is only attempting to confirm specific intervals. In all cases where more sampling is necessary, develop a sampling plan based on your knowledge of the property.

2. Sampling Where Claimant's Data Is Nonexistent.

Keep in mind that a validity examination is intended to verify whether the claimant has discovered a valuable mineral deposit. It is not to explore for a deposit, nor to define and delineate a deposit. The government's verification sampling should be commensurate with the level of diligence shown by the claimant. The suggestions below may be helpful in designing a sampling program to supplement where data or remnant sampling material is unavailable, but it is apparent that the claimant has explored the claim.

a. Collection of representative chip samples. Collect representative chips in a grid pattern from a section of rock approximately 5 feet square (25 square feet) with a resulting sample weight of five to ten pounds.

b. Scope of sampling. Sample a variety of different rock, alteration types, silicified zones, and shear zones. Be aware that most precious metals mineralization, especially gold, is seldom visible and often occurs in nondescript rocks.

c. Pathfinder elements. In addition to analyzing for the metals of interest, test for the common pathfinder elements. As an example, for gold and silver deposits, analyze for As, Sb, and Hg. If the pathfinder elements come up high but no metals of interest are detected, you should consider re-sampling to be certain that precious metals were not missed in the first analysis.

d. No sampling for exploration purposes. You must recognize that more time and effort may be required in a situation where little data exists. The public interest is not served by performing what appears to be an exploration program for the claimant. When a sampling program begins to resemble an exploration program, it is time to complete the analysis and make an evaluation based on the data at hand. Review the difference between exploration and development given above in section A(3)(a) of this chapter.

F. Sampling of Severed Materials.

1. Definitions.

a. Tailings. Tailings are discharged from a mill, and are generally finely ground material, usually in sizes ranging from medium sand to powder. They may contain concentrations of valuable metals due to poor recoveries of earlier processing methods or changes in market conditions.

b. Dumps. Dumps are broken rock excavated from the mine in the course of exploration, development, and production. The material on a dump is heterogeneous and may range in size from fine sand to boulders. A dump is normally considered to be a deposit of rock that had no economic value at the time of its emplacement, even if it contained some mineralization.[6]

c. Heaps. Heaps are piles or stacks of severed material that have been processed by leaching. Heaps contain materials that range in size from cobbles to coarse sand. Heaps may resemble dumps in size and arrangement.

2. Ownership of Severed Materials.

You must keep in mind that the ownership and the definition of various severed materials can be a complex legal issue. In some cases, claimants may make doubtful assertions about what constitutes tailings or other severed materials, in order to obtain saleable mineral materials without paying for them.

a. Possessory title to tailings. Tailings are derived from the processing of locatable ores and are usually considered the personal property of the claimant, unless they were abandoned by the owner under State law or unless they no longer contain any locatable mineral values.[7] A tailing must be held and maintained as personal property under the law of the State in which they are located. Abandoned tailings revert to the land and become the property of the land owner.

b. When severed materials are considered mineral materials.

(1) Sand and gravel that are processed to remove detrital minerals are not considered tailings. Detrital minerals include, but are not limited to, gold, diamonds, tin, sapphires, and garnet. Unless the mining claim pre-dates the Surface Resources Act and the sand and gravel are deemed a valuable mineral deposit, the title to the sand and gravel remains in the United States and is subject to sale under the Material Sales Act of 1947.[8]

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6 Steinfeld v. Omega Copper Co., 141 P.. 847, 848 (Ariz. 1914).

7 United States v. Grosso, 53 Interior Dec. 115, 125 (1930) (quoting Steinfield v. Omega Copper Co., 141 P. 847, 848 (Ariz. 1914) ("The intention with which the owner of the property extracted the ore from the ground and the purpose and intention of the owner with which it was placed on the dump is controlling in arriving at the solution of the question of whether the ore after having been extracted and placed in the dump was personalty or realty.")); 2 Lindley on Mines § 426, at 1009 (1914).

8 Solicitor's Opinion, "Disposal of Sand and Gravel from Unpatented Mining Claims," M-36467 (Aug. 28,

(2) If the material is normally locatable but is of insufficient quality or quantity to constitute a valuable mineral deposit, it becomes a saleable mineral, as this is the only way it may be disposed of in this circumstance.[9]

(3) The tailings have been permitted to co-mingle with waste rock so that it is no longer feasible to later process the tailings to recover any contained locatable mineral values,[10] or the tailings are allowed to escape the impoundment and become deposited on the land as a sedimentary deposit.[11]

(4) Buildings and structures are placed upon the tailings for non-mining purposes.[12]

(5) The tailings are used or sold for a common variety use.[13]

3. General Considerations.

Some mineral commodities that are valuable now may not have been at the time of mining, so they may have been discarded in the dump. The situation with tailings is similar. Early precious metals milling operations often had lower recoveries than mills using current technology, so residual valuable minerals may be found in some areas of the tailings repository. Stamp mills were fairly common until about 1915, so mercury containing amalgamated gold may be associated with their tailings. In later years, flotation methods may have been used to recover or suppress certain metals, depending on the market prices at the time. Residual valuable minerals in old heaps will vary according to commodity price and efficiency of the leaching process at the time each particular lift was emplaced.

4. Homogeneity of Material.

It is important to understand that piles of severed materials are rarely homogeneous. The spatial arrangement and stratigraphy of a dump will depend on what portion of the mine and its lithology was being mined at the time the material was dumped.

5. Severed Material Sample Results Do Not Validate Lode Claims.

Dumps, tailings, and heaps cannot be used to validate a lode mining claim. The content of dumps may provide interesting information about what is in the dump, and what materials may have been placed on the dump years before. However, samples collected on dumps, tailings, or heaps will provide no probative information about whether a valuable mineral deposit exists on the lode claim upon which the dumps, tailings, or heaps are found.

1957), as modified by M-36998 "Disposal of Mineral Materials from Unpatented Mining Claims" (June 9, 1999).

9 United States v. Robinson, 21 IBLA 363, 384 (1975).

10 Hayes v. Alaska Juneau Forest Indus., Inc., 748 P.2d 332 (Alaska 1988).

11 Jones v. Jackson; 9 Cal. 237 (Cal. 1858); II Lindley on Mines, § 426 (3rd ed. 1914); United States v. Grosso, 53 Interior Dec. 115, 126 (1930); Conway v. Fabian, 89 P. 1022, 1037 (Mont. 1939).

12 Id.

13 United States v. Robinson, 21 IBLA 3663, 82 Interior Dec. 414 (1975).

6. Placer Location of Severed Material That Is Mineralized.

Once a mining claim has been abandoned under State law, the mineralized dumps, tailings, and heaps that lay upon it may themselves be considered a mineral deposit, and may subsequently be appropriated by the location of a placer mining claim. The question of abandonment of title to the tailings (not of the mining claim), is a question of State law.

7. Sampling Procedures.

Some preliminary work should be performed before sampling deposits of severed materials.

a. Hazardous materials. Before sampling, consult with the appropriate hazardous materials personnel about potential site-specific safety issues.

b. Site maps. Prepare a map of the site so that you can determine the volume of severed materials.

c. Sample grids. Lay out an appropriate sampling grid on the deposit of severed materials. Transfer the grid to your base map at a scale that allows you to contour the mineral values later.

d. Density and tonnage. To determine the tonnage of the severed materials, take multiple measurements of density to compensate for variability within the deposit of severed materials.

e. Severed minerals – variations and complexities. Sampling methodology is dependent upon the variability and complexity of the severed materials deposit. Ensure that sampling is representative of the entire deposit. Taggart (1927) describes several suitable sampling methods.

(1) Tailings can usually be drilled with augers or reverse circulation equipment. Pits or trenches can be excavated in the tailings. Take appropriate safety precautions to prevent cave-ins, which may require shoring with small coffer dams.

(2) Dumps and heaps are difficult to accurately sample since the size of the material varies considerably. Where the dump is stratified, collect an individual sample from each layer at each sample location.

G. Sampling of Alluvial Placer Deposits.

Sampling precious metal placers is one of the most difficult, time consuming, and costly tasks that you will face. Considerations include the type of deposit; depth to bedrock; false bedrock; variation of silt, sand, and cobble size within the deposit; and quantity and physical characteristics of gold and other placer minerals. You must often rely on the mining history of the area and on experience rather than a rigidly defined formula for collection and interpretation of the sample data.

1. Gold Morphology.

a. Size and weight considerations. Gold can occur in particles from smaller than 100 mesh to large nuggets. Nuggets that are larger than 10 mesh often sell for a premium price above the market gold price, as specimens or for jewelry. However, most gold is valued by weight and not by size. It is customary to report gold weights in either milligrams per cubic yard or grams per cubic meter, and not as Troy ounces per cubic yard.

b. Gold content in a sample. The fraction of gold in a nugget or sample is measured by the "fineness." Fineness is the measure of the gold's purity given in parts per thousand. Gold that assays at 900 fine is 90 percent gold and 10% something else, usually silver and copper. The purest refined gold is usually known as 999.9 gold or four nines and exhibits the specific gravity of gold, 19.0 grams per cubic centimeter. For gold that is not sold as jewelry, you must adjust the amount of payable gold in a deposit for the fineness. This is normally done at the recovery stage in your calculations. Specific gravity will also vary by the fineness of the particle.

2. Relationship of Particle Size and Weight.

a. Sieve analysis. Sieving of recovered gold particles is an important method for separating gold sizes. Gold particle size analysis will assist you in designing a gold recovery system. A typical sieve analysis will use a stack of screens in units of ten mesh beginning with 100 mesh and increasing vertically upwards to 10 mesh, plus an 8mm screen on top. Sieve analysis best measures a particle's ability to pass through a specified size of sieve.

b. Size verses weight. There is no exact relationship between gold weight and sieve size, because of the varying shapes of gold particles of a given mesh, as well as each particle's flatness. A spherical gold particle of 1 mm in diameter will weigh much more than a gold particle of 1 mm diameter that has been flattened to the thickness of gold foil. Yet both gold particles will classify in the same sieve size range. Gold recovered in a placer evaluation must be weighed to provide economic information. See Appendix VII for further details.

3. Quantitative Samples Required.

You will need several quantitative samples to adequately verify a discovery and the mineral character of a placer mining claim. Remember that each ten-acre parcel of a placer mining claim must be mineral in character.[14/] If a discovery has been exposed on a placer mining claim, you may use geologic inference to assess the mineral character of the remaining 10-acre parcels. Placer mining claims may range in size from 20 acres for a claim located by an individual to 160 acres for an association placer claim located by eight or more persons.

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14 United States v. Lara (On Recons.), 80 IBLA 215 (1984), aff'd., Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987).

4. Large Samples Required.

Placer samples should be large. Samples should consist of at least 3/4 cubic yard per three vertical feet of bank or outcrop to be considered quantitative.

a. Acceptability of smaller samples. Smaller samples may be acceptable under extenuating circumstances. Collecting small samples may produce less reliable data. You must fully document in the mineral report the reasons for collecting small samples. Those circumstances may include:

(1) The placer accumulation itself is about the size of a quantitative sample.

(2) There is no mechanical equipment available for sampling.

(3) Topographic, safety or legal conditions make it impossible to use mechanized equipment.

(4) Samples must be hand-dug and carried out via backpack or by pack train.

b. Reducing environmental impact. In some cases, you may be required to take samples from placers in withdrawn areas, where the use of mechanized earth moving equipment requires pre-approval from the appropriate surface managing agency. Discuss the available options with appropriate resource personnel and managers.

(1) A short duration sampling project using a few people with small earth moving equipment used to collect samples of adequate size may create minimal disturbance at a relatively low cost. Such a sampling program will usually involve only one or two trips to each sample point. The earth moving equipment can be used for immediate reclamation of the sample points.

(2) Hand sampling may require more time and personnel and may, therefore, be more costly. Pack animals may be required. Multiple trips to each sample point may be required to ensure collection of an adequate sample size. If the samples are too small, the final report may be less defensible and subject to remand at a hearing.

5. Nugget Effect.

The nugget effect can have a serious impact on placer sample value results. The impact on sample values is more pronounced with gold in medium to coarse size fractions due to the larger unit value of each particle. The nugget effect will be more pronounced in deposits with only a few gold particles, and worse still where those particles are large. Collecting relatively small samples creates a risk of missing gold particles altogether or catching more gold particles than are representative for the deposit. Collecting larger samples will reduce the potential error introduced by the nugget effect. McCulloch (2003) graphs the effects of one particle of gold on the valuation of a sample, and those figures should be consulted as you design a sampling program.

6. Determining Sample Sizes.

McCulloch (2003) provides two methods for estimating the sample size necessary for validity examinations.

a. Most accurate method. The first and most accurate method uses a graph to compare the nugget effect of gold particle sizes to sample sizes. This method first requires that you collect a large sample from the horizon suspected of containing placer gold particles. Next, perform a particle size analysis and use Tables 4.4, 4.5, 4.6, and 4.7 in McCulloch (2003) to select minimum sample sizes.

b. Alternate method. The second method is useful when there is insufficient information about particle size at the beginning of an examination. Using the second method, you can use field and literature data gathered during the examination process to select sample sizes from Table 4.3 in McCulloch (2003). This system considers critical data and should result in an appropriate sample size. The method is similar to a taxonomy key. It consists of a series of conditions leading to a minimum sample size and is given in Appendix VII B. The method considers the following:

(1) Gold particle size distribution from historic production.

(2) Historic mining methods.

(3) Gold fineness.

(4) Common accessory minerals.

(5) Predominant gold characteristics.

(6) Lode-source-deposit types.

(7) Placer deposit types.

7. Sample Sites.

No matter which collection method you use, be certain to clean the face of a previously exposed sample trench to a depth of at least four inches before cutting the sample to avoid salting. Photograph each sample site before and after sampling, using the same procedure as for lode samples.

8. Recording Weights and Volumes.

Record the sample volume in loose cubic yards. Measure the volume of the sample channel or pit to obtain the bank cubic yards. There are several available methods. One method is to use five-gallon plastic buckets, which can be calibrated for lesser volumes. Other methods involve using a backhoe bucket of a measured size.

a. Measure loose volume before transporting sample. When collecting samples in calibrated five gallon buckets, it is important to measure the loose volume of the sample before moving the samples away from the sample point. Any motion of the bucket will cause the sample to settle, which will alter the loose volume measurement.

b. Recording sample weights is optional.

(1) The sample weight (sand, gravel, etc.) is rarely needed to make volumetric calculations.

(2) Recording the sample weight may be useful in calculating the concentration ratio of processing equipment.

(3) When using a backhoe for sampling, it is impossible to weigh the sample unless it is transferred into buckets. Five gallon buckets are useful because they make it simple for you to calculate the total weight of each sample. In general, when collecting samples in five gallon buckets, it is usually a good idea to record sample weight, in case it is needed later.

9. Suction Dredge Sampling.

a. Timed analysis. If you use a suction dredge, you should operate it for a timed period of an hour or more to obtain a proper sample and to be able to calculate the economics of the operation on an hourly basis.

b. Collection of sample. If you can do it safely, place a metal tub of known size at the end of the suction dredge's sluice to roughly measure the volume of sample throughput. Measure the entire sample run or the amount that is run during a timed period. The tub will not capture fine materials that are washed away, but will produce a rough approximation.

c. Manufacturer's throughput rating is not reliable. The suction dredge manufacturer's rated throughput, or hourly capacity, is not a reliable indicator of actual production. The rated throughput is based on a controlled test that involves dredging roofing granule sized particles out of a swimming pool.[15]

10. Concentrate Entire Sample Collected.

Placer deposits and placer samples are not homogeneous. You must recover and concentrate the entire sample, even if it is inconvenient to do so. If part of a sample is discarded, it is impossible to know if the part discarded is barren, rich, or merely representative.

15 Thornton (1979).

11. Concentrating Samples.

You need to reduce the large volume of a placer sample to a manageable size. You can reduce a typical one-cubic-yard placer sample to a concentrate that weighs less than three pounds by mechanical gravity separation in washers, sluices, or jigs. Hand panning to a concentrate, commonly known as a black sand concentrate, is required as a final step.

a. Retaining precious metal values. Take special care in the concentration procedure to ensure you retain all gold values, recognizing that fine particles such as flour gold can be extremely difficult to capture. Whether or not the fine gold portion is commercially viable to recover, the sampling should seek to capture all of the contained gold. The equipment used in the concentration circuit must be capable of reliably recovering placer gold in fine fractions. Experience has shown that a Denver Goldsaver™ coupled with a tail sluice feeding a Knudsen bowl is especially well suited. However, you may also use other combinations of conventional equipment. Whatever equipment you use, you should be trained in its use.

b. Use of claimant's equipment. At your discretion, you may use a claimant's equipment for sampling and concentration. If you do, you must make sure that there is no opportunity for salting, and that the equipment is safe and appropriate for the situation. You must thoroughly clean the equipment before your sampling to avoid sample contamination. You are under no obligation to use the claimant's equipment.

12. Sampling Information and Notes.

a. Sampling information. Sampling of alluvial placer deposits is discussed in Wells (1989), Macdonald (1983), and McCulloch (2003). Consult these publications before sampling any placer deposit.

b. Field checklists. In addition to the field checklist in Chapter III- D, you should also use a placer checklist, such as is found in Appendix VII-C and in McCulloch (2003). Some items in the checklist are not applicable in every case. However, use of the checklist will ensure that you record the necessary data.

13. Reporting Placer Resources.

Placer mineral resources (volume and grade) are reported in bank cubic yards. However, calculate unit operations for handling placer ores in loose cubic yards. When planning mining and processing operations and sizing mining equipment, you must estimate the volume of loose cubic yards to be moved. Each major horizon must be estimated on an individual basis so that proper mine planning may occur.

a. Determination of swell. Determination of swell is an important part of a placer examination and applies to most mining operations. Swell and swell factor are related, but not the same. Swell is calculated as a percent, which represents the increase of volume from bank to loose measure. The swell factor is the reciprocal of the percent swell. There are swell calculations in Handbook 3890-2.

b. Book swell factors are insufficient. Selecting a swell factor out of a book or table is seldom sufficient. Percentage of swell can be estimated in several ways.

c. Estimation of percent swell. A reliable way to calculate a swell factor is as follows:

- Excavate a hole in the ground of known volume, to determine the bank volume.
- Calculate the volume of the hole (which will normally be a cone) by using the pyramid formula: $v = \frac{\Pi r^2 h}{3}$ (h = depth of hole; r – radius at top of hole)
- If the hole is not a cone, consult the Appendices to find a suitable formula to calculate the hole volume.
- Gently place that material into buckets of known volume.
- Measure the volume of the fill in the buckets to determine loose volume.
- Percent swell = $\frac{\text{(loose volume - bank volume)}}{\text{bank volume}} \times 100$

Example: The measured bank volume is 8 yd^3 and the amount of loose yd^3 is 10.

$$\text{Percent swell} = \frac{10-8}{8} \times 100 = \frac{2}{8} \times 100 = 0.25 \times 100 = 25\% \text{ swell}$$

d. Alternate method for estimating percent swell. An alternate method involves using a bucket of known volume. This method may be more useful when excavating holes that will not stand well. You should strive to maintain the integrity of the hole because any slough will affect the results. A conical shaped hole will tend to reduce slough.

- Start with a bucket of known volume.
- Pick a relatively flat portion of the surface.
- Dig a hole and fill the bucket. Do not move or handle the bucket any more than necessary to prevent settling.
- Immediately pour material from the bucket back into the hole until the hole is full to the level of the original surface.
- Measure the material remaining in the bucket.
- The ratio of the remaining material to the initial empty volume of the bucket, expressed as a percentage, is the percent swell.
- Bank volume = empty bucket volume - material remaining in the bucket.

- Percent swell = $\frac{\text{(empty bucket volume - bank volume)}}{\text{empty bucket volume}}$ x 100.

Example: Bucket (14 inches deep) volume = 5 gallons (0.6685 ft^3). Bucket is completely filled to top.

Hole is refilled and 4 inches (0.1910 ft^3) remain in bucket.

Bank volume is therefore = 0.6685 ft^3 – 0.1910 ft^3 = 0.4775 ft^3.

Percent swell = $\frac{0.6685 - 0.4775}{0.6685}$ x 100 = 0.28 x 100 = 28%

e. Estimating a swell factor. Swell factor, is the reciprocal of swell and is normally expressed as a decimal fraction. Swell factor can be calculated as follows:

1 / (1 + percent swell as a decimal) = swell factor.

Example: Using the information from "c" above:

1/ (1 + 0.25) = 1/ 1.25 = 0.8 swell factor

f. Estimating loose volume. To estimate loose cubic yards from measured bank cubic yards, you may use the following method:

Loose cubic yards = bank cubic yards/swell factor.

Example: (using "c" above) $\frac{\text{8 bank yd}^3}{\text{0.8 swell factor}}$ = 10 loose yd^3

Alternatively, you may use this method:

Loose cubic yards = bank cubic yards + (bank cubic yards x percent swell as a decimal)

Example: (using "c" above) 8 bank yd^3 + (8 bank yd^3 x 0.25) = 8 yd^3 + 2 yd^3

= 10 loose yd^3

g. Prevention of sample settling before estimating swell. Whatever method is used, handle the material as little as possible. The measurements MUST be accomplished before transporting the material any distance. Samples cannot be collected at the site for later swell measurement in the laboratory. Any compaction of loose material will affect the estimation.

h. Use bank cubic yards for resource calculations. When calculating placer resources, you will measure sample sizes at the time of collection, and make all calculations in bank cubic yards.

14. Problems in Sampling.

Great care must be used to take representative samples. Several major problem areas may exist:

a. Boulders. If mining requires avoiding, blasting or moving boulders, the boulder factor will have to be considered. In this usage, the term boulder is not the same as used in sediment size analysis. If the largest rocks at the sample point will pass through the processing equipment, there is no boulder factor to calculate. A boulder factor correction can be found in Appendix VII-C, and in Wells (1989).[16]

(1) Rocks small enough to be collected and pass through the sampling concentration equipment should be processed as a part of the sample. In such cases, there is no boulder factor to consider.

(2) Rocks too large to pass through the sample concentration equipment should be cleaned of adhering material and the adhering material should be processed through the equipment. It is important to determine if the rocks would pass through the actual production equipment. If they will, there is no boulder factor to consider.

(3) Estimate volume percent of boulders in the cut that cannot pass through the sample concentration equipment and add that volume to the appropriate volume calculation. Calculations using the boulder factor of Wells (1989) may be appropriate. It is extremely important in this case to have photographs before and after sampling.

(4) Boulders will often be a factor in suction dredge examinations. They will affect the volume and grade of placer resources and present operational challenges.

15. Other Valuable Detrital Minerals.

Valuable detrital minerals may occur in placer deposits or may be mixed in a placer gold deposit. These minerals must be identified and evaluated. These may include rutile, monazite, garnet, cassiterite, ilmenite, cinnabar, sapphires, rubies, diamonds, and monazite. Methods and equipment for sampling and concentrating these minerals are similar to those for placer gold. These minerals will generally occur in much larger volumes than gold and

16 The boulder factor in earlier editions of Wells is in error.

are of lower unit value, so the results of the nugget effect will be much less pronounced.

16. Prevention of Salting.

The following precautions should prevent salting, either accidentally or on purpose:

- Examine and clean all equipment used in sampling and sample processing before, during, and after use.

- Make sure that samples are kept secure. Due to the large size of placer samples, it is often impractical to store them in a locked cabinet or building before they can be concentrated. If this occurs, seal the five gallon buckets, if used, in a manner that will show if any tampering has taken place. It may be necessary for you to post a guard.

- Clean sample sites before taking samples, in a manner similar to lode sampling.

H. Analytical Methods and Assaying.

1. Assaying Defined.

Assaying can be generally defined as the quantitative determination of the metals in ores and furnace products. In the United States mineral industry, the word "assay" is most often applied to describe the protocol of a physical and chemical process that, using a precise methodology, determines the concentration of the valuable metals in weight percent. When undertaken properly, a chemical analysis is comparable in precision to an assay. There is no rigid differentiation between an assay and a chemical analysis. Tests for many industrial minerals and other metals are often referred to as analyses, or chemical analyses.

The written result from the laboratory is usually called an assay sheet or report of assay. In informal usage, the written result is often called simply an assay. A complete listing of assay and analysis methods, with a description of how they work, is beyond the scope of this Handbook. A good place to start when researching assay methods is Haffty (1977).

2. Managing Assay Costs.

Assaying can be expensive, especially for examinations involving large claim groups or industrial minerals. You should carefully plan sampling and assaying to minimize costs as much as possible. However, a sufficient amount of assaying or analysis is required, and only you can make that determination. Failure to perform an adequate amount of assay or analysis work may result in a weak case that must be redone. The Government could end up using public funds to settle a lawsuit or purchase mining claims that cause a resource conflict. Doing the examination right the first time usually prevents expensive litigation and settlements.

3. Assay Methods.

Assay and analysis methods in current use include Fire Assay (FA), instrumental methods, and amalgamation of free gold using mercury.

a. Fire assays. Fire assaying is an industry-accepted, time-proven method of determining the concentrations of gold and silver in a sample, and may be applied to the platinum group metals. A fire assay is a miniature smelting process.

(1) There are no Earth materials that cannot be analyzed for gold and silver using a properly conducted fire assay.

(2) Gold and silver from lode or vein deposits (but not placers) should normally be fire assayed. Fire assay may also be used for platinum group elements if the laboratory is properly equipped.

(3) A fire assay is often used as a pre-concentration step. The resultant precious metal bead is subjected to further instrumental analysis, usually by Induction Coupled Plasma Arc (ICP) methods.

b. Instrumental methods. Instrumental methods include Atomic Absorption spectrophotometry (AA), Induction Coupled Plasma Arc Optical Emission Spectroscopy (ICP-OES), and Induction Coupled Plasma Arc Mass Spectrometry (ICP-MS). When instrumental methods are properly applied and conducted, their results are reliable.

(1) In all instrumental methods, certain metals, particularly iron and nickel, will interfere with spectral readings.

(2) If not taken into account, these interferences will cause the assayer to report erroneously high precious metal and platinum group values.

4. Tests for Bulk Tonnage, Low Grade, Metallic Deposits.

If assays confirm the presence of potentially economic metallic deposits that could be processed by leaching, the mineral examiner should arrange for leach tests. This test determines what proportion of the contained metal can be recovered using leaching technology. The leach tests are not additional assays, and are not to be used as such. These are typically column percolation or bottle agitation leach tests, where samples are leached, and passed through appropriate recovery systems. Reagent consumption is also measured in order to calculate leaching costs.

5. Other Tests May Be Needed.

Some metallic mineral deposits may require other tests. These may include such tests as: bulk density measurements, grinding studies, flotation recovery testing, and acid generation potential.

6. Analysis of Nonmetallic Materials.

Analysis of gem and semi-precious stones, specimen-grade minerals, and non-metallic or industrial minerals, requires tests and methods specific to each commodity. Industrial minerals are further discussed in Handbook 3890-4. If you have questions about the proper analytical technique required to produce a reliable analysis, consult with the selected lab, recognized experts, or refer to Rose, Hawkes, and Webb (1979), and Levinson (1974).

7. Assay of Placer Concentrates.

Successful recovery methods for placer minerals depend on removing the minerals from the sediment using gravity separation methods. Gravity recovery methods will not recover minerals that may be chemically contained within a rock.

a. Placer gold is not amenable to leaching. Placer gold cannot be economically leached or precipitated. Placer gold particles are too large, and slow the kinematics of the leach process. This results in poor recoveries and high costs.

b. Mercury amalgamation of placer gold concentrates. To determine the amount of placer gold in a concentrated sample (the black sand concentrates), use the free gold mercury amalgamation method. Any other process will give an inaccurate value which will usually be higher than the actual value of gold recoverable by placer mining methods.

(1) The concentrates must not be split.

(2) You must request that the assay laboratory report results in total milligrams recovered from the entire black sand concentrate. That result, added to any gold manually removed from the sample by the mineral examiner, represents the total milligrams of gold in the sample originally collected.

(3) A result reported in Troy ounces per ton reflects only the value in the concentrates. You must then mathematically convert that value to represent the actual value per bank cubic yard. Whenever possible, the assay laboratory should report the gold content in milligrams.

c. Preparing samples for amalgamation. Examine concentrates visually and sieve them before amalgamation to determine the percentage of the gold in specific particle size fractions. Use sieve sizes that range in units of ten mesh from 10 to 100 mesh. Nugget gold and coarse gold (> 10 mesh) may bring a premium price on the market as jewelry gold.

d. Fire Assay of amalgamation tailings. Once you finish the mercury amalgamation, perform a fire assay on each sample's remaining tailings to measure any gold that could be locked in and not recovered by mercury. Do not combine the tailings of several samples into one for fire assay. Gold that is identified in a fire assay of

amalgamation tailings is usually in concentrations too small to be of any economic value. Wells (1989) discusses the issue in depth.

e. Spectrographic analysis of black sands. Do an emission spectrographic analysis on the black sands recovered to check for rare earths, tin, titanium, columbium, tantalum, and the platinum group minerals. If these are found in significant amounts, have the black sands assayed. Some laboratories offer inexpensive analytical packages that will accomplish this.

8. Selecting an Assayer.

The analysis of samples is important and you must exercise considerable care in this regard. Erroneous or unreliable assays can cause the Government to lose its case in an administrative hearing. Selecting an assay laboratory solely on the basis of bid price is not acceptable. You must use an established analytical laboratory that has a good reputation and is qualified to perform the required assays. When ever possible, you must use a laboratory that conforms to requirements of The International Organization for Standardization (ISO).

a. Laboratory certification. Many reputable laboratories now possess accreditation or certification under one or more of several standards established by The International Organization for Standardization (ISO). A detailed description of the standards is beyond the scope of this Handbook. The ISO provides numerous descriptive publications. Their website, http://www.iso.ch/iso/en/ISOOnline.frontpage, is a good resource. Two ISO standards apply to analytical laboratories that analyze samples collected by mineral examiners.

(1) ISO-9002 deals with the establishment of quality management systems within organizations. ISO-9002 applies to a wide variety of industries in addition to analytical laboratories.

(2) ISO/IEC-17025 is the more applicable standard. Accreditation to ISO/IEC-17025 first requires that the laboratory meet the quality management system of the appropriate ISO-9000 series standard. However to meet the ISO/IEC 17025 standard, the laboratory must also possess adequate equipment to perform its calibration and testing tasks; and the laboratory must employ adequate personnel with the competency to perform the testing.

In addition, most accreditation plans in the United States and Canada require that the laboratory undergo regular proficiency testing, which typically includes "round robin" testing of standard reference materials with other laboratories. In essence, ISO/IEC 17025 accreditation recognizes laboratory competence, while ISO 9000 series certification alone recognizes conformity to a written quality control system.

b. Specific laboratory applications. Many types of laboratories may possess ISO 9002 and/or ISO/IEC 17025 accreditations. Such laboratories may specialize in unrelated work, such as water testing under the Clean Water Act, testing of effluents, or

analysis only of bullion. Experience has shown that sending rock or ore samples to such laboratories will usually produce incorrect results, even if the laboratories have a good reputation in their primary field.

c. ISO/IEC laboratories to be used when available. At a minimum, only assay laboratories that possess an applicable ISO 9002 certification, with labs that also carry applicable ISO/IEC 17025 accreditation preferred, should be used for official precious and base metal assays. The laboratories selected must routinely analyze ores, rocks, and concentrates as a primary business, not as an occasional service. ISO standards can change. At the time that this Handbook was written, there was discussion of modifying the ISO/IEC 17025 standards to conform with the ISO 9000-2000 standards. It is important that you keep track of which standards are current, and use only labs that are accredited. While appropriate ISO accreditation is required when applicable, the assay laboratory selected must also have a positive reputation in the mining industry.

d. Non-availability of ISO/IEC laboratory. In some cases, no ISO certified or accredited laboratory may offer the necessary analytical services. Such services could include strength testing for industrial minerals or mercury amalgamation for precious metal placer concentrates. In all cases, you should carefully consider experience and reputation when selecting a laboratory.

9. Protocols for Quality Control on Your Assays.

When submitting samples to a laboratory for assay work, you must check on the laboratory's accuracy by using a common quality control technique. You must include duplicate samples (labeled with a different sample number) and "blank" samples. Blanks are samples that have been analyzed and are known to not contain any mineral or metal being looked for in the remainder of your sample stream. In many cases (gold, platinum group elements, and certain base metals), standard samples of ores with a precise metal content may be purchased and introduced into the sample stream using sample numbers from your sample stream. Gold standards may be purchased from the Nevada Bureau of Mines and Geology in Reno, Nevada. Platinum group standards may be purchased from the Geological Survey of Canada. In using duplicate samples and standards, the assay values should not vary by more than ten percent. If the variance exceeds ten percent, the samples should be re-analyzed.

10. Unorthodox or Unusual Situations.

In some cases, you may be told by the claimant that only certain unusual, secret or proprietary assay methods will detect the precious metals on the claims. In other cases, the claimant will assert that only certain highly experienced assayers are capable of detecting the precious metals. These are among the warning signs for a mining scam. (Lechler, 1997).

a. Using a claimant's preferred laboratories. At your discretion, it may be prudent to send a few samples to the claimant's preferred assayer, primarily to check the laboratory's reliability. Any samples thus sent must be splits of samples also sent to

accredited laboratories. Contact the BLM National Training Center to find out whether the mining claimant's preferred assayer has already been determined to be unreliable by other BLM or Forest Service mineral examiners.

(1) Before sending samples to a claimant's preferred assayer, the mineral examiner should ensure that assay costs at the claimant's preferred lab are not excessive.

(2) The sample stream must include standard reference materials, plus one or more blanks that visually resemble the material from the claim.

(3) All samples should be numbered and packaged in such a way that the assayer cannot determine the actual origin of any sample.

(4) You must document the analytical methods and their results in the mineral report.

Chapter V – Evaluating a Mineral Deposit

A. General Requirements and Process.

The objective of evaluating a mineral deposit is to determine if the operator has a reasonable prospect of success in developing a valuable mine.[1]

1. Test for Discovery.

a. Prudent person rule. In patent, validity and related examinations, the standard that you must apply is the prudent person rule, established in Castle v. Womble, supra:

". . .where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby 'all valuable mineral deposits in lands belonging to the United States . . . . are . . . . declared to be free and open to exploration and purchase.' For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do."

b. A validity examination is not an appraisal. An appraisal and a validity report may rely on similar data. However, the purposes of and analyses in each document differ. An appraisal is intended to determine the fair market value of a property right for sale, trade, or taxation purposes. A validity examination is intended to determine whether a claimant has discovered a valuable mineral deposit under the Mining Law. Appraisals generally reflect risk assessments and the use of higher rates of return than does a validity examination, among other distinctions.

c. Factors to consider. You must consider a number of factors to estimate a deposit's probable economic viability, including:

- The grade, tonnage, and estimated gross value of the mineral deposit.
- All non-sunk capital costs, such as costs of equipment, buildings or other infrastructure at the mine (sunk costs are described below)
- All costs incidental to operating the mine, processing the ore, and reclaiming the site.
- Marketing costs.

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1 Castle v. Womble, 19 Pub. Lands Dec. 455 (1894).

- All applicable Federal and State taxes, including but not limited to income taxes, depletion allowance, depreciation allowance, property taxes, and severance taxes.

d. Grouping claims into logical mining units[2] is permitted for verifying discovery.

(1) Mining claims may be analyzed as a group for the purpose of ascertaining whether a marketable discovery exists, so long as each mining claim recommended for patent contains mineralization in sufficient quality and quantity that it can be reasonably expected to be developed profitably under an overall mining plan for the entire deposit. Schlosser v. Pierce, 92 IBLA 109, 130 (1986); see also United States v. Cactus Mines Ltd., 79 IBLA 20 (1984), In Re Pac. Coast Molybdenum Co., 75 IBLA 16 (1983).

(2) For a group of mining claims covering the same mineral deposit, you may treat the mining claims as a single unit for purposes of cost estimation and economic analysis, and validity determination.[3] After you verify that the claimant can show a physical exposure of the valuable mineral deposit on each claim in the group, you may treat the claim group as a logical mining unit for the remainder of the mineral examination. Each claim need not stand alone economically, but each claim must contribute to the overall value of the deposit. In general terms, each claim must have sufficient tonnage at or above the cut off grade for the deposit as a whole to justify extraction. This means that when you are analyzing marketability for a group of claims, "the recovery expected from each claim must not only exceed the costs of mining, transporting, milling, and marketing the particular deposit on that claim but each claim must also bear a proportionate share of the development and capital costs attributable to the combined operation." United States v. Collord, 128 IBLA 266, 287 (1994) (citing Schlosser, 92 IBLA at 131-132 (citing Pac. Coast Molybdenum, 75 IBLA at 24, 24 n.7, 24-26, 32)).

e. Limited information available. In many instances, you will have to verify whether a valuable mineral deposit exists based on limited information. Information available for a mining claim validity examination will only rarely be comparable to a major feasibility study in reliability and scope of available data.

2. Test for Whether Lands are Mineral-in-Character.

Beginning from the earliest days of the public land system, Congress created two categories of public lands: mineral land and agricultural land. Mineral lands were sold for $5 per acre. Agricultural lands were sold for $1.25 per acre. The criteria for determining whether lands were either mineral or agricultural was whether the lands were "chiefly valuable" for one or the other. With the enactment of FLPMA, this land classification distinction became less important. However, the question of whether lands are mineral-in-

2 Usage of the term "logical mining unit" in this context is similar to, but not identical to, the logical mining unit terminology used in solid leasable minerals. In Chapter II of this handbook, a logical mining unit is also referred to as a claim block.

3 Schlosser v. Pierce, 92 IBLA 109, 129-34 (1986).

character must still be addressed when determining the validity of placer mining claims and mill sites or when considering certain land transactions.[4]

a. Considerations for determining whether lands are mineral-in-character. The test for determining whether lands are mineral-in-character, like that for discovery, has been established by case law. It may be viewed as discovery minus a physical exposure. It may be determined by geologic inference, but requires more than a simple determination that unexposed minerals probably exist; their quality and quantity are also an issue. Land is mineral-in-character when known conditions engender the belief that the land contains mineral of such quality and quantity as to render its extraction profitable and to justify expenditure to that end.[5]

b. When required. Determining whether lands are mineral-in-character is most commonly necessary when evaluating the character of each ten-acre parcel of a placer mining claim or when evaluating mill sites under the Mining Law. Geologic inference may be used to estimate deposit size or establish mineral-in-character status.[6]

c. Evidence of Mineral-in-Character. A mineral-in-character determination is based upon a combination of physical exposures and geologic inference. When using geologic inference, you are making projections from known or reasonably inferred formations from adjoining lands into the land in question to determine its mineral character.[7] As such, reserves that may be inferred to reside within a geologic formation adjacent to the land in question may be used to establish the mineral character of the land being classified if available evidence shows that the formation likely projects into this land.

B. Classification of Ore Reserves and Resources.

Problems with defining and properly using terms to describe ore, reserves and mineral resources are not new. As early as 1909, Herbert C. Hoover wrote:

"Some general term is required in daily practice to cover the whole field of visible ore, and if the phrase 'ore in sight' be defined, it will be easier to teach the laymen its proper use than to abolish it. In fact, the substitutes are becoming abused as much as the originals ever were. All convincing expressions will be misused by somebody."[8]

1. Resources, Reserves and Ore.

Over the past few decades there has been a trend to shorten the phrase "ore reserves" to just

4 Manual Section 3060 Mineral Reports Preparation and Review.
5 Diamond Coal & Coke Co. v. United States, 233 U.S. 236, 240 (1914); S. Pac. Co., 71 Interior Dec. 224, 223 (1964); United States v. McCall, 7 IBLA 21, 27, 79, Interior Dec. 457, 460 (1972); United States v. Bunkowski, 5 IBLA 102, 127, 79 Interior Dec. 43, 55 (1972).
6 United States v. Feezor, 74 IBLA 56, 78-79 (1983).
7 S. Pac. Co., 71 Interior Dec. 224, 223 (1964)
8 Hoover, H. C., 1909, Principles of Mining, McGraw-Hill, p 17.

"reserves," and to use the terms "ore" and "reserves" interchangeably. When using these terms, you must be mindful of their various economic and legal meanings. In general usage, an "ore"/"reserve" is that portion of a mineral deposit that can be profitably mined under current economic, technological, and legal conditions. It is generally not possible to determine if a mineral deposit is an ore/reserve or a resource until you have completed your economic evaluation.

2. Terminology.

The terms "resources," "reserves" and "ore" are often classified by adding the terms "measured," "indicated," "proven," and "probable," as well as other descriptive adjectives. You will also encounter a wide variety of other terms such as "possible ore," "ore in sight," and "measured ore." It is important that you understand how these terms are used and the system from which they are derived. Many such terms have little to no direct applicability to determining the validity of a mining claim.

3. Ore Reserve Definitions.

For validity and mineral-in-character purposes, it is recommended that you use the definitions from McKinstry[9] for describing ore reserves. They are well established in practice and match the common usage of the past century. Their focus is on the individual mining property in question rather than the mining district or region, and they can be readily established based on the data at hand. Those definitions are:

a. **Positive ore or ore blocked out**. These terms are now referred to as "proven ore," which are not always "proven" in the classical sense. Ore exposed and sampled on four sides, i.e., by levels above and below and by raises or winzes at the ends of the block. This definition applies to veins; for wide ore bodies the workings must be supplemented by crosscuts.

b. **Probable Ore**. Ore exposed and sampled either on two or on three sides.

c. **Possible Ore**. Ore exposed on only one side, its other dimensions being a matter of reasonable projection. Some engineers use an arbitrary extension of 50 to 100 feet. Others assume extension for half the exposed dimension.

4. Mineral Resource Definitions.

"Mineral resources" can be defined as minerals which are uneconomic to mine under present technological or economic conditions, or for which there is insufficient information to place them into an ore/reserve category. With changes in economic or technological conditions, or after further exploration, resources may become ore/reserves. "Resources" will be defined differently, depending on the classification system and its intended use.

9 Mckinstry, H. E., 1948, Mining Geology, Prentice-Hall Inc.

Resources are usually classified as "measured, indicated, or inferred."

a. Measured resource. To be classified as "measured,"[10] the grade and tonnage are computed from dimensions revealed in outcrops, trenches, workings, or drill holes; grade and/or quality are computed from the results of detailed sampling, and measurements are spaced so closely and the geologic character is so well defined that size, shape, depth, and mineral content is well established.

b. Indicated resource. To be classified as "indicated,"[11] the quantity and grade and/or quality are computed from information similar to that used for measured resources, but the sites for inspection, sampling, and measurement are farther apart or otherwise less adequately spaced. The degree of assurance, although lower than that for measured resources, is high enough to assume continuity between points of observation.

c. Inferred resource. An "inferred"[12] resource is estimated by assuming continuity beyond measured and/or indicated resources, for which there is geologic evidence. An inferred resource may or may not be supported by samples or measurements.

d. Grouping of defined classes. The term "demonstrated" is often encountered in the quantification of resources or reserves for a mineral deposit. "Demonstrated" is usually the sum of "measured" plus "indicated" for resources and "positive" plus "probable" for ore/reserves.

5. Using "Reserves" and "Resources" Terminology in Validity Determinations.

a. Reserves. If a claimant establishes positive and/or probable reserves on a mining claim, it is likely that the claimant has discovered a valuable mineral deposit under the Mining Law. This is because, if there are positive and/or probable reserves on a mining claim, it is likely that a prudent person would invest additional labor and means in the expectation of developing a valuable mine involving that claim. "Possible ore," (from McKinstry's classification) may similarly qualify as the basis for a finding of a discovery of a valuable mineral deposit.[13].

b. Resources. If a claimant establishes the existence of resources on a mining claim, resources are normally an insufficient basis, no matter how accurate or certain, for concluding that the claimant has discovered a valuable mineral deposit. Depending on the outcome of your economic evaluation, resources may or may not become reserves.

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10 Definition as given in Principles of a Resource/Reserve Classification for Minerals; USGS Circular 831 (1980). See also Principles of the Mineral Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey; USGS Bulletin 1450-A (1976). The Bureau uses this term to describe the process for obtaining the resource classification, but the Bureau does not adopt the USGS classification system for mineral reserves.

11 Id.

12 Id.

13 United States v. Hooker, 48 IBLA 22, 30 (1980); United States v. Feezor, 74 IBLA 56, 79 (1983).

c. Discovery under the Mining Law. In a validity examination, use extreme caution when using ore/reserves or resources terminology to confirm the discovery of a valuable mineral deposit. There is no direct correlation between these terms and the validity determination standards because they differ in purpose. Consider a hypothetical situation in which a mineral examiner delineates a large mass of ore grade material in an area where mining operations have historically occurred.

- Until professionally-completed feasibility studies with encouraging results have been completed, that mass of ore grade material probably would not meet Society for Mining, Metallurgy, and Exploration (SME) standards for reserves, and would probably be a resource if SME standards alone are applied.

- Under the U.S. Geological Survey (USGS) "McKelvey" diagram, the mass of ore grade material might be a reserve.

- Under the prudent person rule, the mass of ore grade material would probably constitute a discovery of a valuable mineral deposit.

6. Other Commonly Used Classification Systems.

For many years, the industry worldwide has grappled with establishing actual, legal and verifiable classifications for "resources and reserves." Two of the most commonly used of these systems are the USGS classification system (the "McKelvey diagram") and the SME Guidelines. Neither of these systems is an exact fit with the requirements of the prudent person rule.

a. SME Guidelines and the prudent person rule do not correlate. The prudent person rule, as established in Castle v. Womble, supra, is the basic standard for determining whether a mining claim contains a valuable mineral deposit. The SME guidelines were developed by an international working group as a means of consistently defining and stating mineral resources for publicly reporting companies. Consequently, the prudent person rule and the SME guidelines do not correlate to each other. As an example, if a mining claim contains "proven mineral reserves" as defined by SME there is a very high probability of there being a discovery under the Mining Law. However, discovery under the Mining Law may well be achieved without attaining the level of confidence or certainty required by the SME guidelines for "proven mineral reserves."

(1) You are expected to understand the SME definitions of "reserves" and "resources," and to remain informed as to any amendments to them. You must be conversant in how the terms are used by the mining industry, and how the industry's usage may or may not relate to the Bureau's work so that you may understand the relationship between documents provided by the industry using that terminology and the discovery test. The SME Guidelines are not quoted within this Handbook or included as an appendix because they are subject to change by parties that are not affiliated with the U.S. Department of the Interior.

b. The McKelvey diagram differs from SME Guidelines and from the prudent person rule. The mineral resource classifications in the SME guidelines are not the same as the mineral resource categories in the "McKelvey diagram."[14] The USGS developed the basics of the "McKelvey diagram" during World War II. It was officially published in 1972 and has remained as the USGS standard since then.[15]

(1) USGS developed the McKelvey diagram for mineral resource inventories and land use planning and not for classifying resources and reserves on specific mineral properties. The McKelvey diagram lacks the precision necessary to properly classify resources and reserves for economic reporting purposes or determinations of validity using the prudent person rule.

(2) A noted authority on the use and classification of reserves for the evaluation of a mining property, in discussing the utility of the USGS classification system stated in 1948:

> "This classification leaves room for considerable deduction from geological background. It is well suited to its intended purpose, the estimation of the reserves of a district or a nation. It is less satisfactory for valuing a single mine." (McKinstry[16]).

C. Calculation of the Tonnage and Grade of a Mineral Deposit.

1. Tonnage.

In order to calculate the tonnage of an ore reserve and waste rock in a mining operation you first need to calculate the volumes of each and calculate their respective densities.

a. Volume. Calculate the volumes of the valuable mineral deposit and waste rock that must be removed using geometric methods. In most instances, you will have to subdivide the deposit into multiple geometric bodies to accomplish this task.[17]

b. Weight. Determine the weight, in pounds per cubic foot, of each geometric body. Use measured weights and densities, as they will give you more accurate results than if you rely on a reference, such as in Appendix IV-B. The weights and volumes calculated for waste rocks are included in your estimate of total mining costs.

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14 See Hansen, W. R., Suggestions to Authors of the Reports of the United States Geological Survey (7th ed.) (1991), Dept of the Interior, GPO, p. 96, Fig. 21.

15 McKelvey, V. E., 1972: Mineral Resource Estimates and Public Policy: American Scientist, vol. 60, no. 1, pp. 32-40. Hansen, W. R., 1991: Suggestions to Authors of the Reports of the United States Geological Survey, U. S. Dept. of the Interior, pp. 95-97.

16 Id. at.472

17 Popoff, C., 1966; Computing Reserves of Mineral Deposits: Principles and Conventional Methods; U. S. Bureau of Mines Information Circular 8283, U. S. Dept. of the Interior, pp. 113.

c. Total Tonnage. Using the resulting volumes and weights, calculate the tonnage of each geometric body. Determine the total tonnage by calculating a weighted average of the deposit's geometric bodies and adding them together. See Appendix VIII.

2. Grade.

Calculate the weighted average grade of the valuable mineral deposit. See Appendix VIII.

D. Precision of Calculations.

Be sure to avoid the appearance of extreme precision where it does not exist.

1. Making Calculations Involving Measurements of Varying Precision.

The precision of a calculation is limited to its least precise number. For example, assume that a mineral deposit is about 3.5 feet thick by about 150 feet long by about 750 feet wide. In this example, two of the measurements are significant figures that are not as precise as the third measurement. The correct volume, accounting for the imprecise significant figures, will be about 15,000 cubic yards, not 14,583.33 cubic yards. If the original measurements had been made using a precise survey, measuring exactly 3.502 feet, 150.00 feet, and 750.00 feet, then 14,580 cubic yards would be correct.

2. Rounding of Numeric Values.

You must ensure that rounding is within the accuracy of all measurements. Virtually all calculators and spreadsheet programs will carry an extensive number of digits after the decimal point while making calculations. Rounding can take place with each calculation, at the end of a string of calculations, or with the last calculation. Whichever method you decide to use, be certain to consistently apply it and to explain it in the mineral report.

3. Estimating Resource Values.

Methods of estimating resource values are found in Peele (1947), Peters (1987), Parks (1957), Popoff (1966), and McKinstry (1948). See Appendix VIII for brief examples of calculations. Your choice of method should be appropriate to the situation, recognize geologic boundaries, and be thoroughly explained in the mineral report.

E. Establishing a Market Price for a Commodity.

The Department has ruled that it is both proper and necessary to consider historic price and cost fluctuations in the consideration of marketability.[18]

18 In Re Pac. Coast Molybdenum Co., 75 IBLA 16, 90 Interior Dec. 352, (1983).

1. Pricing Mineral Commodities.

a. Commodities traded on public exchanges. With certain commodities, especially precious metals and some base metals, prices can fluctuate considerably. You must take this fluctuation into account when evaluating the viability of an operation. You must take into account both current market trends and historic price fluctuations.

(1) BLM has established a policy for how to estimate a market price for mineral commodities.[19] In brief, the methodology uses a six-year average, which is centered on the critical date for which the economic evaluation is being performed. Some examinations will require that the calculation be made for more than one critical date.

(2) To begin, calculate the average market price for the three year period before the appropriate critical date. Next, calculate the average commodity futures price for the three years after the critical date, based on the published prices for futures contracts. By including the market price for the month of the critical date, this method gives you 73 months of pricing that is averaged to give an expected commodity price for your economic analysis. Please refer to the policy statement given in Appendix VI-A for more detailed information.

b. Commodities not traded on public exchanges. The pricing policy does not work in all cases. For example, many industrial minerals are utilized in vertically integrated markets and there may not be published prices for them. In such cases, you must review all relevant information to develop a thoroughly documented reference price. For additional information regarding industrial minerals, consult BLM Handbook H-3890-5, *Industrial Minerals*.

F. Mine and Mill Modeling.

Before you can estimate the costs or potential returns, you must first determine what mining and processing methods are being used or are expected to be used.

1. Data Supplied by Claimants.

In many cases, the claimant will provide you with a detailed mine and mill plan that includes economic data. In this situation, you should verify whether that plan is operationally viable. You may evaluate the proposal and adjust or modify any component to improve efficiency, recovery of valuable minerals, savings on reclamation, and so forth. A number of other documents may provide useful information, including:

- Documents filed under the surface management regulations, such as notices or plans of operations

19 65 Fed. Reg. 41,724 (July 6, 2000); Appendix VI-A.

- Documents filed with the United States Securities and Exchange Commission (SEC) or foreign equivalents
- Documents filed with State securities agencies.
- Articles of incorporation, as well as periodic reports. These are normally filed with an agency in the state of incorporation.
- Information posted at a company website or an affiliated website on the internet.
- Company press releases.
- Articles in newspapers and trade journals.

2. Data Not Supplied By Claimants.

When the claimant does not provide a mine and/or mill plan, or where the claimant provides an unrealistic or inappropriate plan, you must develop a hypothetical operation suitable for the deposit being examined. Whether verifying mine and mill information provided by the claimant or developing a hypothetical operation, you must ensure that the mine and mill operations are properly sized and otherwise appropriate for the site and deposit being examined.

G. Preparing a Cost Estimate.

1. Sources of Operating Cost Data.

In many cases, you can get operating cost data for a planned or existing mine from the mine operator. However, you must verify any cost information you get from the mine operator. In other instances, you may have to calculate the costs of a proposed mine operation. Multiple sources of operational and cost information are available for this purpose.[20] In addition, several computer programs are available to assist you in estimating costs. However, if you do not fully understand how the computer program handles the data that it manipulates, you could produce an impressive-looking result that may not be defensible.

2. Estimation Methods.

You may choose to use one of several methods of estimating costs. These include cost indexing, comparable costs in the same mining district, cost models, and grass roots estimating. In essence, you will build a mine on paper. Cost estimation is usually an iterative process, which requires information generated in the previous iterations to refine

20 Western Mine Engineering, equipment handbooks, trade journals.

the results as work progresses. Normally, several full iterations of a cost estimate will be required to provide a sufficient level of confidence. In cases where the resource values are very low or very high, only a few iterations are necessary. For example, there is little need to expend a large amount of effort to estimate the cost of a purported mine that actually contains only average crustal abundance concentrations of mineral commodities.[21]

a. Cost estimating. You can use cost indexing to update or backdate the cost of equipment or services from one point in time to another point in time. The U. S. Department of Labor and Commerce publish monthly and annual cost indices for a large range of commodities and services including mining and milling. Indices are regularly compiled by Western Mine Engineering. Cost indexing does not work well as the sole cost estimation method for an overall mining operation. The resulting numbers become less reliable beyond five years.

(1) Sample index calculation. A D-8 Caterpillar bulldozer cost $150,000 in 1979. You need to know its cost in 1982. Its estimated cost would be:

$$1979 \text{ cost} \times \frac{1982 \text{ cost Index}}{1979 \text{ cost Index}}$$

$$\$150{,}000 \times \frac{343.8}{256.2} = \$150{,}000 \times 1.34 = \$201{,}000$$

b. Comparable operations in the same mining district. Neighboring mining operations within a particular mining district often use similar mining methods. The removal cost per ton of rock or cubic yard of gravel will usually vary by only a few percent between properties. If operating cost data is available for two or three properties in the district, you can use that data to estimate the average operating cost for removing a ton of rock or gravel per day for an operation of equivalent size. Comparative cost analyses do not work well if you are evaluating very small operations using site-built equipment, unless the operations are substantially identical. Comparing operations is often useful in spot checking costs provided by the claimant.

c. Grass roots estimating. This method independently estimates the project costs, or costs of parts of a project, based on unit operations and other discrete costs, all of which together represent the cost of a complete operation. The references cited in cost indexing above, especially Western Mine Engineering, contain up-to-date purchase costs of equipment and services. A number of publications advertise new and used equipment for sale. You may be able to get current and past sales prices at the local library, if the library's collections include these types of publications.[22] Other cost information sources include equipment manufacturers, vendors, and service companies. Many equipment manufacturers publish operating or estimating guides, which can assist you in equipment

21 See generally, United States v. Pass Minerals, 168 IBLA 115, 121 (2006).
22 Past and present sale prices for metallic minerals are also found at www.kitco.com, www.cbot.com>, www.lme.co.uk.

sizing and selection, as well as determining cycle times for unit operations.

d. Sunk costs. Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date.[23]/ Do not include as expenses in the operation's cash flow those capital costs that were sunk **before** the date of marketability.

(1) Excavations, structures, and equipment affixed to the land and that cannot be removed, even for salvage value, may qualify as sunk costs. Examples include pits, underground workings, dumps, tailings ponds, monitor wells and some buildings.

(2) Sunk costs do not include ongoing equipment, improvement or maintenance expenses.[24]/ Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs.

e. Equipment costs and accounting. The acquisition costs of equipment owned by a claimant before the marketability or withdrawal date need not be considered in calculation of costs.[25]/ Replacement costs of equipment after the marketability date are to be taken into account.

f. Labor costs. To establish the labor costs for a mining operation, use the local or regional wage rate for the job classification that was prevailing for the time period you are evaluating. The wage cost must normally account for burden, including Workers' Compensation, FICA, Medicare, and other required personnel costs that may be required by a state or local government. Burden is also applicable to persons who are self-employed. When you are evaluating a small "mom and pop" operation, do not calculate the burden as though the "mom and pop" operators are hiring outside employees. Use only the labor overhead costs that might apply to the "mom and pop" operation, e.g., self-employment taxes and insurance. The minimum wage should only be used for unskilled labor when the local job market is actually paying minimum wage for that kind of work, or if there is no other data.[26]/ When there is evidence that a prudent mine operator would expect to pay a higher wage for a certain type of labor, use the higher wage.

g. Environmental Compliance Costs. Include all costs associated with obtaining federal and State permits, reclamation, and monitoring and maintenance of post mining facilities in your estimate.

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23 United States v. Clouser, 144 IBLA 110, 131 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980).
24 United States v. Garner, 30 IBLA 42, 67 (1977).
25 United States v. Clouser, 144 IBLA 110, 132 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980)
26 United States v. Clouser, 144 IBLA 110, 129-130 (1998).

3. Milling Costs.

a. Information sources. Ask the operator for the costs of processing, but be certain to confirm those costs independently. If the operator cannot or will not give you processing costs, calculate the costs of proposed mill operations independently. Use Western Mine Engineering or a similar reference as a source for many milling costs.

b. Cost of compliance. All mill operations must meet current environmental and safety standards, including applicable regulatory requirements imposed by the surface managing agency and any applicable State regulatory requirements. You must consider all appropriate costs, including costs of acquiring water, water treatment, and disposal of tailings and waste. Report the final cost output in dollars per ton of rated capacity of the mill. Then calculate these costs back to the cost per ton of ore in the same manner as for other milling costs.

4. Smelter and Refining Costs.

A mining operator may plan to produce, process, and sell a finished product from the mineral property under evaluation. In such cases, determine the costs of the processing and refining needed to produce the marketable product. Determine the marketing costs to the first point of sale. In other words, determine whether the commodity will be sold on an FOB mine site basis, from a processing plant, or if transportation to market is normally required.

a. Custom smelters. If a mining operator sells the mine's output through a custom smelter, consider the cost of smelting or ore reduction, as well as the costs of transportation to the smelter, in the economic evaluation. Confirm that the smelter was operational and actually accepting and processing custom concentrates during the critical dates. In addition, confirm that the smelter would accept the form of concentrates proposed for production. Obtain smelter schedules from the mine or smelter operator. Western Mine Engineering has several sample smelter schedules for various commodities in the western United States and Canada. Smelter schedules typically have the following components:

- **Charges:** The basic cost of smelting and handling of the ore.

- **Deductions:** That portion of the received minerals that is not paid for, mainly for losses during smelting.

- **Penalties:** The additional cost to the smelter for treating undesirable constituents in the ore. Arsenic, bismuth, and antimony, for example carry a stiff penalty, as does high moisture content.

- **Premiums:** Credits given for specific constituents contained in the ore that are needed in the smelting process. For example, silica is a premium constituent in the smelting of copper ores because it is a necessary flux.

H. The Marketing of a Mine's Products.

Typical end products may include dore', concentrates, precious and semiprecious gemstones, or chemical feed-stocks. When a mine is proposed, but not in operation, you need to determine whether there is a market and whether market entry is feasible.

1. Metallic Mineral Deposits.

Products for which there is an established market, such as gold, silver, copper, lead, zinc, molybdenum and other metallic minerals, are inherently marketable. That does not mean that all deposits containing these metals are valuable. It only means that there is a market for the metals. Information sources include Engineering and Mining Journal and The Northern Miner. Internet sources include <www.kitco.com> and <www.cbot.com>.

2. Industrial Minerals.

You must determine whether industrial minerals and materials with local, regional or used in vertically integrated industries, are marketable. Mineral deposits may be of a very high grade, but if there is no market for them, they are not valuable.[27]/ There are five factors to consider in determining whether industrial minerals are marketable.[28]/ The five factors, with some additional considerations outlined in the subparagraphs, are as follows:

a. Accessibility.

(1) Is the deposit accessible?

(2) Is a market area accessible?

b. Bona fides in development.

(1) Are there any existing plants and equipment on the claim?

(2) Is there present or past usage evident on the claim?

(3) What is the status of mine (undeveloped, developed, or on standby)?

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27 United States v. Coleman, 390 U.S. 599 (1968); Layman v. Ellis (On Recon.), 54 Interior Dec. 294 (1933); Layman v. Ellis, 52 Pub. Lands Dec. 714 (1929).
28 Foster v. Seaton, 271 F. 2d 836, 838 (D.C. Cir. 1959) (citing Layman v. Ellis, 54 Interior Dec. 294, 296 (1933)); 43 CFR 3830.12(b) (2006).

c. Proximity to market.

(1) What are the transport and haulage costs?

(2) How many users or buyers are available in the market area?

(3) How many competitors are there in the market area?

(4) How much material is being consumed by the available users?

(5) How much of the same type of mineral is being produced by competitors?

(6) Is it possible to enter the market?

d. Existence of present demand.

(1) Are there any sales contracts or verifiable, legitimate letters of intent to purchase?

(2) Is there present, legitimate use of the commodity in the market area?

(3) Does the quality of the product compare favorably with a competitor's product?

e. Other factors.

(1) Are there any other factors not covered above that would have a bearing on the sale of the product?

3. Common Variety Determination.

Not all mineral commodities are locatable. The Surface Resources Act, 30 U.S.C. § 611, provides that:

> No deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders and no deposit of petrified wood shall be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws.
>
> * * ** * * * * * *
>
> Common varieties" as used in sections 601 and 603 of this title does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value and does not include so-called "block pumice" which occurs in nature in pieces having

one dimension of two inches or more.

a. McClarty test. To determine whether an otherwise common variety mineral has distinct and special value, follow the standards set forth in United States v. McClarty:[29]

(1) There must be a comparison of the mineral deposit in question with other deposits of such minerals generally;

(2) The mineral deposit in question must have a unique property;

(3) The unique property must give the deposit a distinct and special value;

(4) If the special value is for uses to which ordinary varieties of the mineral are put, the deposit must have some distinct and special value for such use;

(5) The distinct and special value must be reflected by the higher price which the material commands in the marketplace or by reduced costs or overhead so that the profit to the producer would be substantially more while the retail market price would remain competitive.

b. Some factors not relevant. Differences in the chemical composition or physical properties are immaterial if they do not result in a distinct economic advantage of one material over another.[30]

4. Unmarketable Resources (formerly known as "Excess Reserves").

a. Industrial minerals. If you are determining the validity of a mining claim or a group of mining claims located for industrial minerals, you must determine whether any ten-acre parcel of a placer claim or any mining claim in the group contains unmarketable resources. Unmarketable resources are mineral resources that cannot be presently marketed or marketed in the reasonably foreseeable future. Industrial minerals include, but are not limited, to sand, gravel, perlite, gypsum, limestone, cinders, and building stone. Industrial minerals may be of widespread occurrence and have a low unit value. They may exist on a particular mining claim or mining claim group in far greater abundance than can be reasonably marketed at present or in the reasonably foreseeable future.[31]

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29 17 IBLA 20, 24-26 (1974); 43 CFR 3830.12(c) (2006); see also United States v Multiple Use Inc., 120 IBLA 63 (1991).

30 United States v. Thomas, 1 IBLA 209, 217 (1971) (citing United States v. U. S. Minerals Dev. Corp., 75 Interior Dec. 127 (1968)).

31 McCall v. Andrus, 628 F. 2d 1185 (9th Cir. 1980), cert. denied, 449 U. S. 932 (1981); Solicitor's Opinion M-36984, Excess Reserves Under the Mining Law (1996); United States v. Oneida Perlite Corp., 57 IBLA 167, 204, 88 Interior Dec. 772, 793 (1981); United States v. Williamson, 45 IBLA 264, 293, 87 Interior Dec. 34, 53 n.8 (1980).

b. Market entry. To determine whether there are unmarketable resources, the appropriate test is to determine whether the deposits found in each ten-acre parcel of a placer claim or each mining claim in a claim group can enter the market presently or within the reasonably foreseeable future. Consider the total amount of the mineral resource held by a mining claimant, on private land to the extent possible, as well as the total amount of the mineral resource available in the general market area. The mining claimant's holdings must be treated in the same manner as other competitive sources of the same material.

c. Time line for calculation of unmarketable resources. The Department's policy is to treat any industrial mineral resource that can be marketed within 40 years of the marketability date as presently marketable or marketable within the reasonably foreseeable future. The Department's policy is to treat any industrial mineral resource that cannot be marketed within 40 years as an unmarketable resource.

d. Application. Apply the 40-year policy by first determining a reasonable annual production rate for the mineral. To arrive at a reasonable annual production rate, take into consideration the claimant's past production rates for an operating mine or the claimant's proposed production rate for a proposed mine plan. If there is no operating mine and the claimant has not provided you with a proposed mine plan, you must develop your own mine plan with a logical mining sequence to calculate a production rate. Next, consider the available market for the mineral. You may only consider what reasonably can be marketed, even if the mine could produce at a level that exceeds the available market. Any minerals that cannot be thus produced and marketed within 40 years cannot be marketed in the foreseeable future and may not serve as the basis for validating a mining claim in a claim group or a ten-acre parcel of a placer claim.

I. Economic Analysis of a Mineral Property.

1. Pre-tax Income.

The pre-tax income, in dollars per ton, is determined by deducting necessary capital and operating costs from the gross value of the sales or projected sales. These costs will normally include mining, milling, reclamation, environmental compliance, transportation, marketing, and all costs internal (itemized line items on your cost analysis sheet) to these categories. Compute the costs up to the point of delivery either Free on Board (FOB) at the mine site or at the first point of sale.

a. Results. If the pre-tax value is negative, you can conclude that there is no discovery of a valuable mineral deposit and recommend the mining claim or ten-acre parcel of a placer claim for contest. If the pre-tax value is positive, you can conclude that the claimant has demonstrated a discovery of a valuable mineral deposit.

2. Net Income.

To obtain the net income from the operation, account for taxes, amortization, depletion, depreciation, and other costs generally accounted for in financial reports on mineral properties.

3. Net Present Value Calculations.

Occasionally, it is necessary to estimate the net present value of a property containing proven or probable reserves. For example, a mine may have been developed but not yet placed into production. To do so, the property's future net earnings are converted to present day value by a discount process. The Discounted Cash Flow (DCF) method estimates either the project's net present value (NPV) or the Internal Rate of Return (IRR). The IRR is a projection of the percent payback to the investors in the project. The NPV is a projection of the present value of the property, based on a fixed rate of return, and is not to be confused with an appraisal of the value of the property. An appraisal takes into account other factors not considered in NPV calculations. For example, the rate of return is usually very different and an appraisal will take into account risk analyses.

Chapter VI - The Mineral Report

A. General Requirements.

1. Format.

The purpose of a mineral report is to convey the conclusions you have drawn about the validity of the mining claim or claims at issue based on your professional opinion and the factual technical data. The mineral report should conform with Bureau Handbook H-3890-3 Validity Mineral Reports, unless the designated BLM Certified Review Mineral Examiner (CRME) agrees to modifications for unusual circumstances. The report should be concise. Your conclusions must be supported by the data and analysis. The report should answer all relevant questions. Use plain language that a lay person can understand. Write in the active voice. Always acknowledge the sources of data and information you have used in the report.

2. Handling Confidential Commercial or Financial Information in Mineral Reports.

a. Confidential information. Mineral reports commonly contain confidential information that may be withheld from the public under Exemption 4 of the Freedom of Information Act (FOIA). Exemption 4 protects "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential."[1]

b. Freedom of Information Act (FOIA) request. If you receive a FOIA request for a draft or final mineral report, follow the instructions in 43 CFR 2.23 (2005) before releasing any information that might be considered confidential commercial or financial information.

c. Submission of confidential information. A mining claimant who has submitted commercial or financial information to you does not have to mark the information as commercially or financially sensitive in order for the information to be treated as such.[2]

d. Penalties for unauthorized release. Government employees and officers who disclose trade secrets, processes, operations, style of work, or apparatus, or the identity, confidential statistical data, amount or source of any income, profits, losses, or expenditures of any person, firm, partnership, corporation, or association, may be subject to criminal penalties, including substantial fines or imprisonment.[3]

1 5 U.S.C. 552(b)(4)(2006); 43 CFR Part 2, App. E (4) (2006).
2 43 CFR 2.24 (2006).
3 18 U.S.C. 1905.

3. Responding to FOIA Requests for Draft Mineral Reports

You will withhold pre-decisional, deliberative information under Exemption 5.[4] Except for publicly available information, you will withhold the entire draft mineral report because it is a preliminary document that is subject to change upon further review by others and has not been formally or informally adopted by the agency. This includes draft mineral reports that are undergoing review by a technical reviewer, State Office management, the BLM Headquarters, or the Solicitor's Office.

B. Review Process for Mineral Reports.

1. Review and Approval Process. A BLM CRME must review and approve all mineral reports for validity examinations, including those prepared by other agencies or by contract, before BLM may take the recommended action. If the mining claims or sites are recommended for a mineral patent, the BLM Headquarters and the Solicitor's Office in Washington, D.C., must review the mineral report for legal adequacy before the patent application package is sent to the BLM Director for final action. Mineral reports must meet current standards of the Department of the Interior. Mineral reports that are not satisfactory will be returned for necessary revisions. Technical review is completed as outlined in BLM Handbook H-3890-3, Validity Mineral Reports.

2. Disagreements During Review. Disagreements between authors and technical reviewers must be resolved according to the procedures set forth in BLM Handbook H-3890-3 Validity Mineral Reports. If you disagree with the Solicitor's Office regarding any revisions requested by that office, discuss the matter with the attorney in the Solicitor's Office who reviewed the mineral report. Do not simply ignore the Solicitor's Office's recommendations.

4 5 U.S.C. 552 (b)(5) (2006); 43 CFR Part 2, App. E (5) (2006).

Chapter VII – Testifying as an Expert Witness

A. Purpose of a Hearing.

A mining claim contest involves issues of fact that can only be resolved at an administrative hearing. The Interior Board of Land Appeals (IBLA) has stated that it has "long been recognized that the power of this Department to determine that [a mining] claim is invalid requires an adequate hearing, and that an equitable or legal claim to property against the United States may not be invalidated except in accordance with the requirements of due process of law."[1] Moreover, IBLA has concluded that "the hearing requirements of the Administrative Procedure Act are applicable to hearings on the validity of mining claims."[2] Administrative hearings are conducted by an Administrative Law Judge (ALJ) and the proceedings are recorded verbatim by a court reporter. The ALJ hears the evidence, the parties file briefs, and then the ALJ issues a decision on the matter. Both the government and the contestee may offer oral and written testimony. Witnesses may be subject to cross-examination during the hearing by opposing counsel.

B. Appeals.

Either party may appeal the decision of the ALJ to the Interior Board of Land Appeals (IBLA).[3] The IBLA has the delegated authority of the Secretary of the Interior to review all appeals. The IBLA may decide the matter in a few ways, including upholding the ALJ's decision, reversing the ALJ's decision, or remanding the case to the ALJ or the agency for additional actions to resolve the issues involved. The IBLA decision is a final agency action and binding upon the Department. The mining claimant may appeal the IBLA decision to Federal court.

C. Expert Witness.

1. Definition.

An expert witness is one who is qualified to speak authoritatively by reason of professional experience, special training, skill, or familiarity on a given subject.[4]

2. Duties of an Expert Witness.

Expert witnesses are called upon for testimony related to their fields of expertise. If necessary, corroborating witnesses or outside experts may be called to give supporting testimony. If you are to testify as an expert witness, you must first demonstrate professional competence and qualifications to the satisfaction of the ALJ. For example, a

1 United States v. O'Leary, 63 Interior Dec. 341, 344 (1956).
2 Id. at 345.
3 43 CFR § 4.452-9.
4 Black's Law Dictionary, 579, 600 (7th ed. 1999).

mining engineer, geological engineer, or geologist can qualify as an expert witness on mining or geology only, unless the proper foundation has been laid that the individual is also an expert on other aspects of mineral property evaluation. Such a foundation may be established based upon your education and professional experience. The government's counsel develops this foundation at the opening of the hearing and as testimony continues.

3. Mineral Examiner Certification Supports Expert Credentials.

Mineral examiners and review mineral examiners are required to be certified. The certification process is designed to ensure that government geologists, geologic engineers, and mining engineers have had the necessary training and experience to be expert witnesses in mining claim contests. A certified mineral examiner is qualified to give expert testimony in an administrative hearing before an ALJ concerning the presence or absence of a discovery of a valuable mineral deposit under the Mining Law. Certification requirements are detailed in Manual Section 3895 Certification of Mineral Examiners.

a. Importance of mineral examiner's testimony. Certified mineral examiners should not underestimate their status as expert witnesses. They will normally be the primary witnesses for the government. Your testimony on the witness stand will not only affect the government's case, but may also be a factor in establishing future case law.

4. Preparation for a Hearing.

You must be fully prepared when presenting testimony at a hearing. It may be necessary for you to spend considerable time in advance with the government attorney assigned to the case, and during nights and weekends as the hearing progresses, to prepare for and present a credible case. **You must be prepared to spend whatever time is necessary and should expect to be compensated, as appropriate, by your home office**. State or Field Office management must prioritize your workload to allow adequate time for hearing preparation, participation in the hearing, and to prepare post-hearing briefs.

5. Pre-hearing Conference.

The ALJ may order a pre-hearing conference at his or her discretion, or upon request of either party. The purpose of the pre-hearing conference is to shorten the hearing by reducing the number of issues and simplifying those that remain. A pre-hearing conference may lead to the preparation of stipulations of facts, admissions regarding uncontested facts, responses to interrogatories, agreements regarding the introduction of exhibits, agreements to limit the number of expert witnesses, and agreements to deal with other matters that may aid in the disposition of the proceeding.

a. Role of mineral examiner in pre-hearing conference. Once the pre-hearing conference or hearing has been scheduled by the ALJ, you and the government's counsel must review all material issues and facts and prepare the government's case. You must be involved in all aspects of the case in order to properly support the attorney who is handling the contest for the government.

b. Mineral examiner must brief government's counsel. It is incumbent upon you to acquaint the government counsel with the facts and every technical issue in the case. If more than one mineral examiner has been involved, all mineral examiners should be present for the hearing. The mineral examiner and Departmental counsel will review the mineral report and the adequacy of all other exhibits (documents, maps, photographs, assay certificates, and other supporting evidence) to be used at a contest hearing. Three copies of each exhibit, equal in quality to the original document, should be prepared for the hearing: one for the ALJ, one for the opposing counsel, and one for the government's counsel. The ALJ will provide at least 30 days advance notice of the time and place for the hearing. Please be flexible and responsive in dealing with the attorney assigned to the case.

6. Maintenance of Working Files.

You should maintain a working file for reference until the case is finally decided. If possible, you should revisit the claims shortly before the hearing to determine whether there has been recent activity, and to refresh your memory regarding conditions on the ground. You should review all calculations, grade and tonnage estimates, mining costs, and other pertinent information. If critical discovery dates are not involved and considerable time has lapsed since the mineral report was written, you may need to prepare a supplemental report with the information updated to the present.

7. ALJ May Authorize Document Discovery.[5]

The government's mineral report is usually given to the contestee before the hearing as a result of document discovery, pre-hearing agreements by the attorneys, or by an order issued by an ALJ. You should be prepared to define and/or explain any terms or procedures used in the mineral report that may be unfamiliar to the ALJ or to the opposing counsel. Although your mineral report will be introduced as evidence, you must still be prepared to testify from field notes and/or memory. Anything taken to the witness stand is subject to examination by the opposing counsel.

5 This is a legal process which allows each party to request the other party to produce certain documents or information and is not the same thing as discovery of a valuable mineral deposit.

D. Questions Asked at a Hearing.

1. Preparation for Direct Testimony at Hearing.

To effectively prepare for testimony, you should become familiar with the five categories of questions that the government's counsel will use to develop testimony:

a. Establishing qualifications. You must prepare a professional resume' to aid the government's counsel in demonstrating your competence to the court. Some attorneys and courts will call this document a "vita." You should include your education, professional licenses or registration, certifications, work experience, publications, and the hearings at which you appeared as an expert witness during the last three years. Counsel will introduce this document as evidence of your expertise.

b. Establishing knowledge of the subject property. The physical examination of the mining claim or mill site is covered here.

c. Nature and scope of data considered. Calculations of values, analysis of the market, and mining costs, etc.

d. Opinion as to the validity of the claim.

e. Reasons for the opinion.

E. Order of Testimony.

The government, as the party initiating the contest action ("contestant"), presents its case first. The "contestee," who is normally the claimant, follows. You are usually called as the first expert witness for the government. At that stage of the proceedings, the counsel for the government develops the witness's direct testimony, thereby presenting the government's case. Both you and the government's counsel must be thoroughly familiar with the testimony regarding the facts before the proceedings begin. The order and content of testimony are normally developed in advance of the hearing.

1. Prima Facie Case.

At this point, you as the expert witness must establish the government's prima facie case that the mining claim is invalid. A prima facie case is one that is established by sufficient evidence and can be overcome only by a preponderance of the evidence to the contrary. Once the government establishes a prima facie case that the mining claim is invalid, the burden shifts to the contestee to show by a preponderance of the evidence that the claim is valid. A prima facie case is also called a "case in chief" by many attorneys and Administrative Law Judges. In particular, a prima facie case

"[h]as been made when a Government mineral examiner testifies that he has examined the exposed workings on a claim and has found the evidence of mineralization insufficient to support a finding of discovery of a valuable mineral deposit."[6]

2. Cross-examination.

During cross-examination the opposing counsel may seek to discredit you as an expert witness and your testimony. Your professional reputation is "on the line." Be calm and maintain your composure on the witness stand. Do not allow opposing counsel to make you feel rushed. Take your time to answer questions and do not say more than is necessary.

a. Re-direct Examination. In re-direct examination, the government's counsel will have the opportunity to review and clarify points raised in cross-examination. However, the lapse of time between direct, cross-examination and re-direct testimony may result in loss of continuity, concentration, meaning, and emphasis. **You must strive to answer questions on re-direct in a way that re-establishes the continuity.** The Government's attorney will attempt to restore the continuity of testimony in post-hearing briefs by referring to appropriate parts of the transcript.

F. Assisting Counsel in Developing Questions.

1. Assistance during Hearing.

The government's counsel may have very little expertise in the technical issues involved. Therefore, during the testimony of the contestee's witnesses, you must listen attentively and write down questions that the government's counsel should ask of the contestee's witness during cross-examination. You will need to assist counsel in the preparation of the rebuttal case.

2. Sequestration.

In rare cases, government's counsel or contestee's counsel may request that the ALJ sequester witnesses from the courtroom until it is time for their testimony. This means that the witness must wait outside of the courtroom while other testimony is given. This can present a difficult situation. The government's counsel has the right to a technical expert to serve as advisor, or "Second Chair," whose role also includes keeping exhibits in order. When this situation occurs, you and the government's counsel should devise a strategy for dealing with sequestration.

6 United States v. Miller, 91 IBLA 245, 250 (1986).

3. Post-Hearing Briefs.

The post-hearing briefs are a vital part of the government's case. You should expect to assist the government's counsel in preparing post-hearing briefs. Doing so will require that you become familiar with the transcript of the entire hearing, as well as all exhibits introduced. **You should expect to devote all necessary time to this task and your supervisor must allow you to take the time necessary for this purpose.**

4. Appeals.

If either party appeals, you should again expect to assist the government's counsel in preparing the necessary briefs. There will usually be very short time frames involved, which cannot be extended. **The contest is a Departmental issue.** You must make time available.

G. Hearing and Courtroom Demeanor.

You represent the Bureau in these proceedings. You must be properly attired in business attire and be neatly groomed and look professional. In many courts, a judge will not allow persons not properly attired to participate in the proceedings. In giving expert testimony in an administrative hearing or in court, you must maintain a professional, dispassionate, and unbiased attitude. You are there as the government's witness to give an expert, objective opinion on the validity of the mining claim or mill site so that an impartial decision may be made by the ALJ. The government's counsel should be experienced in courtroom procedures and will do everything reasonably possible to help you be an effective witness.

H. Suggestions for an Expert Witness

When called to the stand as an expert witness, you must convince the ALJ, federal judge, and/or the jury that you are qualified to give expert testimony. You must present the facts and leave no question about how and why you formulated your opinions. The following time-proven suggestions will help you to strengthen your credibility as an expert and establish the government's case.

1. Address Your Answers to the Judge.

Do so regardless of who asked you the question. **Do not mumble. Do not nod in lieu of a verbal answer.** Speak loudly and clearly so that everyone in the hearing room can hear you. The court reporter taking the verbatim record of your testimony must be able to hear you and record what you say. You should normally spell out a difficult technical term the first time that you use it. For example, when using the word "poikilitic" in testimony, you should spell it out for the benefit of the court reporter.

2. ALJ Relies on Transcript for Facts of Case.

Always make sure that you give a complete statement using complete sentences. A half statement or incomplete sentence may convey your thought at the hearing, but may be unintelligible when read later by the ALJ, or on appeal. Prepare a list of technical terms that will be used in your testimony and give them to the court recorder to avoid misspellings and word errors.

3. Referring to Exhibits.

Explicitly identify your exhibit (e.g., referring to sample point 2 on Government Exhibit A). Verbal references such as "this section of the drawing" will not make sense in the written record. When your exhibit is a map or chart, be sure to describe exactly what part you may be referring to. Saying "from here, we walked to there, and then over to there" will be unintelligible in the transcript. Say instead, "We started at this point marked A, walked to the point marked B, and then to the point marked C."

4. Listen Carefully to the Question.

Give your attorney time to object by waiting for two long breaths before beginning your answer. Doing so will also help you formulate a concise and accurate answer. Answer directly and simply, **then stop**.

a. Do not anticipate a question. Do not anticipate a question, and never try to anticipate why you are being asked a particular line of questions. Doing so may cause you to unwittingly be led to an incorrect conclusion.

b. Objections by counsel. If a question you are asked raises an objection, wait for the ALJ to rule. If the objection is overruled, you are required to answer the question.

5. Give Definite Answers Whenever Possible.

Avoid phrases such as "I think," or "I believe," or "As best as I can remember." They weaken your testimony.

6. Do Not Guess.

If you do not know the answer, say so. Do not guess or make up an answer.

7. Do Not Attempt to Answer Unclear or Multiple-part Questions.

Ask the examining counsel for clarification, particularly when the question is long and involved or when two or more parts of the question need to be answered separately. Such situations usually occur on cross-examination. Sometimes the examining counsel cannot

or will not adequately clarify an answer, and the judge allows the question. When that occurs, preface your answer by stating that you don't fully understand the question, or that it is a multiple part question. If the examining counsel objects to your qualification of your response, answer the best you can. During a recess with your counsel, discuss the possibility of clarifying your answer on re-direct.

8. If You Make a Mistake, Correct it Immediately.

If your answer was not clear or was incorrect, correct it immediately. It is also acceptable to interrupt your own testimony to correct an error you made a few minutes before. If you discover that you made a mistake much later, discuss how to correct it with your counsel.

9. Never Volunteer Information.

Answer only the question that was asked, not what you think was intended. The transcript will show only the question asked, not what was in your mind. Remember, no matter how nice the opposing counsel may seem on cross-examination, his or her job is to discredit you as an expert witness.

a. Example. You may be asked "Can you explain your opinion?" Your answer should be "Yes." If the opposing counsel wants you to explain your opinion, the question asking you to do so should be "Please explain your opinion to the Court."

10. Stick to the Answers You Have Given, if Correct.

If it turns out you were mistaken in some of your testimony, admit it. Accuracy is more important than stubborn consistency.

a. Changing your opinion. A common practice for cross-examining attorneys is to ask if you would change your opinion to agree with someone who may have more education or experience. Do not fall into this trap. If you examined the mining claims in question, you probably know much more about the situation.

11. Beware of Hypothetical Questions.

Do not allow yourself to be led into expressing a positive opinion about things about which you are uncertain. However, the Federal Rules of Civil Procedure allow for hypothetical questions to be posed to you, as an expert witness. It is important to state that you are providing a hypothetical answer to a hypothetical question. Do not be too concerned if the hypothetical questions seem to lead to an answer contrary to the position you have taken in the case. The contestee's counsel will attempt to apply your hypothetical answer to the case, so it is important that you keep the situations separate in your mind and in your answers. Discuss the hypothetical questions you have been asked with your counsel during a recess so that an appropriate line of testimony may be developed for your redirect testimony.

12. Answering "Yes or No" Questions.

If you must answer a question on cross-examination by a "yes" or "no" and feel that you need to qualify or explain your answer, immediately begin the explanation. If the mining claimant's counsel attempts to stop you by saying that you have answered his question, explain to the ALJ the need to enlarge on your answer. If you are not allowed to do so, your counsel should question you later on your answer during re-direct testimony.

13. Questions Relying on Misquotations of Previous Testimony.

Misquoting your previous testimony or quoting it out of context is a common ploy of opposing counsel to get you to contradict yourself. Consider your answer carefully before replying to a question from opposing counsel concerning your earlier testimony. If you believe that your previous testimony has been misquoted, say so. You may ask to have your previous testimony read from the record if necessary.

14. Avoid Hearsay Testimony If Possible.

You are testifying as an expert witness to the facts upon which you based your opinion. In general, at some time during the hearing, you will be permitted to relate all the information (whether hearsay or not) upon which you based your opinion. Keep in mind that hearsay testimony should not be used unless absolutely necessary, as it is normally given very little weight by the ALJ. Hearsay testimony is testimony based not on a witness's personal knowledge but on another's statement not made under oath.

15. Do Not Become Argumentative or Flippant.

Do not argue or try to be clever with the ALJ or with the mining claimant's counsel. If you are perceived by the ALJ as flippant or argumentative, your testimony will be compromised. **Do not argue with the ALJ**.

16. Be Professional and Respectful.

Refer to other witnesses respectfully and in a professional and considerate manner. Strive to demonstrate to the ALJ that you know what you are doing and that you are objective. Do not let the opposing counsel upset you during cross-examination.

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DENISON MINES

Canyon Mine Today

DENISON MINES

Conclusions

- The ROD and Plan are valid and Denison is authorized to mine consistent with their terms
- No further USFS approvals, NEPA analysis or consultations are required
- USFS retains oversight and enforcement authority to ensure that Denison complies with the ROD and Plan and USFS regulations
- Upon acknowledgement of completeness of the Type 2.02 General Permit, Denison will have all State and Federal authorizations and approvals needed to operate the Mine

DENISON MINES

Denison Mines (USA) Corp.
1050 17th Street, Suite 950
Denver, CO 80265
USA

Tel : 303 628-7798
Fax : 303 389-4125

www.denisonmines.com

VIA E-MAIL AND OVERNIGHT DELIVERY

September 13, 2011

Mr. Mike Williams
Forest Supervisor
United States Forest Service
Kaibab National Forest
800 South 6th Street
Williams, AZ 86046

RECEIVED
SEP 14 2011
KAIBAB NATIONAL FOREST

Re: Resuming Active Mining Operations at the Canyon Mine

Dear Mr. Williams:

This letter follows up on Denison Mines (USA) Corp.'s ("Denison") recent meetings with you and your colleagues at the United States Forest Service ("USFS") regarding Denison's Canyon Mine ("Mine"), and provides USFS with notice of Denison's intent to resume active mining operations at the Mine.

As we discussed, and as set forth in greater detail in the slide-presentations Denison provided to you (copies of which are enclosed herewith), USFS approved a Plan of Operations ("Plan") for the Mine in 1986. That decision was challenged in Federal court. USFS's decision was upheld against all challenges by the U.S. District Court for the District of Arizona, and that decision was affirmed by the U.S. Court of Appeals for the Ninth Circuit. Active mining operations were conducted at the Mine under the Plan until 1992, when, consistent with USFS regulations (36 C.F.R. § 228.10), such operations were temporarily suspended due to a downturn in the uranium market. During the suspension, the Mine was operated consistent with USFS regulations (36 C.F.R. §§ 228.9, 228.10).

In 2007, the uranium market rebounded, and Denison now intends to end the suspension and to resume active mining operations in the coming months. As we discussed, Denison has concluded that the Plan remains valid, and that there will be no material changes to its operations from those previously approved. Therefore, Denison intends to operate the Mine under and consistent with the previously approved Plan. As we also discussed, Denison recently voluntarily updated its bond for the Mine, and has updated and/or obtained all necessary permits from the State of Arizona to operate the Mine, consistent with the Plan and USFS regulations (36 C.F.R. §§ 228.5, 228.8).

Denison has concluded that no action is required by USFS in connection with Denison's resuming active mining operations under the Plan. Denison intends to cooperate with USFS to provide it with any information it may need to confirm Denison's conclusion, and otherwise to perform its duties.

Please do not hesitate to contact me if you have any questions regarding this letter.

Yours very truly,

DENISON MINES (USA) CORP.

Harold R. Roberts
Executive Vice President – U.S. Operations

Enclosures

cc: Ron F. Hochstein, Denison Mines (USA) Corp.
David C. Frydenlund, Denison Mines (USA) Corp.

United States Department of the Interior
U.S. Fish and Wildlife Service
Arizona Ecological Services Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In reply refer to:
AESO/SE
02EAAZ00-2012-IC-0093

February 9, 2012

Mr. Michael R. Williams, Forest Supervisor
Kaibab National Forest
800 South Sixth Street
Williams, Arizona 86046-2899

Dear Mr. Williams:

Thank you for your correspondence of January 26, 2012. This letter documents our review of the proposed Canyon Uranium Mine on the Tusayan Ranger District (District) in Coconino County, Arizona, in compliance with section 7 of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531 et seq.). Your correspondence included a determination that the proposed project may affect but is not likely to jeopardize the continued existence of California condors (*Gymnogyps californianus*).

Our records show that informal consultation on the October 1984 plan of operations was informally concluded on August 6, 1985 (AESO file number 22410-1985-I-0092). That consultation considered potential effects to sentry milk-vetch (*Astragalus cremnophylax var. cremnopylax*) and American peregrine falcon (*Falco peregrines tundrius*). Since that consultation, the peregrine falcon has been de-listed and California condors have been released as a non-essential experimental population in the area that includes the Canyon Mine.

PROPOSED ACTION

Descriptions of the proposed action were provided in an October 1984 plan of operations and a January 25, 2012, biological evaluation (BE), and are incorporated herein by reference. The project area includes a mine site that is approximately 4.5 miles north of Red Butte, and transportation on approximately 25 miles of several forest roads, on the Tusayan Ranger District.

However, the BE does not provide a full description of transportation associated with the mining activity sufficient for us to determine the entire extent of the action area. The documents submitted for consultation described transportation of extracted material from the mine only as far as the intersection of Forest Road 307 and Highway 64. Thus, this consultation addresses only that portion of the potential project area up to that intersection, as described in your BE. We recommend reviewing your action and our previous consultation, and if you believe there may be interrelated and interdependent effects to listed species associated with transportation of

extracted material beyond that intersection that require consultation under section 7, you will need to reinitiate consultation with us and fully describe those effects.

The project will complete construction necessary for, operation of, and rehabilitation of, the Canyon Uranuim Mine. Some project components have been completed. Those actions include fencing of the 17.4-acre mining site, construction of surface facilities, installation of 1.7 miles of an electric power line, construction of 2.7 acres of diversion drainage channels, removal and on-site storage of the topsoil layer at the mine site, construction of an evaporation pond, and installation of water and fuel tanks.

Actions that will be completed include construction of shift and ventilation shafts, stockpiling of waste rock, construction of an ore pad, stockpiling of ore and high-waste rock, transportation of ten truck loads per day of ore and/or high-waste rock to a mill, construction of a water well, operation of the mine, and rehabilitation of the mine site.

SPECIES IN THE ACTION AREA

The California condor (*Gymnogyps californianus*) was listed as endangered on March 11, 1967 (32 FR 4001). Critical habitat was designated in California on September 24, 1976 (41 FR 187). Critical habitat has not been designated outside of California. Despite intensive conservation efforts, the wild California condor population declined steadily until 1987, when the last free-flying individual was captured. Following several years of increasingly successful captive breeding, captive-produced condors were released back to the wild in Arizona beginning in 1996.

The first release of condors into the wild in northern Arizona occurred on December 12, 1996. They were released within a designated nonessential experimental population area in northern Arizona and southern Utah. The area is bounded by Interstate 40 on the south, U.S. Highway 191 on the east, Interstate 70 on the north, and Interstate 15 to U.S. Highway 93 on the west. The nonessential experimental population status applies to condors only when they are within the experimental population area. For the purposes of section 7 consultation, when condors are on lands not within the National Wildlife Refuge System or the National Park System, but within the experimental population area, they are treated as if proposed for listing. When condors are on National Wildlife Refuge or National Park System lands within the designated experimental population area, they are treated as a threatened species. Any condors outside of the experimental population area are fully protected as endangered.

Condors are scavengers and rely on finding their food visually, often by investigating the activity of ravens, coyotes, eagles, and other scavengers. Most California condor foraging in northern Arizona occurs in open areas and throughout the forested areas of the rims of Grand Canyon. Typical foraging behavior includes long-distance reconnaissance flights, lengthy circling flights over a carcass, and hours of waiting at a roost or on the ground near a carcass. Condors are also attracted to human activity; newly released individuals and young inexperienced juveniles are more likely to investigate human activity.

Roost sites include cliffs and tall trees, including snags. Nesting sites for California condors include various types of rock formations such as caves, crevices, overhung ledges, and potholes.

Condors regularly occur on the south rim of Grand Canyon and vicinity, including the Tusayan Ranger District. California condor nest sites also occur in the Grand Canyon in the vicinity of the south rim.

RECOMMENDED CONSERVATION MEASURES

As indicated above, California condors that may be affected by the proposed action are considered as a proposed species for the purposes of section 7 consultation. Section 7 regulations require that the action agency (e.g., Forest Service) determine whether a proposed action is likely to jeopardize the continued existence of a proposed species. If jeopardy is not determined likely, no additional consultation is necessary. However, the Forest Service generally requests conferences for proposed species at the "may affect" level. Conferences allow us to provide consistent advisory recommendations across the range of the condor population. In addition to your stated determination that the proposed action is not likely to jeopardize the California condor, your January 26, 2012 letter also requested an informal conference regarding potential effects to the condor. Potential effects to condors from mining-related activity include adverse human-condor interactions, condor poisoning, and modification of normal condor behavior.

Your BE included several "recommendations" that would be provided to the mining company to reduce potential effects to the California condor. In this response to your conference request, we recommend that the following conservation measures be incorporated into the proposed action.

- Prior to the start of any remaining construction activities, the Forest will contact personnel monitoring condor locations and movement to determine the locations and status of condors in or near the project area.

- All workers at the mine will be advised of the possibility of the occurrence of California condors in the project area.

- All workers at the mine will be instructed to avoid interaction with condors and to immediately contact the appropriate Kaibab National Forest (Forest) or Peregrine Fund personnel if and when condor(s) occur at the project area. To avoid injury both to condors and personnel, mine personnel will not haze condors.

- If a condor occurs at the project site, permitted personnel will employ appropriate techniques to cause the condor to leave the site. "Permitted" means those with the necessary federal and state permits.

- Any project activity that may cause imminent harm to condors will temporarily cease until permitted personnel can assess the situation and determine the correct course of action.

- The project area will be kept clean (e.g., trash disposed of, scrap materials picked up) in order to minimize the possibility of condors accessing inappropriate materials. The Forest will complete a site visit to ensure clean-up measures are adequate.

- To prevent water contamination and potential condor poisoning, a hazardous material (including vehicle fluids) leakage and spill plan will be developed and implemented. The plan will include provisions for immediate clean-up of any hazardous substance, and will outline how each hazardous substance will be treated in case of leakage or spill. The plan will be reviewed by the Forest to ensure protection for condors.

- Any pesticide use at the project area will follow the guidelines for California condor in the April 2007 *Recommended Protection Measures for Pesticide Applications in Region 2 of the U.S. Fish and Wildlife Service*.

- Mine site ponds containing water will be made inaccessible to condors in order to prevent use by condors.

- Unless it already meets them, the 1.7-mile connecting powerline will be improved to current Avian Power Line Interaction Committee (APLIC) standards (http://aplic.org).

- If condors consistently occur at the project area, then additional conservation measures may be necessary. The Forest will report consistent condor occurrence at the mine area to us in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest, and us.

- Condor nesting in the vicinity of the mine area is unlikely; however, if condor nesting activity occurs within 0.5 mile of the mine area, then additional conservation measures may be necessary. The Forest will report such occurrences to us in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest, and us.

In keeping with our trust responsibilities to American Indian Tribes, by copy of this letter we are notifying Tribes that may be affected by this proposed action and encourage you to invite the Bureau of Indian Affairs to participate in the review of your proposed action. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

Thank you for your continued coordination. Should project plans change, or if information on the distribution or abundance of listed species or critical habitat becomes available, these determinations may need to be reconsidered. Should you require further assistance, or if you have any questions, please contact Bill Austin at (928) 226-0614 (x102) or Brenda Smith (x101).

Sincerely,

Brenda H. Smith

for Steven L. Spangle
Field Supervisor

cc (hard copy):

Director, Cultural Resource Center, Chemehuevi Tribe, Havasu Lake, CA
Cultural Compliance Technician, Museum, Colorado River Indian Tribes, Parker, AZ
Tribal Secretary, Havasupai Tribe, Supai, AZ
Director, Hopi Cultural Preservation Office, Kykotsmovi, AZ
Program Manager, Tribal Historic Preservation Office, Hualapai Tribe, Peach Springs, AZ
Director, Historic Preservation Department, Navajo Nation, Window Rock, AZ
Director, Apache Cultural Program, Yavapai-Apache Nation, Camp Verde, AZ
Director, Yavapai Cultural Program, Yavapai-Apache Nation, Camp Verde, AZ
Director, Zuni Heritage and Historic Preservation Office, Zuni, NM
Environmental Specialist, Environmental Services, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ

cc (electronic):

District Ranger, Tusayan Ranger District, Kaibab National Forest, Tusayan, AZ
Forest Biologist, Kaibab National Forest, Williams, AZ
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Flagstaff, AZ

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Forest Service

Kaibab National Forest

800 South Sixth Street
Williams, AZ 86046-2899
(928) 635-8200

File Code: 2810
Route To:

Date: June 25, 2012

Subject: Canyon Mine Review

To: Regional Forester, R-3

Denison Mines has notified me of their intent to resume operations at the Canyon Uranium Mine on the Tusayan Ranger District. Operations at this mine have been in standby status since 1992 at the request of the operator. Based on this notification, I've reviewed the Plan of Operations, the environmental analysis and the decision for any changes in laws, policies or regulations that might require additional federal actions to be taken before operations resume. The mineral validity examination was completed April 18, 2012 and determined that Canyon Mine has valid existing rights.

I assigned an interdisciplinary team to conduct the review, and their findings are documented in the attached report. The report indicates that no new federal action subject to further NEPA analysis is required. The report identifies the need for further administrative actions related to Canyon Mine including tribal consultation and adaptive management measures related to wildlife issues. I intend to continue discussions with the tribes and schedule government-to-government consultation meetings on Red Butte Traditional Cultural Property as outlined in the report, and pursue coordination of further mitigation measures for wildlife concerns. These measures are not additional federal actions subject to further NEPA analysis but are continued implementation of the original decision which expressly provides for consultation and additional mitigation measures.

Based on this review, I, as the responsible official, have concluded that no modification or amendment to the existing Plan of Operation is necessary; that no correction, supplementation, or revision to the environmental document is required; and that operations at the Canyon Mine may continue as a result of no further federal authorization being required.

Please direct any questions on this matter to Liz Schuppert at 928/635-8367, or to me.

/s/ Michael R. Williams
MICHAEL R. WILLIAMS
Forest Supervisor

Enclosure

cc: Liz M Schuppert, Nicholas Larson, Robert Cordts

CANYON URANIUM MINE REVIEW

Review of the Canyon Mine Plan of Operations and Associated Approval Documentation in Anticipation of Resumption of Operations

US Forest Service, Southwestern Region, Kaibab National Forest

6/25/2012

Executive Summary
Canyon Uranium Mine Review
June 25, 2012

On September 13, 2011, Denison Mines informed the Kaibab Forest Supervisor they intended to resume operations at Canyon Mine under the existing Plan of Operations and Record Of Decision. A review has been completed of the Canyon Mine Plan of Operations and associated approval documentation in anticipation of the resumption of operations.

Canyon Mine is within the area segregated in 2009 and then ultimately withdrawn in the Northern Arizona Withdrawal process by the Secretary of Interior on January 9, 2012. Under the segregation and subsequent withdrawal, any mining claimant pursuing approval for exploration or mining would need to prove their claims had valid existing rights prior to the 2009 segregation. Denison Mines' mining claims at the Canyon Mine were evaluated by US Forest Service mineral examiners with regards to valid existing rights under the 1872 Mining Law. This mineral validity examination, completed on April 18, 2012, confirmed that the mining claims have valid existing rights.

In addition to the mineral validity examination, the Forest undertook a review of the 1986 Environmental Impact Statement and Record of Decision, and associated documents. Resource specialists from the Kaibab National Forest and the Southwestern Regional Office reviewed the documents to determine if any modification or amendment of the existing Plan of Operations was required and whether there was any new information or changed circumstances indicating unforeseen significant disturbance of surface resources. It was determined that no amendment or modification of the Plan of Operations was required and that there was no unforeseen significant disturbance of surface resources. Therefore, Denison Mines will resume operations under the existing Plan of Operations.

For background, in October 1984, Energy Fuels Nuclear submitted a proposed Plan of Operations to mine uranium from the Canyon claims, approximately 6 miles south of the Grand Canyon National Park boundary. The US Forest Service completed an Environmental Impact Statement to evaluate the Plan, including significant comment and input from federally recognized tribes. The final Environmental Impact Statement and Record of Decision were issued on September 29, 1986, approving the Plan of Operations with modifications. Mine site surface preparation activities began in late 1986. Appeals of this decision were made to the Southwestern Regional Forester, and the Chief of the Forest Service, who both affirmed the Forest Supervisor's decision. The Havasupai Tribe and others then sued over this decision in the U.S. District Court for the District of Arizona. The District Court ruled for the US Forest Service on all counts, and a subsequent appeal was filed with the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991.

In 1992, due to the economic downturn in the price of uranium, the Mine was put into standby status. In 1997, Denison Mines acquired the Mine from Energy Fuels Nuclear.

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Review of the Canyon Mine Plan of Operations and Associated Approval Documentation in Anticipation of Resumption of Operations

Kaibab National Forest
Tusayan Ranger District
June 25, 2012

The Kaibab National Forest (KNF or Forest) was verbally notified on August 22, 2011 by Denison Mines that they plan on resuming operations at the Canyon Uranium Mine on the Tusayan Ranger District, Kaibab National Forest. A follow-up letter was sent by Denison Mines on September 13, 2011. Denison Mines intends to resume operations, as outlined in the 1986 Record of Decision (ROD) and Plan of Operations (PoO), as soon as possible.

An interdisciplinary team consisting of various specialists from the KNF and the Southwest Regional Office (R3) was assigned to review the Environmental Impact Statement (EIS) and analysis, ROD, PoO, and any related information or documentation in the project record, in relation to each of their areas of expertise. The team was to document and assess whether there is any new federal action required before re-starting operations and if there is any new information or any changed circumstances relating to the environmental impacts indicating a need for further federal actions. The following summary documents the findings and conclusions of each specialist.

Original NEPA Decision, Background, and Current Conditions

Background: Canyon Mine is located approximately 6 miles south of the Grand Canyon National Park boundary, within the area segregated in 2009 and then ultimately withdrawn in the Northern Arizona Withdrawal process by the Secretary of Interior on January 9, 2012. Denison Mines' mining claims at the Canyon Mine were evaluated by US Forest Service (USFS) mineral examiners with regards to valid existing rights (VER) under the 1872 Mining Law, due to the segregation and withdrawal. This mineral examination, completed on April 18, 2012, confirmed the existence of valid existing rights.

Energy Fuels Nuclear submitted a proposed Plan of Operations (PoO) to mine uranium from the Canyon claims in October 1984. The USFS completed an Environmental Impact Statement (EIS) to evaluate the plan, including consultation with federally recognized tribes. The final EIS and Record of Decision (ROD) were issued by the Forest Supervisor on September 29, 1986, approving the PoO with modifications.

Twelve administrative appeals were received on the ROD, including appeals from the Hopi and Havasupai Tribes. Sinking of the shaft was stayed by the Deputy Regional Forester and affirmed by the Chief, pending the appeal decision; however, mine site surface preparation activities began in late 1986. On June 9, 1988, the Chief affirmed the ROD and PoO. The Secretary of Agriculture decided not to review the appeal. The Havasupai Tribe and others sued in the U.S. District Court for the District of Arizona, challenging the USFS's decision. The District Court ruled for the USFS on all counts (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). The Havasupai Tribe appealed to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991.

In 1992, active operations were suspended at the Canyon Mine and the Mine was put into standby status. Denison Mines acquired the Canyon Mine from Energy Fuels Nuclear in May 1997. All major surface structures are in place. The Plan of Operations Approval remains unchanged at this time.

Current Status: On September 13, 2011, Denison Mines submitted a letter advising the Forest Service that the activities associated with the resumption of active mining operations at the Mine will not differ from the approved mining operations under the current PoO and ROD. The current PoO consists of the 1984 PoO in combination with the modifications required in the ROD and has been in place since the 1986 decision. An approved PoO has been in place since 1986, with no lapses or breaks in time. The letter also states that there will be no unforeseen disturbances to surface resources or other impacts previously reviewed by the USFS based on Denison's operation of the Mine under the approved PoO.

The mineral validity examination on Canyon Mine was completed April 18, 2012. Based on the results, the Forest Service has determined that Denison Mines has valid existing rights at Canyon Mine.

Assessment of New Information or Changed Circumstances

The Interdisciplinary Team (IDT) is made up of the following USFS specialists:

Stu Lovejoy	**Stewardship Staff Officer, KNF**	**IDT Leader**
Diane Tafoya	**Forest Geologist, KNF**	**Minerals and Geology Specialist**
Mike Linden	**WO-CNO Regional Liaison - M&G**	**M&G Specialist**
Mike Lyndon	**Forest Tribal Liaison, KNF**	**Tribal Consultation Specialist**
Margaret Hangan	**Forest Archaeologist, KNF**	**Heritage Resources Specialist**
Chirre Keckler	**Forest Wildlife Biologist, KNF**	**Wildlife and TE&S Specialist**
Susanna Ehlers	**Regional Office, Air Quality, R3**	**Air Quality Specialist**
Roger Congdon	**WO-CNO Groundwater Geologist**	**Surface and Ground Water Spec.**
Edwin Monin	**Asst. Forest Engineer, KNF**	**Transportation Specialist**
Liz Schuppert	**Public Services Staff Officer, KNF**	**Rec., Lands and Minerals Specialist**
Gary Snider	**Assistant Planner, KNF**	**Socioeconomics Specialist**
Alvin Brown	**Silviculture/NEPA, KNF**	**Vegetation and NEPA Specialist**
Mark Herron	**Acting NEPA Coordinator, KNF**	**NEPA Coordinator**

Minerals and Geology

A thorough review of the approved Plan of Operations, the FEIS and ROD, and Federal Regulations was made. The findings are described below.

Period of Time Covered by the Plan of Operations

Due to the lapse in time since operations were conducted at the Canyon Mine, it is important to deterimine if the PoO is still in effect. The PoO was approved in 1986 without an expiration

date. For this analysis, the approved plan was evaluated in terms of the Forest Service minerals regulations at 36 C.F.R. 228 Subpart A. The regulations speak to the temporal aspect of a PoO.

Forest Service regulations in 36 C.F.R. 228.4(c) lists the information that should be included in a Plan of Operations (PoO or Plan). The regulations address the duration of a PoO by stating that information in a PoO must be sufficient to describe "the period during which the proposed activity will take place". 36 C.F.R. 228.4(c)(3)

In practice, PoOs give a proposed date when operations are expected to begin and end, and a description of the operations. PoOs can be approved with a specific expiration date, but it is provided in the regulations that it is possible to have an approved PoO with an estimated period of activity and an unspecified final completion date.

> In 36 C.F.R. 228.4(d) "the plan of operations shall cover the requirements set forth in paragraph (c) of this section, as foreseen for the entire operation for the full estimated period of activity: *Provided, however,* That if the development of a plan for an entire operation is not possible at the time of preparation of a plan, the operator shall file an initial plan setting forth his proposed operation to the degree reasonably foreseeable at that time, and shall thereafter file a supplemental plan or plans whenever it is proposed to undertake any significant disturbance not covered by the initial plan."

Denison Mines' PoO (pg. 10) states "The period of time estimated to exhaust the reserve is currently estimated to be 10 years. However, the duration of activities will ultimately be determined by the extent and mining grade of the deposit, as well as milling capacity and market conditions."

The emphasis in the regulations as to a PoO's duration is that it be in effect over the full operations and reclamation of surface disturbing activities. According to the regulations, the plan covers the entire operation and is in effect from approval until the time that final reclamation is completed. Denison Mines' PoO specifically addressed that the timing of operations could be affected by market conditions, as it has been in the interval since the PoO was approved. According to the regulations covering timing of operations, the PoO is in compliance. The approved 1986 PoO is currently in effect.

Surface Disturbing Activities as Foreseen by the Original Plan

The original PoO included the full area of operations as 14.7 acres, plus 2.7 acres disturbed around the area of operations due to an adjacent drainage-diversion channel. Total disturbance equals 17.4 acres. In response to requirements in the Arizona Department of Environmental Quality's (ADEQ)-issued permits, Denison Mines has indicated (letter of November 1, 2011) there would be upgrades to the stormwater evaporation pond liner and an increase in the holding capacity of the stormwater pond. The two identified ADEQ requirements would not require a change to the PoO. The liner is a 'replacement in kind' to increase the safety of the evaporation pond by further preventing the infiltration of stormwater into the soil. The proposed enlargement of the pond remains inside the footprint of the approved area of operations and insures the capacity of the pond to handle the designed flood specifications. The pond (as built) is 1.73 acres and would be expanded to 2.32 acres (Denison Mines, 11/1/2011) to meet the

ADEQ requirements for a 100-year 24-hour flood event (as determined by ADEQ). The final size of the stormwater pond is not specified in either the PoO or the ROD which modified the PoO with additional mitigation. The FEIS (p. 2.12) analyzed the pond as having a variable volume depending on water encountered during the sinking of the shaft. The FEIS (p. 2.13) evaluated the internal site (area of operations) configuration as changeable, noting that "…buildings or the holding ponds could be relocated within the project area but the change in environmental impacts to the area would be minimal", such that no alternative configurations were analyzed. The entire area of 17.4 acres which was proposed to be disturbed by mine activities was analyzed through NEPA and approved as the full acreage proposed. The outer diversion channels require no modification or enlargement to meet the ADEQ requirements that they handle a 500-year, 24-hour flood event. The total footprint of approved mine disturbance is unchanged from that approved in the PoO, and no significant surface disturbance is proposed which was not covered through NEPA.

It is also important to note that the ROD modified the PoO to include the possibility of future mitigation to be required as needed. The September 1986 ROD approved the proposed PoO with the following operational features: "Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary …" (page 2, II(1)) This language adds the further flexibility of continual monitoring during the life of the mine to adjust best management practices (BMP)s, as needed, to protect surface resources. Taken in total, the Forest does not reasonably anticipate any "unforeseen significant disturbance of surface resources" as contemplated in 36 C.F.R. 228.4(e).

Modification or Other Supplement to the Plan of Operation

A supplemental plan is needed if there is a proposal to undertake any significant disturbance not covered by the initial PoO. (36 C.F.R. 228.4(d)) A modification to an approved PoO is indicated when there is unforeseen significant disturbance of surface resources. "At any time during operations under an approved plan of operations, the authorized officer may ask the operator to furnish a proposed modification of the plan detailing the means of minimizing unforeseen significant disturbance of surface resources." 36 C.F.R. 228.4(e)

The immediate superior of the authorized officer shall then determine "(1) Whether all reasonable measures were taken by the authorized officer to predict the environmental impacts of the proposed operations prior to approving the plan, (2) Whether the disturbance is, or probably will become of such significance as to require a modification of the operating plan in order to meet the requirements for environmental protection specified in §228.8 and (3) Whether the disturbance can be minimized using reasonable means." 36 C.F.R. 228.4(e)

"Lacking such determination … no operator shall be required to submit a proposed modification of an approved plan of operations. Operations may continue in accordance with the approved plan… unless [it is determined that] operations are unnecessarily and unreasonably causing irreparable injury, loss or damage to surface resources …" 36 C.F.R 228.4(e) As mentioned above, no operations presently exist or are proposed which would be unnecessarily and unreasonably causing irreparable injury, loss or damage to surface resources. A comparison with the regulations verifies that no modification or amendment is indicated. Therefore, modification

or other supplement to the Canyon Mine Plan of Operation is not needed before operations can begin.

New Information or Changed Circumstances
There is no new information or changed circumstances relating to the environmental impacts documented in the analysis (see above). The upgrades that Denison Mines plans to make in starting up the mine provide for further environmental protection, rather than impacts outside of those envisioned in the original analysis. The proposed work was already allowed (foreseen) in the language of the PoO and ROD as it is within the total area identified in the PoO for disturbance.

Forest Plan Consistency
The Kaibab National Forest Land Management Plan 1988, as amended (Forest Plan) is new since the 1986 approval of the PoO and was reviewed for consistency with the PoO. The Forest Plan was found to be consistent with activities authorized under the approved 1986 Canyon Mine Plan of Operations.

Conclusion
The PoO is still in effect and no amendment or modification to the PoO is required before Canyon Mine resumes operations under the approved PoO. As discussed above, the Forest Service regulations only provide for a PoO modification in cases of "unforeseen significant disturbance of surface resources" as in 36 C.F.R. 228.4(e). There are no indications that any unforeseen significant disturbance of surface resources exist or would exist due to operations conducted under the existing PoO. Lacking new information or changed circumstances that might indicate the potential for significant surface resource damage, there is no requirement to modify the approved PoO.

Information from the references, documentation and data bases, below, was considered and incorporated into this Minerals & Geology Review:

Approved Plan of Operation, September 1986
Record of Decision, September 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986.
Kaibab National Forest, Land Management Plan, 1988, as amended
Denison Mines' letter to Forest Supervisor Mike Williams, November 1, 2011
36 C.F.R. 228.4(e).

Heritage Resources - Canyon Mine Section 106 Compliance

The review of Heritage Resources involved determining if there is any further federal undertaking subject to NHPA Section 106 compliance required before Canyon Mine resumes operation under the approved PoO, and if there is new information or changed circumstances to the original analysis.

NHPA Section 106 Compliance (36 C.F.R. 800)

A review of the original National Historic Preservation Act (NHPA) Section 106 compliance analysis for the Canyon Mine was conducted and the KNF informally sought the advice of both the Advisory Council on Historic Preservation (ACHP) and the Arizona State Historic Preservation Office (AZSHPO). The Forest determined that the quality of the work conducted for the Canyon Mine was up to standard and fully addressed the activities proposed in the ROD and the PoO. Since Denison Mines has not proposed any new activities which would require a modification of the existing PoO or a new PoO, there will be no new federal undertakings subject to NHPA Section 106 compliance.

Background Information on Section 106 Analysis for Canyon Mine
The Canyon Mine Plan of Operation (PoO), as proposed, included the 17-acre mine site, an access road and a proposed power line to supply electricity to the Mine. The mine site was inventoried by contractor Abajo Archaeology in November of 1984. Two sites, AR-03-07-04-586 and site -587 were recorded. In 1984, Forest Archaeologist Tom Cartledge conducted an intensive inventory along a 2.58 mile section of the mine access road in an effort to avoid impacting two sites (AR-03-07-04-572 and 573).

In 1985, Abajo Archaeology in consultation with the Forest, AZSHPO and ACHP, developed a testing plan and conducted archaeological tests to determine the NR eligibility of the sites AR-03-07-04-586 and site -587. The tests concluded that site AR-03-07-04-586 did not meet the criteria for NR eligibility; however, site AR-03-07-04-587, because of the possible presence of subsurface features, did meet the criteria for NR eligibility and that the Mine as proposed would have an adverse effect on the site. The AZSHPO concurred with the recommendations. Abajo Archaeology conducted data recovery at site AR-03-07-04-587 in 1986 as mitigation for the adverse effect to site AR-03-07-04-587. No subsurface cultural features were defined during the excavation and the majority of the cultural material was deposited in a single soil unit no more than 15 centimeters thick. The Forest determined that the excavation "constituted total data recovery; further work at this site would yield no further additional useful information about the occupation at the site." (Westfall, 1986)

In 1987, Abajo conducted a cultural resource survey of the proposed power line, located adjacent to Forest Road (FR) 305, which would supply power to the mine site. One small lithic scatter (AR-03-07-04-717) was located and recorded. The site was determined not to be eligible for inclusion on the NR in consultation with the AZSHPO.

Canyon Mine EIS and Tribal Involvement
Detailed information about tribal participation in the EIS analysis and the subsequent appeal and litigation of the decision is discussed in detail in the Tribal Relations section of this review. Relevant to the Heritage review is the fact that during the appeal and ligation of the Canyon Mine decision the Havasupai tribe provided a significant amount of detailed information to the court regarding the sacred values associated with the clearing in which the Canyon Mine would sit and Red Butte, located about 4 miles to the south of Canyon Mine. TCPs, as defined in 36 C.F.R. 800.16, were generally not recognized as historic or cultural properties under NHPA until after its amendment in 1992. Consequently, the information submitted for the appeal and litigation was in relationship to AIRFA and the First Amendment and focused on the effects of the Mine on the tribe's religious practices.

Effects on Historic Properties (36 C.F.R. 800.5)
Denison Mines is not proposing new activities that would modify their existing PoO (letter of November 1, 2011). Therefore, there will be no changes or alterations in effects on historic properties as described at the time of the ROD.

A review of the NHPA Section 106 compliance analysis and ROD for the Canyon Mine indicates that the agency did adequately address all the effects to historic properties that had been identified in the ROD. See discussion below for additional information about the Section 106 compliance analysis for Canyon Mine.

Unanticipated Effects on Historic Properties (36 C.F.R. 800.13(b))
The potential effects to the tribes' religious practices under AIRFA and the First Amendment were examined as part of the EIS analysis. However, it is important to recognize that there was no analysis of the effects to Red Butte as a historic property under NHPA. Section 106 of NHPA applies to those properties listed or eligible for listing on the NR. NHPA and the implementing regulations, 36 C.F.R. 800, at the time the ROD was signed, did not have a provision for including properties of cultural importance in the NR. As a result, Red Butte was not recorded as a site or determined eligible for the NR. Even though the tribes knew about the importance of Red Butte, and the KNF was becoming aware of it, Red Butte was not a historic property under NHPA so the process as described in the current 36 C.F.R. 800 regulations did not take place.

Because there was no prior planning for inadvertent discoveries during the EIS analysis, the section of 36 C.F.R. 800.13 that applies is paragraph (b).

> "(b) *Discoveries without prior planning*. If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties"

The construction for the Mine has commenced, consequently the next section that applies in this case is (b) (3).

> "(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond

> within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

Under the current 36 C.F.R. 800 regulations, the newer definition of historic property includes "properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria." The full definition is presented below.

> **§ 800.16 Definitions.**
>
> "(l)(1) *Historic property* means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria."

Because the earlier definition did not include properties of traditional religious and cultural importance, Red Butte was only recorded as a TCP and evaluated as eligible for inclusion on the NR after the ROD but before the project has been completed. Therefore, it could be considered a newly "discovered" historic property, and section 36 C.F.R. 800.13(b) of the regulations would apply. Similarly, as noted above, the effects to the tribes' religious practices under AIRFA and the First Amendment were considered during the appeal and the litigation on the ROD, but the potential effects to Red Butte as a historic property had not been analyzed. These effects could then be considered "unanticipated effects" to a historic property and 36 C.F.R. 800.13(b) of the regulations would apply in this situation as well.

The intent of 36 C.F.R. 800.13 is to allow for reasonable considerations of effects to historic properties if they were not anticipated or if new historic properties are "discovered" after the 106 process has been completed, but before the undertaking has been completed and there is still an opportunity to avoid or minimize effects from the undertaking. It is in a sense an emergency measure to ensure historic properties are not inadvertently damaged during project implementation. The timelines of 48 hours to notify the consulting parties and tribes and 48 hours to respond illustrates the intent to address potential impacts quickly, and to avoid delaying projects.

The Canyon Mine project is a somewhat unusual situation in that the Section 106 process was completed more than 20 years ago, but there was a long period of inactivity. The Forest can notify the tribes, AZSHPO and ACHP within 48 hours of making the determination that the section applies, and summarize the process the Forest intends to follow, but it is unlikely that there can be an adequate discussion or response within that

short amount of time. Nevertheless, the current situation seems to fall within the intent of 36 C.F.R. 800.13.b, and consulting with the tribes to seek reasonable ways to minimize the effects would be prudent. It appears that this would not result in project delays, nor prohibit the company from reinitiating mining, but would be an opportunity to continue tribal consultation on ways to minimize the effects. This would also conform to Stipulation III. C. of the KNF's Programmatic Agreement with the ACHP and AZSHPO which states "(w)hen it is determined that an undertaking may affect a property identified by a Tribe as having traditional cultural or religious significance, the FS shall consult further with the Tribe regarding the identification, evaluation, assessment of effects, and the resolution of adverse effects, if applicable, with respect to the property."

Although further NHPA consultation under 36 C.F.R. 800.13 will be aimed at ways to minimize any effects on the characteristics that make the Red Butte TCP eligible for the NR, it would also be consistent with the Canyon Mine Record of Decision which states consultation "will continue during the review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs." (USDA 1986b:8) Further consultation would also be consistent with the final agency decision on Canyon Mine. The Chief's decision states "The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants' religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs." (A.R. Doc. 256: page 5233)

Overview of Changes Since the Canyon Mine Decision

Changes in the legal and policy framework, and the political climate have occurred affecting historic properties management, sacred sites, and government-to-government Tribal consultation since the original decision. These changes include:

1990 Forest Service American Indian and Alaska Native Policy
1990 Native American Graves Protection and Repatriation Act
1992 Amendments to National Historic Preservation Act of 1966
1993 Religious Freedom Restoration Act
1994 National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties
1994 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income People
1996 Executive Order 13007, Sacred Sites
1999 Amendments to 36 C.F.R. 800, Protection of Historic Properties
2000 Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
2000 Amendments to National Historic Preservation Act of 1966
2000 Amendments to 36 C.F.R. 800, Protection of Historic Properties
2004 Revised Forest Service American Indian and Alaska Native Policy, FSM 1500, Chapter 1560 and FSH 1509.13
2004 Amendments to 36 C.F.R. 800, Protection of Historic Properties

2008 USDA Policy on American Indian and Alaska Natives, Departmental Regulation 1340-007, implementing EO 13175
2008 USDA Tribal Consultation Policy, Departmental Regulation 1350-001
2009 Presidential Memorandum on Tribal Consultation, reaffirming EO 13175
2011 USDA's Office of Tribal Relations and Forest Service Sacred Sites Policy and Procedures Review (Ongoing)

Since 1992, there were also several archaeological pedestrian surveys conducted within 2 miles of the Mine for roads maintenance, fuels and timber projects, and as part of the proposed VANE Minerals Uranium Exploration Project. There have also been two new cultural properties listed or determined to be eligible for listing on the NR within one mile of the mine site, access road and power line.

Grand Canyon Airport Historic District
The Historic District was listed on the NR in 2007 under criteria A and C. Located about 0.2 miles east of FR 305 and about 3 miles south of the Canyon Mine site, the Historic District consists of 7 buildings and two airstrips.

Red Butte Traditional Cultural Property (TCP)
The majority of the following was taken from the Determination of Eligibility completed in 2010 (Lyndon, 2010).

Red Butte consists of several un-eroded layers of rock that overlie the Kaibab limestone capping the relatively flat Coconino Plateau and is located about 4 miles south of the Canyon Mine and less than a mile from the mine access road and power line. The Kaibab National Forest has recognized Red Butte as a sacred site to the Havasupai and other area tribes for some time. In the mid-1980s, the Havasupai Tribe disputed a Forest decision to permit the Canyon Uranium Mine on the grounds that mining in the area would destroy Red Butte as a sacred site (USDA 1986b). During the environmental analysis process for the Canyon Mine, the Havasupai Tribe was guarded about specific information regarding Red Butte. However, numerous other comments submitted during the Canyon Mine appeal process reiterated the importance of Red Butte to the traditional culture of the Havasupai people and to the central role Red Butte plays in the Havasupai religion, and traditional practitioners have argued that significant physical impacts to the area would result in irreparable damage to their ability to practice the Havasupai religion.

Since the early 1990s, the Kaibab worked with the tribes to insure the continued use of Red Butte for traditional gatherings, conducting ceremonies and collecting medicinal plants. The Forest has also made management decisions to better protect Red Butte, such as restricting motor vehicle use around the butte and identifying the butte as a Land Management Area in the proposed revision of the Kaibab National Forest Land Management Plan.

In 2008, in response to the proposed Vane Minerals Uranium Exploration Project, the KNF began to work with the Havasupai, Hualapai, Navajo, Hopi and Zuni Tribes to conduct an evaluation for a Determination of Eligibility (DOE) of Red Butte for inclusion

on the NR as a TCP under Criteria A, B and D, in accordance with 36 C.F.R. 800.4. The DOE included a combination of the information provided by the Havasupai as part of the Canyon Mine decision appeal and court case records, notes from government-to-government consultation meetings, and ethnographic information about religious and sacred values ascribed to the butte provided by the Havasupai, Hualapai, Navajo, Hopi and Zuni Tribes. The AZSHPO confirmed the KNF eligibility recommendation for the Red Butte TCP in 2010.

One of the issues that needed to be addressed during the DOE evaluation was the location of a boundary to delineate the TCP. The Park Service, who are the managers of the National Register, require that a NR eligible historic or cultural property be delineated with a boundary that includes all of the elements that contribute to the eligibility of the historic or cultural property. In general, some tribes did not believe that there should be a boundary, while other tribes agreed that there could be a boundary, but did not agree on how to define or locate the boundary. Therefore, the KNF created a boundary for the purposes of the DOE evaluation. According to Lyndon (2010):

> "(t)he proposed boundary includes all of the contributing elements associated with the TCP that are known to the Forest without identifying the exact locations of these elements. These contributing elements include shrines, ceremonial areas, traditional gathering sites, potential eagle collecting areas, medicinal plant collecting areas, and sacred grounds associated with Red Butte. The exact locations of several contributing elements have been retained by the tribes in order to protect their confidentiality and are not known to the Forest.

The Havasupai did, however, explicitly discuss the spiritual relationship of Red Butte to the clearing where the Canyon Mine is located (Lyndon 2010). Because the clearing is considered a contributing element to the TCP, the Mine was included within the TCP boundary.

Potential Unanticipated Effects to National Register Eligible Sites

When conducting a NR evaluation on a historic property, a variety of aspects and qualities are taken into consideration to meet the criteria for inclusion on the NR. These include environmental setting, physical and visual integrity and characteristics, design, workmanship, feeling, associations and the current and past impacts to the property. The integrity of a historic property can be affected if there is a direct or indirect change to the characteristics that made the property eligible for inclusion on the NR. In the case of the Canyon Mine, both the Grand Canyon Airport Historic District and the Red Butte TCP were listed or determined to be eligible for listing on the NR after the Canyon Mine was authorized, but while the mine was not in operation. Therefore, the effects of the mine operations on the integrity of these properties were not been taken into consideration when they were evaluated for the NR.

Grand Canyon Airport Historic District

The Grand Canyon Airport Historic District is located near the mine access road, FR 305A, located west of the District, and some of the buildings can be viewed from the road in a few locations. During normal mine operations, there will be an increase in trucks

using FR 305 to transport materials from the Mine to the mill in Utah. The sound of trucks along the road will likely impact the atmosphere and feel of the Historic District. However, this will be temporary and will not have a physical impact on the individual elements that constitute the Historic District. These impacts could have temporary unanticipated effects on integrity of setting.

Red Butte Traditional Cultural Property (TCP)
When conducting the evaluation for the DOE, the physical effects of the Canyon Mine facilities and associated power line and other modern features, such as roads and the Grand Canyon Airport, on the aesthetic and cultural values, and visual quality of the TCP were taken into consideration. Lyndon (2010) pointed out that while Red Butte has been impacted by modern improvements, the site currently retains sufficient physical integrity as a cultural landscape for inclusion on the NR. Furthermore, ongoing ceremonial and traditional practices conducted at Red Butte demonstrate that the site clearly retains integrity of relationship and condition in the minds of traditional practitioners.

However, Havasupai elders have stated that past activities have "wounded" the sacred site, and that future significant impacts could "kill" the sacred site, and by extension, the religion of the Havasupai people. Consequently, the actual mining activities (i.e., the removal of material from the mine shaft) will be considered by the Havasupai and other tribes as a significant wound or impact to the sacred and religious values ascribed to the TCP. According to the Havasupai, the clearing in which the mine is located is directly connected to Red Butte. They believe that "a mine will kill and destroy the resting place of the Life Spirit and the Mother" and therefore significantly impact the religious significance of the TCP to the area tribes and the religion of the Havasupai people. (Lyndon 2010) These impacts could have unanticipated effects on integrity of setting, feeling and association.

New Information or Changed Circumstances
The Red Butte Traditional Cultural Property (TCP), which includes the Canyon Mine location, was determined to be eligible for the National Register of Historic Places (NR) in 2009. According to the Havasupai and other tribes who ascribe religious and sacred values to the Red Butte TCP, the mining operations at Canyon Mine will have a very negative impact on the religious and sacred values important to the tribes. The religious and sacred values constitute a very strong integrity of association which in part makes the Red Butte TCP eligible for inclusion on the NR. Therefore, damage to this integrity could affect the TCPs continued eligibility for the NR. See discussion below for additional information about the Red Butte TCP.

According to the Final Environmental Impact Statement (FEIS) for the Mine, the Havasupai, the Hopi, and the Hualapai Tribes, and the Navajo Nation "responded to the "Notice of Intent to Publish an EIS," the Scoping Letter, or have otherwise expressed an interest in receiving the document." (USDA 1986a:6.1). In the Record of Decision (ROD), it states that "The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the Draft EIS in conjunction with a general analysis of impacts on American Indians." (USDA 1986b:4) Tribal comments and continuing consultation on the Draft EIS prompted the KNF to revise the EIS to add Indian religious concerns to the list of issues evaluated in detail by the EIS.

However, the information provided by the tribes prior to the signing of the ROD appears to have not been considered very definitive by the KNF. For example, the Havasupai tribe stated that "…sacred camping and burials sites are present in the general area north of Red Butte…" however; they refused to disclose the actual location of these sites (USDA 1986b:8). Moreover, this information was considered in the EIS in the context of First Amendement and the American Indian Religious Freedom Act (AIRFA), not as a NR eligible property. Traditional Cultural Properties, as defined in 36 C.F.R. 800.16, were generally not recognized as historic or cultural properties under the NHPA until after its amendment in 1992. As noted in the Tribal Relations section of this review, after the ROD was signed the tribes appealed the Canyon Mine decision and later ligitated the decision under the First Amendment and AIRFA.

A Determination of Eligibility (DOE) for the Red Butte TCP, which includes the Canyon Mine location, was completed in 2010. The affects of the Canyon Mine operations on the TCP could not have been analyzed as part of the original EIS because it was not identified as a historic property until well after the ROD was signed.

Forest Plan Consistency

The Canyon Mine site is located in Forest Plan Management Area 10 (MA-10). A review of MA-10's relevant management direction includes Geologic and Mineral Resource Operations guidelines 8, 9, and 10 (Forest Plan p.44). Guideline 8c states "Prohibit surface occupancy yearlong in foreground of all sites listed on the National Register to protect historic values" and guideline 9b states "Prohibit the construction of mine surface facilities … in foreground of heritage resource sites with National Register status."

Red Butte TCP is eligible to the National Register, but has not been nominated; therefore, it is not listed. The KNF will work with the tribes to protect the TCP to the best of its abilities. Had the TCP been nominated, this prohibition in the Plan would probably require a mineral withdrawal, which was only recently undertaken, and would still be subject to valid existing rights. NFMA allows the continuence of permitted pre-existing non-conforming use under valid existing rights. (16 U.S.C. 1604(i) In the recent mineral exam of Canyon Mine dated April 18, 2012, the USFS determined that Denison Mines has valid existing rights.

Information from the references, documentation and data bases, below, was considered and incorporated into this review:

Cartledge, Thomas R.
1985 Realignment of Roads 305 A and B Cultural Resource Survey, Tusayan Ranger District, Kaibab National Forest.

Hanna, Augustine
2000 Letter from Augustine Hanna, Havasupai Tribal Chairman, Havasupai Tribe to United States Department of Agriculture, Forest Service, Kaibab National Forest, Tusayan Ranger District.

Kaibab National Forest Heritage Program Geographic Information System (GIS) and I-Web INFRA Databases.

Lane, Liz
2003 The Kaibab National Forest's Heritage Program: Brokering Culture Inside and

Outside the Forest, Unpublished Internship Paper, Northern Arizona University, Ms. on file at Kaibab National Forest Supervisor's Office.

Lyndon, Michael G.
2009 Red Butte *Wii Gwidwiisa*-Havasupai, *Wigan Wisa*-where the Pointed Rock Stands Alone-Hualapai, *Qawinpi*-Hopi, *Tsé Łi áhi*- Navajo Red-Butte, A Determination of Eligibility as a Traditional Cultural Property on the Tusayan Ranger District, Kaibab National Forest, Arizona. Confidential document on file at the Kaibab National Forest Supervisor's Office.

Parker, Patricia L. and Thomas F. King
1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties, National Register Bulletin, US Department of the Interior, National Park Service, National Register, History and Education.

USDA, Forest Service
1988, as amended Kaibab National Forest Land Management Plan. On file at the Kaibab National Forest Supervisor's Office.

USDA, Forest Service
1986a Final Environmental Impact Statement Canyon Uranium Mine, Kaibab National Forest, Williams, Arizona, 1986. On file at the Kaibab National Forest Supervisor's Office.

USDA, Forest Service
1986b Record of Decision Canyon Uranium Mine, Kaibab National Forest, Williams, Arizona, 1986. On file at the Kaibab National Forest Supervisor's Office.

USDA, Forest Service
n.d. Canyon Uranium Mine Chronology of Events, Kaibab National Forest. On file at the Kaibab National Forest Supervisor's Office.

USDA, Forest Service
Decision of the Chief of the USDA Forest Service, June 9, 1988, Appeal Review Document 256: page 5233. On file at the Kaibab National Forest Supervisor's Office.

USDA, Forest Service
2004 First Amended Programmatic Agreement Regarding Historic Property Protection and Responsibilities Among New Mexico Historic Preservation Officer and Arizona State Historic Protection Officer and Texas State Historic Preservation Officer and Oklahoma State Historic Preservation Officer and the Advisory Council on Historic Preservation and United States Department of Agriculture Forest Service Region 3. On file at the Kaibab National Forest Supervisor's Office.

United States District Court
1990 The Havasupai Tribe, et al V. United States of America. Judgment in a Civil Case. Case Number Civ 88-971-PHX-RGS. On file at the Kaibab National Forest Supervisor's Office. Also, see Appendix II.

Stine, Pat
2007 National Register of Historic Places Registration Form: Grand Canyon Airport Historic District. On file at the Kaibab National Forest Supervisor's Office.

Westfall, Deborah A
1985 Archaeological Testing at the Energy Fuels Nuclear, Inc Canyon Mine Project Area, Coconino County, Arizona. On file at the Kaibab National Forest Supervisor's Office.

1986 The EFN Canyon Mine Site: A Prehistoric Camp on the Northern Coconino Plateau, Coconino County, Az. Mitigation Data Recovery at AZ.H:4:4(ASM). On file at the Kaibab National Forest Supervisor's Office.
1987 Cultural Resource Inventory of the Energy Fuels Nuclear Proposed Canyon Mine 12.5 kV Electric Power line Right-of-way, Coconino County, Az. On file at the Kaibab National Forest Supervisor's Office.

Tribal Consultation and Tribal Relations

The review of Tribal Consultation and Tribal Relations involved determining if there is any new information or changed circumstances to the original analysis.

Background Information
The Canyon Uranium Mine is controversial with Federally recognized tribes (Tribes). Tribes opposed construction of the Mine in 1986, and continue to oppose any uranium exploration or mining in northern Arizona. Past uranium exploration and mining on tribal lands have left a legacy of legal, environmental and public health issues. Tribes have voiced numerous concerns about uranium mining that include environmental, cultural, religious, public health and economic concerns. This discussion focuses on the religious concerns related to Canyon Mine. Heritage Resource issues are discussed in the section above.

In 1986, the Kaibab National Forest (KNF) issued a decision to permit Energy Fuels Nuclear (EFN) to construct a uranium mine at the Canyon Mine site. Prior to the decision, the KNF sought input from Tribes on the proposal by sending scoping letters to the Navajo, Hopi, Havasupai, and Hualapai Tribes. The Havasupai and the Hopi Tribes submitted comments stating environmental concerns. The Draft EIS (DEIS) was published in February of 1986 and stated, "No areas of sacred or religious significance have been identified near the mine site or proposed ore haul routes."

Both the Havasupai and Hopi Tribes commented on the DEIS and raised additional concerns on cultural and religious issues, the consultation process, and environmental issues. The KNF hosted a meeting in Tusayan, AZ in August of 1986 with the Havasupai and Hopi Tribes to discuss religious and cultural concerns.

In September 1986, the KNF released the Final EIS (FEIS) for the Canyon Uranium Mine which included "Indian Religious Concerns" as a major issue, and the ROD permitting construction of the Mine. The FEIS indicates that specific information on potential impacts was not available for analysis and consideration.

> "The Hopi and Havasupai Tribes have suggested that sacred religious sites…exist at or near the mine site and haul routes. However, consultation with the Tribes and experts on Indian religious sites and practices as well as archaeological inventories have failed to identify any specific Hopi or Havasupai sites of sacred or religious significance near the proposed mine site." (USDA 1986a:3.58)

The ROD documented that the Havasupai Tribe asserted potential religious and cultural impacts. However, due to the available information, no specific impacts related to the mine were identified.

> "The Havasupai Tribe has also recently stated that the general area around the mine is important to the Tribe's religious well-being because it lies within a sphere of existence or continuum of life extending generally from the Grand Canyon to Red Butte. They explain that any uranium mining or similar activity within the sphere or continuum will violate unidentified Havasupai religious values and, may pose a threat to their very existence. The Havasupai have steadfastly declined to provide any additional information concerning the nature or importance of this sphere of existence because, they stated, to discuss it further would be sacrilege." (USDA 1986b:8)

The ROD indicates that no specific information related to potential cultural and religious impacts was submitted to the KNF for analysis and consideration prior to the ROD, and therefore, no specific mitigation measures could be proposed at the time.

> "Further consultation with the Havasupai and Hopi people will continue during project review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs." (USDA 1986b:8)

Based on information available at the time, the ROD concludes that:

> "Development of the mine site under Alternatives 2-5 and haul route options requiring the new road construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices consisting of plant gathering and ceremonial activities. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any known religious sites or areas be restricted." (USDA 1986b:8)

EIS Scoping Process

The process of consultation with federally recognized tribes has changed significantly since the 1999 amendments to the National Historic Preservation Act (NHPA). In 1986, the KNF sought input from Tribes on the Canyon Mine proposal by sending scoping letters to the Navajo, Hopi, Havasupai, and Hualapai Tribes, and by publishing a Notice of Intent (NOI) in the Federal Register.

After review of the Administrative Record, it appears that the Forest was diligent and thorough in its efforts to solicit tribal input and understand tribal concerns. The tribal scoping process used during development of the EIS probably exceeded the standards of the time. Furthermore, the District Court Ruling (USDC 1990:32) found that "the Forest Service took appropriate action under NEPA and the policy of the AIRFA to investigate and consider the religious concerns of the Havasupai Tribe."

Since the Decision, the Hualapai Tribe, Navajo Nation, and the Pueblo of Zuni have claimed cultural affiliation to the Red Butte TCP. The Navajo Nation raised no cultural concerns during the original scoping process although a previous publication cited Red Butte as a Navajo sacred site prior to the analysis. (Van Valkenburgh 1974)

Summary of Appeals

Both the Havasupai and Hopi Tribes appealed the Decision. The Hopi Tribe appealed on several grounds including potential cumulative impacts to religious sites across the landscape (A.R. 10:938-939). The Havasupai Tribe filed an Affidavit (A.R. 122) and made oral presentations to the Regional Forester (A.R. 176 and 62a). These comments included new statements about religious concerns specific to the Canyon Mine location and Red Butte that were not analyzed during the NEPA process. These also included some explanation of Havasupai cultural taboos regarding the disclosure of religious information. A few examples of comments specific to the Canyon Mine are below. (Appendix III, Citation 2)

The Forest-level decision was affirmed by the Regional Forester in 1987. The Regional Forester found that the Forest had fulfilled its requirements under AIRFA and NEPA. (AR 188)

> [AIRFA] "does not establish Indian religions as having a more favored status than other religions. The Act does not mandate protection of Tribal religious practices to the exclusion of all other course of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices." (A.R. 188:7)
>
> "Religious concerns were not raised by appellants until after completion of the DEIS. All of the Tribal comments were responded to and the EIS was substantially revised to reflect the information provided by the Havasupai and Hopi." (A.R. 188:7)
>
> "A decision was made on the basis of the information disclosed after adequate opportunity and time was made available. The record clearly displays the Forest's full commitment to and understanding of AIRFA and compliance with the law." (A.R. 188:7)
>
> "I continue to have utmost regard and appreciation for a people's religious beliefs and practices and have given serious consideration to all the information relating to this issue … However, I conclude that operations at the Canyon Mine site … do not interfere with continued religious belief and practice in any manner prohibited by AIRFA. (A.R. 188:8)
>
> See Appendix III, Citation 3:
>
> "The record supports the Forest Supervisor's conclusion that no Tribal beliefs are penalized by this action." (A.R. 188:9)

The Havasupai Tribe and Hopi Tribe appealed to the Chief of the Forest Service (A.R. 195, 197). The Havasupai Tribe essentially argued that potential impacts to Havasupai religion from the mine had been misunderstood or ignored. (Appendix III, Citation 4)

The Chief of the Forest Service issued a decision in June of 1988 affirming the Regional Forester's decision (A.R. 256). This was the final agency decision (Decision) and considered all information presented to the record at that time. The Chief found that the Forest provided many opportunities for Tribes to submit comments, and considered all submitted comments. The Chief cited *Lyng v. Northwest Indian Cemetery Protection Association* on First Amendment issues. The Secretary of Agriculture decided not to review the appeal. In his decision, the Chief stated:

> "I find that the Forest Supervisor's decision complies with the requirements of AIRFA as interpreted by the Supreme Court. The Forest Supervisor sought the early involvement of the Indian tribes, prepared a draft EIS which considered Indian beliefs, responded to their comments on the draft EIS…selected the alternative which fulfilled the agency's statutory responsibilities and minimized any impacts on the Indians' opportunity to exercise their religious practices." (A.R. 256:7)
>
> "The Forest Supervisor, Regional Forester, and I have provided appellants a variety of forums to consult, comment, discuss and ultimately appeal this matter…We recognize the difficult position of the Havasupai, who have declined to provide additional information regarding their religion or religious practices in the area on the basis that to discuss it further would be sacrilege. The Forest Service recognizes and respects this belief. The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants' religious beliefs and practices." (A.R. 256:8)
>
> The Supreme Court's recent decision in *Lyng v. Northwest Indian Cemetery Protection Association*, supra, holds that the Court's prior decisions interpreting the Free Exercise Clause of the First Amendment cannot be read to "imply that incidental effects of government programs, which may make it more difficult to practice certain religions but which have no tendency to coerce individuals into acting contrary to their religious beliefs, require government to bring forward a compelling justification for its otherwise lawful actions . ." Slip op. at 10. The Court found this to be the case even if the government's action could virtually destroy an individual's ability to practice their religion. (A.R. 256:7)

Summary of Litigation

The Havasupai Tribe and others sued in the U.S. District Court for the District of Arizona, challenging the USFS's decision. The District Court ruled for the USFS on all counts (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). The Havasupai Tribe appealed to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991. No further

agency decisions were made following the appeal to the Chief. Below, are passages which summarize the final District Court ruling. (U.S.D.C 1990)

> "The court recognizes that the nature of the Havasupai religion is inherently a personal and secret issue. However, the law requires revelation in exchange for further recognition, consideration, and mitigation. The Forest Service took every reasonable step to develop these comments and discussed each in the final EIS. The Forest Service agency repeatedly sought clarification of plaintiff's comments. However, the Administrative Record reflects that the Havasupai declined to participate or structure their participation in a meaningful manner during the administrative action." (U.S.D.C. 1990:32)

> "The court recognizes the sincerity of the beliefs held by the Havasupai Tribe and the sincerity of the disagreements it has with EFN and the Forest Service, however, the court finds no violations of" [NEPA]. (U.S.D.C. 1990:37)

Ultimately, the District Court assumed all religious claims made by the Havasupai Tribe to be true, including assertions that "the Canyon Mine site is sacred and any mining will interfere with their religious practices at and near the mine, will kill their deities, and destroy their religion or Way." (U.S.D.C. 1990:18) However, the Court ruled against the Tribe on all AIRFA and First Amendment claims following *Lyng*.

Additional information regarding the Havasupai Tribe and the Canyon Mine issue is available in Lane (2003:73-74).

Development of the Kaibab Tribal Relations Program

Both Hanson and Lesko (1997) and Lane (2003) argue that the Canyon Mine, combined with another dispute over a ski area on Bill Williams Mountain, served as the catalysts for the Tribal Relations program on the Forest. Following these lawsuits, KNF leadership recognized a need to improve the consultation process and develop stronger working relationships with Tribes. As former Forest Archaeologist John Hanson and former American Indian Liaison Lawrence Lesko state (1997):

> "[T]he Kaibab National Forest has not always had respectful relationships with our tribal neighbors. In fact, for a long time we had almost no relationships at all. Interaction with the tribes was sporadic and usually confined to bureaucratic letters sent to satisfy legal requirements. These poorly developed relationships grew strained as confrontations over a ski area expansion and uranium mines turned into court battles. Although the courts upheld the U.S. Forest Service for following the letter of the law, good will was compromised and mistrust prevailed between the parties".

The KNF established a formal Tribal Relations program in 1997 by designating the first American Indian Liaison (Lesko) position in the U.S. Forest Service Region 3, and developed the first Memorandum of Understanding (MOU) with a southwestern Tribe to guide the consultation process. The KNF has entered into MOUs with four Tribes, has established strong

relationships, and is now considered a leader in regional Tribal Relations. The KNF works with Tribes in a proactive manner in the spirit of "shared stewardship" and is frequently lauded by tribes for its collaborative approach. There have been no appeals or litigation regarding a Forest decision since Canyon Mine, and excellence in Tribal Relations is considered a "niche" for the Forest.

Consultation Changes Since the Decision

The USFS has updated tribal consultation procedures significantly since the decision at both the national and local level. The KNF has since developed Memoranda of Understanding with the Havasupai Tribe, Hopi Tribe, Hualapai Tribe and Kaibab Band of Paiute Indians to guide the consultation process, and would additionally consult with the Navajo Nation, Yavapai-Prescott Indian Tribe, and Pueblo of Zuni on uranium-related projects today. The Kaibab Band of Paiute Indians, Yavapai-Prescott Indian Tribe and Pueblo of Zuni were not scoped during development of the DEIS and did not respond to the NOI.

1990 Forest Service American Indian and Alaska Native Policy
1990 Native American Graves Protection and Repatriation Act
1992 Amendments to National Historic Preservation Act of 1966
1993 Religious Freedom Restoration Act
1994 National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties
1994 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income People
1996 Executive Order 13007, Sacred Sites
1999 Amendments to 36 C.F.R. 800, Protection of Historic Properties
2000 Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
2000 Amendments to National Historic Preservation Act of 1966
2000 Amendments to 36 C.F.R. 800, Protection of Historic Properties
2004 Revised Forest Service American Indian and Alaska Native Policy, FSM 1500, Chapter 1560 and FSH 1509.13
2004 Amendments to 36 C.F.R. 800, Protection of Historic Properties
2008 USDA Policy on American Indian and Alaska Natives, Departmental Regulation 1340-007, implementing EO 13175
2008 USDA Tribal Consultation Policy, Departmental Regulation 1350-001
2009 Presidential Memorandum on Tribal Consultation, reaffirming EO 13175
2011 USDA's Office of Tribal Relations and Forest Service Sacred Sites Policy and Procedures Review (Ongoing)

None of these legal and policy changes are retroactive or require re-examination of prior agency decisions. These changes will apply to any new consultation.

The KNF conducts regular government-to-government consultation with Tribes, and Canyon Mine has been the subject of ongoing dialogue since the Decision. Canyon Mine has regularly been discussed during consultation meetings and additional updates on the issue have been provided by letter. During these ongoing consultations, Tribes have provided increasingly more detailed information on cultural and religious concerns related to the Red Butte area.

Recently, the KNF worked with the Havasupai, Hopi, Hualapai, Navajo and Zuni Tribes to determine the eligibility of Red Butte as a Traditional Cultural Property (TCP) under NHPA. During the Determination of Eligibility (DOE) process, KNF officials informed Tribes that cultural information regarding Red Butte would be considered in analyzing any new undertakings that may impact the TCP. The Canyon Uranium Mine is located within the boundary of Red Butte TCP based on tribal comments specifically linking the mine site to Red Butte. Additional information on Red Butte TCP and potential impacts are included in the Heritage section, above.

Over the last two years, Denison Mines has pursued the acquisition of necessary permits from Arizona Department of Environmental Quality (ADEQ). During the State public involvement process, Tribes have repeatedly expressed opposition for the Canyon Mine, and other uranium mines in the area.

Over the years, KNF staff have anticipated that a proposal to reopen the Canyon Mine would be initiated by Denison Mines. Recently, Denison Mines notified the KNF of its intent to proceed with operations at the Canyon Mine under the existing PoO.

During the course of this review, the Forest has contacted tribal representatives to update tribes on the review process, address questions, and ensure that tribal issues are considered during this review. These contacts have included phone calls to tribal representatives, conference calls with the Hualapai Tribe, Kaibab Band of Paiute Indians, Navajo Nation, and Pueblo of Zuni, and face-to-face meetings with the Hopi Tribe and Havasupai Tribe. Tribes have stated opposition to the Canyon Mine and request additional environmental analysis of the proposal based on the age of the Decision. As documented above, new information regarding tribal religious and cultural concerns is available.

New Information or Changed Circumstances

As documented below, information regarding religious and cultural concerns was limited for the NEPA analysis as outlined in the ROD. Additional specific information regarding these concerns was submitted during the appeal and subsequent legal challenge. All information provided by tribes was considered by the Chief as part of the final agency decision in June of 1988 (Decision). Additional specific religious information was considered by the courts.

New information and/or changed circumstances since the Decision include the following: 1) In 2010, the Kaibab determined that Red Butte is a Traditional Cultural Property (TCP) eligible to the National Register of Historic Places (NR) due to its ongoing, and historic, cultural and religious significance to multiple tribes. The Canyon Mine site is within the boundary of the Red Butte TCP; 2) Additional information related to Havasupai and Hopi religious and cultural use of the Red Butte TCP has been provided to the Forest since the Decision (Appendix III, Citation 1); 3) The Hualapai Tribe, Navajo Nation, and Pueblo of Zuni have claimed cultural affiliation with Red Butte TCP and have provided additional information related to the TCP. These tribes were not involved in the original NEPA analysis of the Canyon Mine; 4) There have been numerous legal and policy changes related to consultation with Federally recognized tribes since the

Decision; and 5) Navajo Nation is now opposed to the transportation of uranium through the Navajo reservation as approved in the ROD.

The Decision considered specific significant impacts to the Havasupai and Hopi religions as a result of permitting the Canyon Mine but determined that the USFS had adhered to the process mandated by law, and addressed known concerns appropriately during the NEPA analysis. Effects to the religious practices of the Navajo, Zuni and Hualapai tribes were not known or considered prior to the Decision. Current available information on specific religious practices related to the Red Butte TCP may allow for mitigation of specific concerns that were not addressed under the Decision. Much of the specific information related to religious concerns was considered by the Chief as part of the final agency decision, but was not documented as part of the original analysis.

Conclusion

Existing Forest Service policy, post-dating the Canyon Mine decision, directs KNF leadership to be sensitive to Native American traditional and cultural issues, protect sacred sites, and consult on issues of importance to Federally recognized Tribes. The Draft USDA Sacred Sites Policy recently submitted to the Secretary of Agriculture recommends that the Forest Service use all available discretion to protect sacred sites (while acknowledging that agency decision space is limited under the 1872 Mining Law). As discussed above, the Canyon Mine site has the potential to impact Native American sacred sites and is an issue of importance to area tribes.

Since the Decision, the KNF has worked to establish strong, mutually-beneficial relationships with area tribes that are valued within the Region. The KNF has and will continue to use all available discretionary authority to mitigate impacts to Native American religious activities. Tribes have commented that most anticipated impacts, including the most serious impacts, cannot be mitigated if uranium mining is conducted at the Canyon Mine site.

Following conclusion of this review, the KNF will initiate government-to-government consultation with federally recognized tribes in an effort to understand, and possibly mitigate, impacts to Native American religious values. This is consistent with the Canyon Mine Record of Decision which states consultation "will continue during the review, construction, and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs." (USDA 1986b:8) Further consultation would also be consistent with the final agency decision on Canyon Mine, the Chief's decision which states "The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants' religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs." (A.R. Doc. 256: page 5233)

Information from the references, documentation and data bases, below, was considered and incorporated into this review:

Hanson, John A. and Lawrence M. Lesko
1997 *Walking the Land Together*, In *Inner Voice*. March-April: 12-23, 1997
Lane, Liz
2003 *The Kaibab National Forest's Heritage Program: Brokering Culture Inside and Outside the Forest*, Unpublished Internship Paper, Northern Arizona University, Ms. on file at Kaibab National Forest Supervisor's Office.
Parker, Patricia L. and Thomas F. King
1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties, National Register Bulletin, US Department of the Interior, National Park Service, National Register, History and Education.
USDA, Forest Service
1986a Final Environmental Impact Statement Canyon Uranium Mine, Kaibab National Forest, Williams, Arizona, 1986.
USDA, Forest Service
1986b Record of Decision Canyon Uranium Mine, Kaibab National Forest, Williams, Arizona, 1986.
USDA, Forest Service (A.R.)
1988 Administrative Record of Administrative Appeal, Canyon Uranium Mine.
USDA, Forest Service
1992 Attachment to Letter by William M. Lannan, Kaibab Forest Supervisor, Canyon Uranium Mine Chronology of Events, Kaibab National Forest, Williams, Arizona.
United States District Court
1990 Havasupai Tribe v U.S., 752 F.Supp. 1471
Van Valkenburg, Richard F.
1974 Navajo Sacred Places. Edited by Clyde Kluckhohn, Commission Findings, Garland Publishing, Inc., New York.

Wildlife and Threatened, Endangered, and Sensitive Species

The review of Wildlife and Threatened, Endangered and Sensitive (TES) Species involved determining if there is any new information or changed circumstances to the original analysis.

Previous Consultation with US Fish and Wildlife Service (T&E Species)
At the time of the signing of the ROD, the peregrine falcon and bald eagle were listed as endangered species under the Endangered Species Act (ESA). Both species have since been delisted and no longer have federal protection under ESA. However, they are both now on the U.S. Forest Service Region 3 (R3) sensitive species list. Re-consultation is not required for either of these species since there is no information that the birds are using the area any differently since 1986 and also, both species are no longer on the ESA threatened and endangered species list.

New TES Species Since the Original FEIS
California condor (*Gynmogyps californianus*) was reintroduced in 1996 on the BLM's Arizona Strip District as a nonessential experimental population (section 10 (j) ESA). A "nonessential experimental population" is a reintroduced population whose loss would not be likely to

appreciably reduce the likelihood of survival of the species in the wild. For section 7 consultation purposes, section 10(j) requires the following: 1) any nonessential experimental population located outside a National Park or National Wildlife Refuge System unit is treated as a proposed species; and 2) critical habitat is not designated for nonessential experimental populations. (USDI 1998) Conference is only required when the proposed action is likely to jeopardize the continued existence of a proposed species or adversely modify proposed critical habitat. (USDI 1998) Since, by definition, a nonessential experimental population loss would not jeopardize the species population in whole and there is no critical habitat associated with a nonessential experimental population, conferencing is not required for the California condor for actions taken on National Forest land within the 10(j) management area.

The project area is within the California condor 10(j) management area. There are nesting condors in the Grand Canyon near the south rim and the birds are often seen along the south rim. The condor is occasionally seen on the Tusayan Ranger District of the KNF. On January 20, 2012, the Forest discussed with the US Fish and Wildlife Service (FWS) the intent of this project going forward. Based on this discussion, the Forest entered into informal conferencing with the FWS on this project. On February 9, 2012, the Forest received an informal conferencing letter (AESO/SE 02EAAZ00-2012-IC-0093) from FWS that contain recommendations to reduce potential impacts to the condor. These recommendations will be provided to Denison Mines before they begin operations.

As mentioned above, there are nesting California condors in the Grand Canyon near the south rim and the birds are often seen along the south rim. Radio telemetry has shown that the condor occasionally use the Tusayan Ranger District for foraging (TPF 2010). Condors will forage over large areas and there is always the potential that they could use the general area where the mine site is located. Condors are also very curious about human activities and will visits sites where people are working. The project area only has foraging habitat and the nearest potential nest site is over 6 miles away, at the Grand Canyon.

The following discussion will demonstrate how the Canyon Mine EIS and PoO meet or do not meet the recommendations and how that might impact the condor. The recommendations provided by the FWS are listed below.

1. Prior to the start of any remaining construction activities, the Forest will contact personnel monitoring condor locations and movement to determine the location and status of the condors in or near the project area.
2. All workers at the mine will be advised of the possibility of the occurrence of California condors in the project area.
3. All workers at the mine will be instructed to avoid interaction with condors and to immediately contact the appropriate KNF or Peregrine Fund personnel if and when condor(s) occur at the project area. To avoid injury both to condors and personnel, mine personnel will not haze condors.
4. If a condor occurs at the project site, permitted personnel will employ appropriate techniques to cause the condor to leave the site. “Permitted” means those with the necessary federal and state permits.

5. The project area will be kept clean (e.g., trash disposed of, scrap materials pick up) in order to minimize the possibility of condors accessing inappropriate materials. The Forest will complete a site visit to ensure clean-up measures are adequate.
6. To prevent water contamination and potential condor poisoning, a hazardous material (including vehicle fluids) leakage and spill plan will be developed and implemented. The plan will include provisions for immediate clean-up of any hazardous substance, and will outline how each hazardous substance will be treated in case of leakage or spill. The plan will be reviewed by the Forest to ensure protection for condors.
7. Any pesticide use at the project area will follow the guidelines for California condor in the April 2007 *Recommended Protection Measures for Pesticides Applications in Region 2 of the U.S. Fish and Wildlife Service.*
8. Mine site ponds containing water will be made inaccessible to condors in order to prevent use by condors.
9. Unless it already meets them, the 1.7-mile connecting powerline will be approved to current Avian Power Line Interaction Committee (APLIC) standards (http://aplic.org).
10. If condors consistently occur at the project area, then additional conservation measures may be necessary. The Forest will report consistent condor occurrences at the mine area to FWS in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest and FWS.
11. Condors nesting in the vicinity of the mine area are unlikely; however, if condors nesting activity occur within 0.5 mile of the mine area, the additional conservation measures may be necessary. The Forest will report such occurrences to FWS in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest, and FWS.

The September 1986 ROD approved the proposed PoO with the following operational features, "Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary." (ROD, II(1)) This language adds the further flexibility of continual monitoring during the life of the Mine to adjust best management practices (BMPs), as needed, to protect surface resources, such as wildlife.

For recommendations #2-5, the Forest will work with the Denison Mines requesting them to contact the Forest if condors visit the worksite or are seen in the area. The Forest will provide Denison Mines with information on who to contact and about not interacting with the condor. The Forest will work with Denison Mines to determine the effects to the condor and what actions they could take to reduce impacts to the condor. Denison Mines is required to keep the work area clean.

With regards to recommendation #6, as part of the ADEQ permit for uranium mining, the site is required to have a hazardous material spill plan. The hazardous material on site will likely be diesel and gasoline for fueling equipment. The potential for a spill impacting condors is very low.

The only potential for pesticide use will be during the reclamation process after mining is completed. The Final EIS for Integrated Treatment of Noxious or Invasive Weeds (2005) (Weeds EIS) would be used for any weed treatment within the mining site. The Weeds EIS includes the protective measure in recommendation #7.

With regards to recommendation #8, there are no requirements for open pits or ponds to be made inaccessible to bird species in the FEIS for this project. The evaporation pond has already been constructed. The pond is to collect surface water runoff from the production site and any water collected during the mining process, so it may or may not retain standing water for much of the Mine's life. If the pond had standing water and a condor was to drink or bathe in these waters it could affect the health of the bird. The Forest will work with the mining company to determine the necessity and practicality of such a covering or determine if there are any other actions the company could take to mitigate this possibility of an impact to the condor when standing water is in the evaporation pond.

With regard to recommendation to #9, the EIS for this project has a mitigation that the overhead power lines must have a 60-inch minimum separation of wires. This is the same recommendation that is in the Avian Protection Plan Guidelines (APLIC 2005) that is on the website provided by the FWS. The Forest will work with the company to see if other remedial options have been conducted such as covering of conductors and equipment or installing bird perch guards or triangles with perches. It can be noted that since the construction of the power line, there has been no California condors death associated to the power line.

Access to the mining site is achieved by turning east off State Highway 64 to Forest Road (FR) 305. The route follows FR 305 for two miles and then turns onto the north fork of FR 305A. This leads due north for four miles past Owl Tank. There is a side road then leading due west ½ mile, and terminates at the Canyon Mine project site. Haul routes from the mine will use the same roads. Once the trucks leave the forest roads, they will use Highway 64 to Interstate 40, traveling east and exiting onto Highway 89 traveling north. The haul route off forest roads will be on roads systems that have a high daily use and the addition of approximately 10 trucks per day is within their normal background use. No condor has been recorded killed or injured on any of these roads and the use of these roads should have no effect to condor.

In 2007, a new R3 sensitive species list was approved by the Regional Forester. In addition to the bald eagle and peregrine falcon being on the R3 sensitive species list, there are four other wildlife species on the new list that have the potential of occurring within the project area. The four species are the spotted bat (*Euderma maculatum*), Allen's lappet-browed bat (*Idionycteris phyllotis*), pale Townsend's big-eared bat (*Corynorthinus townsendii pallescens*) and Navajo Mogollon vole (*Microtus mogollonensis navaho*). The three bat species would primarily use the area for foraging. There is the potential of the Navajo Mogollon vole occurring within the 34 acre meadow adjacent to the site. A review of the 2007 R3 sensitive species list shows there is no new sensitive plant species that could potentially be in the project area. There is no new information since the original analysis for plants.

For the spotted bat, Allen's lappet-browed bat and pale Townsend's big-eared bat, the project area would be used as foraging only. None of the roosting habitat for these bat species is found in the mining site area. Since most of the vegetation in the area has already been removed as part of the development of the site, there is not much habitat left to support prey species. However, the development of the evaporation pond may have resulted in the bats using the area for drinking and creating habitat for some prey species. Reserve pits associated with oil or gas drilling operations can be a source of bat mortality because bats can often mistake them for natural water sources. Various bat species have drowned in these ponds in Wyoming (Luce and Keinath 2007). There is potential for bat mortality by either drowning or drinking the water from the evaporation pond due to the siltation levels and potential concentration of heavy metals. However, this would likely affect very few bats and would not lead toward federal listing of any of the three bat species.

The Navajo Mogollon vole uses meadow habitat for den sites. There is the potential that the vole could be in the 34-acre meadow adjacent to the mine site. It is not clear if the removal of the top soil at the mining site in the early 1990's has totally removed the vole from the mining site. Since the area has not been used since around 1992, there has been some vegetation that has returned to the site. Once operations begin again and mining starts, the 17 acres within the area would not be suitable habitat for the vole. If Navajo Mogollon vole is present in the meadow adjacent to the mining site, then it could be impacted by any elevated uranium and arsenic concentrations. Because the vole uses subterranean habitat, there is potential of inhalation, ingestion or direct exposure to uranium and other radionuclides while digging, eating, preening and/or hibernating. Individual Navajo Mogollon voles may experience mortality; however, these impacts would not alter their distribution or result in changes to overall population viability. It would not lead toward federal listing of the species.

The new information and changed circumstances for listed and sensitive species would not require a new analysis of the project since no new federal action is being proposed. The PoO, as approved with modifications by the ROD, did not contain a discretionary involvement or control for Threatened or Endangered species to be retained by the Forest as contemplated in 50 C.F.R. 402.16.

Conclusions

While there could be direct and indirect affects to wildlife species from the mining activities in the area, due to the limited amount of area and number of animals affected, this would likely be a localized impact.

Since the signing of the ROD, the Forest has also developed a Land Management Plan (LMP) for the Kaibab National Forest. The project is in consistent with Forest Plan direction for wildlife species and their habitats. The LMP designed Management Indicator Species (MIS) under the EIS for the LMP. Pronghorn antelope is the MIS designated as an indicator for grasslands. Since only 34-acres of grassland habitat would be affected by the mining activities, this would not change the Forest-wide habitat or population trend for the pronghorn.

The bird species meeting the Migratory Bird Treaty Act have been reviewed and none of the grassland species are found in this location.

The following references and documents were considered in this review:

Canyon Mine ROD for FEIS
Canyon Mine Final EIS Chapters 3 and 4
Appendix A, Draft Canyon Uranium Mine EIS – Plan of Operation
Appendix C, Draft Canyon Uranium Mine EIS – Wildlife Section
Appendix G, Draft Canyon Uranium Mine EIS – Comments and Responses
Northern Arizona Proposed Withdrawal DEIS
50 C.F.R. 402.16
Luce, R.J. and D. Keinath. 2007. Spotted Bat (Euderma maculatum): a technical conservation assessment. [online]. USDA Forest Service, Rocky Mountain Region. Available: http://www.fs.fed.us/r2/projects/scp/assessments/spottedbat.pdf [access: January 9, 2008].
The Peregrine Fund (TPF). 2010. California Condor Restoration, Final Report to the Kaibab National Forest. 7 pp. On file at the Kaibab National Forest Supervisor's Office.
United States Department Of Interior (USDI). 1998. Endangered Species Consultation Handbook – Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. Final March 1998.
USDI. 2011. Draft Environment Impact Statement Northern Arizona Proposed Withdrawal. BLM. February 2011. Volume 1. On file at the Kaibab National Forest Supervisor's Office.

Air Quality

After reviewing Final Environmental Impact Statement for the Canyon Uranium Mine (August 1986), the Canyon Mine ROD (September 1986), and the Plan of Operation (October 1984), air quality should not trigger a need for federal action. The EIS includes an air quality section that discusses fugitive dust and radon, the two primary pollutants of concern with the Canyon Uranium Mine. Since publication of the ROD, the Environmental Protection Agency (EPA) has regulated more air pollutants at more stringent levels defined as the National Ambient Air Quality Standards (NAAQS).

The EIS looks at total suspended particulates (TSP or PM10), whereas EPA has since started to regulate PM10 and PM2.5, separately. While the EIS estimates TSP concentrations well within the current NAAQS for PM10, the EIS does not address PM2.5 concentrations. Despite this, the analysis of TSP concentrations shows compliance with both the current PM10 and PM2.5 standards. With the majority of construction complete, particulate matter emissions from mine operations should be less than what was estimated by the EIS. Fugitive dust from truck hauling, and wind erosion of stock piles remain as the main sources of air-borne particulates. These fugitive emissions are adequately assessed in the EIS.

The EIS shows compliance with Federal standards for Radon-222 emissions.

In order to begin operations, Denison Mines must have an air quality control permit from the Arizona Department of Environmental Quality (ADEQ). In reviewing the permit application, it is apparent that Denison Mines utilized current modeling techniques to show NAAQS compliance and also performed a visibility impact analysis to demonstrate minimal visibility degradation. ADEQ issued Denison Mines an air quality control permit (No. 52552) on March 9, 2011, confirming the mine's ability to meet all State and Federal air pollution regulations, including those not specifically addressed in the EIS.

The PoO allows for monitoring of air pollution and mitigation as needed to maintain NAAQS attainment status. The EIS is consistent with the Kaibab Forest Land and Management Plan, assuring that Clean Air Act compliance is mandatory. As such, the Canyon Mine is not anticipated to impair air quality or visibility.

The following references and documents were considered in this review:

Final Environmental Impact Statement for the Canyon Uranium Mine, August 1986
Canyon Mine ROD, September 1986
Plan of Operation, October 1984
Arizona Department of Environmental Quality (ADEQ), Denison Mines permit application
ADEQ air quality control permit (No. 52552)

Surface and Ground Water Quality

Very little has changed since the 1986 FEIS and ROD. The USGS paper; Scientific Investigations Report 2005-5222 Hydrogeology of the Coconino Plateau and Adjacent Areas, Coconino and Yavapai Counties, Arizona by Donald J. Bills, Marilyn E. Flynn, and Stephen A. Monroe shows that the gradient in the Redwall-Muav aquifer is to the southwest towards the Havasu Drainage and Cataract Creek. The Redwall-Muav aquifer is at least 2500 feet below ground surface at the location of the Mine. The southwestward gradient should also apply to any local perched aquifers in this area, due to the parallel-bedded, layer-cake style stratigraphy. The C-aquifer is generally not saturated this far to the west, and would not be affected. Also, as Bills and others (2005) state, "These perched zones generally are small and thus are unsuitable as long-term water supplies …" The single monitoring well at the mine site should be adequate for evaluation of any perched aquifers which may potentially be affected.

There does not seem to be any reason to reevaluate the groundwater conditions or mining effects to them, as there is no new information or changed circumstance related to ground water that would indicate the original analysis is insufficient.

The following references and documents were considered in this review:

Canyon Mine Plan of Operation, October 1984
Canyon Mine Record of Decision, September 1986

Transportation / Engineering

Transportation

After a review of the Canyon Mine ROD, EIS, and Engineering Report it was noted that, as per the chosen Alternative 5, the haul route from the mine will be as follows: (1) Haul Route 6: FSR305A to FSR305 to Route 64 south to I-40, I-40 East to Route 89 North, 89 North to Utah or (2) Haul Route 7: FSR305A to FSR305, FSR305 to Route 64 south to Route 180, 180 to FSR417, and then along a more southern route passing through state and private lands in the SP crater area. The only portion of these routes that travel across National Forest System land is the initial 4.8 miles on FR 305A and 305 on the Kaibab NF and 4 miles of FSR 417on the Coconino NF.

The Arizona Department of Environmental Quality (ADEQ), Arizona Department of Transportation (ADOT), EPA, Arizona Radiation Regulatory Agency (ARRA), and the City of Flagstaff have been contacted regarding the portion of the proposed haul route through the City of Flagstaff. ADEQ and ADOT reported no requirements, and the EPA is only concerned with radon emissions at the mine. Any additional requirements that may arise from ADOT/USDOT, will be followed. The City of Flagstaff requested the relevant NEPA documentation. The ROD and Engineering Report were sent electronically to City of Flagstaff. The City's response is to coordinate with Coconino County emergency planning and ARRA.

Nothing has changed regarding the FSR305A to FSR305 to Route 64 or FSR417 haul routes and there does not seem to be any reason to reevaluate the potential affects of these haul routes to the Forests' Boundaries. It is recommended that applicable USDOT guidelines be followed for hauling operations.

Engineering

A review of the Pond Design criteria in the Engineering Report was performed (Appendix B, DEIS). No detailed liner design was noted, however, pond design criteria from Arizona Engineering Bulletin No. 11 were referenced.

In addition, the ADEQ was contacted regarding the ore piles, lined impoundments, and Storm Water Pollution Prevention Plan (SWPPP). The facility currently has a 3.04 Aquifer Protection Permit for the lined impoundment. Denison Mines has applied for 2.02 APP permits for the ore stockpile and tailings pile. Denison Mines does not have a current industrial SWPPP permit and has not applied for one at this time.

Conclusion

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to either transportation or engineering.

Prior to operation, this facility will be inspected by a Forest Service Engineer to verify sound engineering of the following: (1) the lined impoundments (to include berm and liner integrity), (2) the ore and tailings stockpile sites and associated drainage measures, and (3) adequate storm water pollution prevention Best Management Practices (BMPs).

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986
Canyon Mine Record of Decision, September 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986.
Appendix, Draft Environmental Impact Statement, Canyon Uranium Mine, December 1985.

Recreation, Special Uses, and Lands

Recreation

The affected environment of the Canyon Mine area has not changed since the publishing of the FEIS in 1986, and subsequent ROD. Visitors use the Forest roads in this area to primarily drive for pleasure and for hunting. There are no developed recreation sites and no trails in the near vicinity.

As the environmental consequences section states, there will be increased truck traffic, noise and increased activity around the mine area; therefore, any visitor looking for solitude could be adversely impacted. These effects would be the same today.

Special Uses

To the east of Canyon Mine lies the original Grand Canyon Airport which is now on the National Register of Historic Places. There is no current special use permit for the private buildings which occupy this site and they are slowly deteriorating.

There may be an occasional recreation or other permitted event (e.g., Red Butte Tribal Gathering); however, there has been no interest in any event being located near the mine site.

Lands

Land use has remained the same since the FEIS/ROD were written for Canyon Mine. There have been no adjustments, exchanges, rights-of-way or trespasses. There is a grazing allotment under permit located to the east which the mine area does not impact.

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to Recreation, Special Uses, and Lands.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986

Draft Appendix for the Draft Environmental Ipact Statement, Canyon Uranium Mine, October 1985
Draft Environmental Impact Statement, Canyon Uranium Mine, October 1985
Canyon Uranium Mine Record of Decision, September 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986

Socio-Economics

Since the estimated costs and employment levels were the same for all project alternatives (except No Action) the Canyon Uranium Mine EIS found that the economic impacts would be the same for all alternatives. This has not changed.

Most of the socioeconomic impacts (jobs and income) were expected to occur in the town of Williams and considered to be beneficial. Any increases in employment and income in the town of Williams would indeed be beneficial. The effects in terms of increased employment and income in Coconino County were estimated to be less than 1 percent. The relative impacts would be even less today given that the County population and economy have grown considerably since 1986.

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to the socioeconomic environment. The factors within the Plan of Operations that would result in changes in socioeconomic impacts are unchanged, thus the estimated socioeconomic effects remain unchanged. Impacts in terms of employment (jobs) and income remain within the scope and range of the original effects analysis. These would be relatively small and positive.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986

Vegetation

The 1986 FEIS, ROD and the 1984 PoO were reviewed with regards to how vegetation resources were analyzed compared to the 1988 Kaibab National Forest Land Management Plan (Forest Plan) to determine if there was new information or requirements for vegetation that had not been considered in the original analysis. The PoO was compared to the Denison Mines letter of November 1, 2011 to determine if there are any changes to the 1984 PoO that would affect the vegetation analysis in the 1986 FEIS.

There are no changed circumstances relating to the environmental impacts documented in the analysis relating to vegetation resources.

The analysis and decision are consistent with the Kaibab National Forest Land Management Plan direction concerning vegetation management. The mine site exists on 17 acres of a 34-acre site that was classified as a grassland before the mining use. Because this area is in a non-forest grassland vegetation cover type, and it has been changed to a mining use, it is not affected by any of the changes or requirements made in the current Forest Plan and amendments, including the 1996 Forest Plan Amendment for Mexican spotted owl and northern goshawk habitat management.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation (PoO), October 1986
Canyon Mine Record of Decision, September 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986.
Kaibab National Forest, Land Management Plan, 1988, as amended
Denison Mines letter to Kaibab Forest Supervisor Mike Williams, November 1, 2011
36 C.F.R. 228.4(e).

Forest Plan Consistency

A review of the 1988 Kaibab National Forest Land Management Plan, as amended, has been completed to determine if there are any new issues or management concerns in relation to the Canyon Mine FEIS, ROD and PoO since the analysis preceded the date of the Forest Plan decision. Although there is not specific mention of the Canyon Mine in the Forest Plan, it is apparent that the planners were aware of the mine and the ongoing analysis, and as such, added issues regarding minerals management for the Kaibab National Forest. The Forest Plan, Chapter 2 – Public Issues and Management Concerns, Overview, page 7 states, "It became evident in the spring of 1985 that minerals management and mining in the Kaibab National Forest is controversial, and based on public comment, the issue regarding minerals management was added for the Kaibab National Forest." Next, on page 13, a section for Minerals Management is included and can be summarized as: This plan provides for the timely analysis and processing of locatable and leasable mineral prospecting, exploration, leasing and development proposals. Lands potentially valuable for uranium and oil and gas production are available for exploration and development.

The Forest Plan again addresses minerals in Chapter 4 – Management Direction – Minerals, p. 19, which states "Administer the mineral laws and regulations to minimize adverse surface resource impacts. Support sound energy and minerals exploration and development."

The Forest Plan gives additional management direction on page 50, which, in summary specifies providing intensive management of prospecting, exploration and development of mineral resources to protect surface resources and other environmental values. Direction is given to restrict or prohibit surface use in areas with habitat of threatened and endangered species, and heritage resources nominated or posted to the National Register. Also on page 50, the Forest Plan gives direction to "Evaluate the need for development of areas with substitute or surrogate habitats, facilities, structures, etc., to replace areas of substantial loss or destruction from mining

activities. The direction is then applied to the various Management Areas of the Forest Plan, and there is no further direction pertinent to Canyon Mine.

NFMA expressly allows the continuance of permitted pre-existing non-conforming use under valid existing rights. See 16 USC 1604(i). Denison has a pre-existing PoO that predates the Forest Plan and remains in effect. Also, as determined in the recent mineral validity examination dated April 18, 2012, Denison Mines has valid existing rights at the claims comprising Canyon Mine. Furthermore, the Forest Plan provisions regarding nominated sites do not apply by its own terms because the applicable NR eligible sites have not been nominated to the NR. Regarding the substitute habitat provision, the FEIS includes replacement requirements for the 17 acres of meadow/grasslands, as directed in the Forest Plan on p. 50. There are no Forest Plan conflicts with the Canyon Uranium Mine FEIS, ROD or PoO.

The following references and documents were considered in this review:

Kaibab National Forest, Land Management Plan, 1988, as amended

National Environmental Policy Act Compliance

No new federal action subject to further NEPA analysis is required for resumption of operations of the Canyon Mine. The existing PoO remains in place and in effect, and there is no need for any amendment or modification of the PoO. There is a need for further administrative activities related to Canyon Mine including further tribal consultation and adaptive management measures related to wildlife issues. However, such administrative activities are not additional federal actions subject to further NEPA analysis but are continued implementation of the original decision which expressly provides for further consultation and additional mitigation measures.

Appendix I
Brief Summary of Selected Applicable Legal Concepts

Forest Service Mineral Regulation

The Forest Service administers and manages mining activities for locatable minerals pursuant to applicable mining laws, including the 1872 Mining Law and Forest Service regulations. The Forest Service regulations set forth at 36 C.F.R. Part 228, Subpart A are the principal regulations applicable to locatable mineral operations on National Forest System (NFS) lands. Among other things, these regulations require approval of a Plan of Operation (PoO) for activities which may cause significant surface disturbance. These regulations do not define the duration of such plans or require a termination date. The Forest Service may request an operator to submit a modification to the PoO if there are "unforeseen significant disturbance of surface resources" pursuant to 36 C.F.R. 228.4(e). There is no current Forest Service Manual or Handbook direction defining "unforeseen significant disturbance of surface resources".

National Forest Management Act

The National Forest Management Act (NFMA) sets forth a variety of requirements for management of NFS lands. Among those is the requirement to establish Land and Resource Management Plans (LRMPs aka "Forest Plans") for each National Forest. NFMA also requires that all instruments for use and occupancy of the forest be consistent with the LRMPs. See 16 USC 1604(i). However, NFMA recognizes there may be inconsistent pre-existing uses that are allowed to continue where there are valid existing rights. (See 16 USC 1604(i) which states that any revision in instruments for use and occupancy "shall be subject to valid existing rights.") This consistency provision has been interpreted to apply prospectively only and not retroactively to already approved projects. See Forest Guardians v Dombeck, 131 F.3d 1309 (9th Cir. 1997).

National Environmental Policy Act

Under the National Environmental Policy Act (NEPA), approval of a PoO under 36 C.F.R. Part 228 is often considered a major Federal action requiring an Environmental Impact Statement (EIS). However, the continuing private mineral operations would not constitute an ongoing or continuing Federal action. See e.g. Center for Biological Diversity v Salazar, Slip Op. 2010 WL 2493988 (D. Ariz. 6/17/2010) (BLM's approval of a plan of operations was the proposed action subject to NEPA and resumption of operations approximately 20 years later did not constitute an ongoing major federal action requiring supplementation); *accord* Cold Mountain v. Garber 375 F.3d 884 (9th Cir. 2004) (holding that after Forest Service issuance and approval of a special use permit, there was no ongoing major federal action requiring supplementation). Therefore in the absence of a new major Federal action, no supplemental NEPA analysis would be required for resumption of operations at an existing mine with a PoO.

Endangered Species Act

The Endangered Species Act and its companion regulations set forth various requirements applicable to agency actions that may affect threatened or endangered species. For already permitted projects or activities, there are limited circumstances where a Federal agency may have the authority or obligation to conduct further ESA compliance activities. Pursuant to 50 C.F.R. 402.16, re-initiation of consultation under the Endangered Species Act is required where discretionary Federal involvement or control over the action has been retained or is authorized by law and one or more conditions exist, including "if new information reveals effects

of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered,… [or] if a new species is listed or critical habitat designated that may be affected by the designated action."

For adequate discretion to be retained to trigger this re-consultation requirement, the discretion must include the ability to impose conditions that inure to the species' benefit. Unrelated provisions that retain discretionary authority and control for other purposes would not grant the necessary discretion to trigger re-initiation of consultation under 50 C.F.R. 402.16 *See* Sierra Club v. Babbit, 65 F.3d 1502 (9th Cir. 1995) (Limited discretion over exercise of reciprocal right of way agreement did not constitute discretion requiring BLM to engage in reconsultation); E.P.I.C. v Simpson Timber Co., 255 F.3d 1073 (9th Cir. 2001) (FWS did not retain sufficient discretionary involvement and control giving it a duty to reinitiate consultation on Incidental Take Permit for newly listed species and holding "that the permit must reserve to the FWS discretion to act to protect species in addition to the Northern Spotted Owl.")

National Historic Preservation Act

The National Historic Preservation Act (NHPA) Section 106 requires Federal agencies to consider the effect of an undertaking on historic properties. The U.S. Forest Service Region 3 conducts NHPA Section 106 compliance pursuant to a 2003 First Amended Programmatic Agreement (Programmatic Agreement) with several states, including the State of Arizona and the Advisory Council on Historic Preservation (the Council).

For purposes of compliance with NHPA, an "undertaking subject to Section 106 consultation is defined as a project, activity, or program… [including those] requiring a Federal permit, license or approval." 16 U.S.C. 470f; 36 C.F.R 800.16. Approval of a PoO is typically considered an undertaking subject to Section 106 requirements.

After approval of a PoO, further Section 106 compliance may be required in limited circumstances set forth in provisions of 36 C.F.R. 800.13 and 36 C.F.R. 800.8(c)(5).

Pursuant to 36 C.F.R. 800.8(c)(5), when Section 106 compliance was provided through NEPA processes, if "the undertaking is modified after approval of the FONSI or the ROD in a manner that changes the undertaking or alters its effects on historic properties, or if the agency official fails to ensure that the measures to avoid, minimize or mitigate adverse effects (as specified in either the FONSI or the ROD, or in the binding commitment adopted pursuant to paragraph (c)(4) of this section) are carried out the agency official shall notify the Council and all consulting parties that supplemental environmental documents will be prepared in compliance with NEPA or that the procedures in §§800.3 through 800.6 will be followed as necessary".

Pursuant to the Programmatic Agreement and 36 C.F.R. 800.13 "If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process… the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and: If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery." These parties have 48 hours to respond and the agency must then take these responses into account according to the regulation.

In conducting consultation efforts, an agency may rely on prior consultation efforts on related undertakings. See Te-Moak Tribe v Department of Interior, 608 F.3d 592, 609 (9th Cir. 2010) (In light of the BLMs previous consultation with affected tribe about an original mineral

exploration project and other projects in the area, BLM provided tribe with opportunities to identify its concerns about historic properties where it notified Tribe one month before an EA was submitted and three months before BLM issued its decision and FONSI).

Subsequent information submitted by interested parties does not necessarily require an agency to re-open section 106 consultation under 36 C.F.R. 800.13(b) where a project was previously approved by the action agency, SHPO, and Advisory Council. See SUWA v Norton, 326 F.Supp.2d 102 (D.D.C. 2004).

An agency is not required to re-open the Section 106 process based on information that would have been brought to the agency's attention through full participation in an original NHPA process. Apache Survival Coalition v U.S., 21 F.3d 895911-912 (9th Cir. 1994) (Dismissing claim for violation of an ongoing duty to consult on the effect of the Mount Graham International Observatory on the San Carlos Apache religious practices associated with Mount Graham and stating that it would undermine the justifications for requiring an agency to conduct additional NHPA review to require re-consultation for information that would have been available had the Tribe originally participated in the NHPA process.)

Appendix II
Brief Summary of Appeals and Litigation on the Canyon Mine FEIS and ROD

The Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) for Canyon Mine were issued on September 29, 1986. The ROD approved the PoO with modifications. Eleven different parties filed administrative appeals, including the Hopi and Havasupai Tribe. (AR Doc. 188; page 3932) In total, these parties raised 25 different issues including First Amendment and American Indian Religious Freedom Act (AIRFA) challenges, a variety of NEPA challenges, alleged violation of trust responsibility, and challenges regarding ground water, surface water, air quality, wildlife, transportation, etc. (AR Doc. 188; page 3933)

The appeals of Havasupai and Hopi were not limited to the record developed at the time of the FEIS and ROD, but included the submission of significant new information in support of the AIRFA and First Amendment claim, most importantly:

1. The Havasupai Tribe filed an affidavit regarding tribal religious issues and sacred sites. (AR Doc. 122; page 3137 – 3143)

2. On February 25, 1987, a hearing was held in the Office of the Chief on the appeal of the Regional Forester's denial of a stay of activities. A transcript of that hearing is in the record. (AR Doc. 176; page 3716 – 3825) This included discussions from Havasupai Tribe leaders and their counsel of tribal religious issues and sacred sites at AR Doc. 176; page 3733-3769).

3. On May 14, 1987, a hearing was held on the merits of the appeal before the Deputy Regional Forester. A transcript can be found at AR Doc. 62a; page 1882 – 1992. Havasupai Tribe representatives spoke on tribal religious issues and sacred sites (page 1927–1956) and Hopi representatives also spoke on these issues (page 1965-1978).

On August 28, 1987 the Deputy Regional Forester made his decision on the merits. (AR Doc. 188; page 3928, et seq.) The Deputy Regional Forester noted the record had been extensively supplemented and his decision on the merits was based on a complete review of all the record including supplementary material. (AR Doc. 188; page 3931, 3934, and 3935) The Deputy Regional Forester's decision on the merits has a detailed discussion of the tribal religious issues at pages 3934-3936. Several important findings concerning AIRFA and the First Amendment challenge were made by the Deputy Regional Forester in his decision, notably;

> [AIRFA] does not mandate protection of Tribal religious practices to the exclusion of all other course of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices. (AR Doc. 188; page 3934)
>
> I continue to have utmost regard and appreciation for a people's religious beliefs and practices and have given serious consideration to all the information relating to this issue…However, I conclude that operations at the Canyon Mine site…do not interfere with continued religious belief and practice in any manner prohibited by AIRFA. (AR Doc. 188; page 3935)

> The record supports the Forest Supervisor's conclusion that no Tribal beliefs are penalized by this action. Individual members of the Tribe can continue to express and act on their beliefs without undue governmental interference. The record does not support the contention that identified religious practices will be prohibited. (AR Doc. 188; page 3935)
>
> I conclude, therefore, that the administrative record does not support any contentions that the Forest Service did not comply with the provisions of the First Amendment of the Constitution nor does it contain information of sufficient specificity to establish the First Amendment claim made by appellant. (AR Doc. 188; page 3935)

The Deputy Regional Forester's decision was appealed to the Chief of the Forest Service and the issues were briefed again based on the record before the Deputy Regional Forester, i.e. no further evidence was added at this stage of the proceeding.

On June 9, 1988 the Chief issued his final decision on the merits affirming the decisions of the Regional Forester. (AR Doc. 256) This decision became the final agency action approving the PoO for Canyon Mine. The Chief expressly stated he included in his considerations all the information included in the record. (AR Doc. 256; page 5230) The Chief's decision on the merits has a detailed discussion of the tribal religious issues at AR Doc. 256; page 5231-5239. Several important findings were made by the Chief in his decision, notably:

> I find that the Forest Supervisor's decision complies with the requirements of AIRFA as interpreted by the Supreme Court [in Lyng v Northwest Indian Cemetery Protective Association]. The Forest Supervisor sought the early involvement of the Indian tribes, prepared a draft EIS which considered Indian beliefs, responded to their comments on the draft EIS, identified the Indians concerns as one of the major issues to be analyzed in detail in the final EIS, and after careful consideration of the competing interests of all interested and affected parties, selected the alternative which fulfilled the agency's statutory responsibilities and minimized any impacts on the Indians' opportunity to exercise their religious practices (A.R. Doc. 256: page 5232)
>
> The Supreme Court's recent decision in *Lyng v. Northwest Indian Cemetery Protection Association*, supra, holds that the Court's prior decisions interpreting the Free Exercise Clause of the First Amendment cannot be read to "imply that incidental effects of government programs, which may make it more difficult to practice certain religions but which have no tendency to coerce individuals into acting contrary to their religious beliefs, require government to bring forward a compelling justification for its otherwise lawful actions . ." Slip op. at 10. The Court found this to be the case even if the government's action could virtually destroy an individual's ability to practice their religion. (A.R. Doc. 256: page 5232)

> The ROD also notes that the further consultation identified in the EIS has taken place, and "will continue during the review, construction, and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs." ROD p. 8. (A.R. Doc. 256: page 5233)
>
> The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellant' religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs. (A.R. Doc. 256: page 5233)

The Havasupai Tribe filed suit challenging the Chief's decision in the United States District Court for Arizona on several grounds, including: claims that approval of the plan of operations violated the tribes' first amendment rights to freely exercise their religion at the Canyon Mine site; breach of fiduciary duties owed to the tribe; aboriginal title claims; alleged violation of the Grand Canyon Enlargement Act, and claims that the EIS was deficient. The District Court ruled for the USFS on all counts. (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). Specifically, concerning the AIRFA, First Amendment and NEPA issues the Court stated:

> The Havasupai assert that the Forest Service's decision approving the modified plan of operations for the Canyon Uranium Mine violates their first amendment rights to freely exercise their religion at the Canyon Mine site. The Havasupai assert that the Canyon Mine site is sacred and any mining will interfere with their religious practices at and near the mine, will kill their deities, and destroy their religion or "Way." *E.g., Complaint,* at 7–11; V.2B–D.59–P.1827 (Transcript of Oral Presentation before the Deputy Regional Forester, May 14, 1987); V.3B–D.122–P.3137–3143 (Affidavit of Four Havasupai Tribe members); V.3D–D.176–P.3716–3825 (Transcript of Oral Presentation before the Chief of the Forest Service, February 25, 1987). For purposes of this section of analysis, the court can assume that all of plaintiffs' assertions about the religious sanctity of the Canyon Mine site and adverse affects upon the Havasupai belief system are true. Havasupai Tribe v U.S.752 F.Supp. at 1484-1485
>
> The case of *Lyng v. Northwest Indian Cemetery Protective Association,* 485 U.S. 439, 108 S.Ct. 1319, 99 L.Ed.2d 534 (1988) is applicable to the instant case and is dispositive of plaintiffs' first amendment claim. …in the instant case, the Forest Service's approval of the Plan does not violate the free exercise clause of the first amendment. Havasupai Tribe v U.S.752 F.Supp. at 1485
>
> The court finds and concludes that the Forest Service has fulfilled its obligations to the Havasupai Tribe under AIRFA through its undertakings during the NEPA process. Havasupai Tribe v U.S.752 F.Supp. at 1488

> It is clear from this analysis, that the Forest Service complied with NEPA and took the required "hard look." The Havasupai continuously claim that they are the only ones that know their religion, yet the record clearly shows that they were not forthcoming on the subject during the scoping process or the comment period leading up to the publication of the final EIS, nor would they identify specific sites of religious significance. The Havasupai Tribe argues that the Forest Service did not make a sufficient effort, but the record reflects that the plaintiffs did not respond to numerous attempts for more specific information.
>
> The court recognizes that the nature of the Havasupai religion is inherently a personal and secret issue. However, the law requires revelation in exchange for further recognition, consideration, and mitigation. The Forest Service took every reasonable step to develop these comments and discussed each in the final EIS. The Forest Service agency repeatedly sought clarification of plaintiff's comments. However, the Administrative Record reflects that the Havasupai declined to participate or structure their participation in a meaningful manner during the administrative action. Accordingly, the plaintiffs cannot complain that the agency's consideration of their religious concerns was inadequate.
>
> The court finds and concludes that the Forest Service took appropriate action under NEPA and the policy of AIRFA to investigate and consider the religious concerns of the Havasupai Tribe. The Forest Service complied with the applicable laws and did not make any findings that were arbitrary or capricious under the facts and circumstances of this case.
>
> Havasupai Tribe v U.S.752 F.Supp. at 1500

The Havasupai Tribe appealed the District Court decision to the 9th Circuit Court of Appeals, but the 9th Circuit Court of Appeals affirmed the District Court's decision in a brief opinion. See Havasupai v Robertson, 943 F.2d 32 (9th Cir. 1991) A petition for certiorari was filed with the United States Supreme Court but was denied. See Havasupai v. U.S., 503 U.S. 959, 112 S.Ct. 1559 (1992).

Not for Public Release: This Information is Confidential and FOIA Exempt

Appendix III
Confidential Information Related to Native American Religious and Cultural Issues

Notice: This document contains information subject to the confidentiality requirements in the Archaeological Resources Protection Act (codified at 16 USC 470hh), the National Historic Preservation Act (codified at 16 USC 470w-3), Executive Order 13007 – Sacred Sites, the Food, Conservation, and Energy Act of 2008 (codified at 25 USC 3056), and the US Forest Service Regulations at 36 CFR 296.18. This information is exempt from disclosure under the Freedom of Information Act (FOIA) exempt and shall not be made available to the public.

USDA United States Department of Agriculture | Forest Service | Kaibab National Forest | 800 South Sixth Street Williams, AZ 86046-2899 (928) 635-8200

File Code: 2360/2810
Date: August 24, 2012

CAROLINE D HALL
ASSISTANT DIRECTOR
OFFICE OF FEDERAL AGENCY PROGRAMS
FEDERAL PROPERTY MGMT SECTION
ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 PENNSYLVANIA AVE NW STE 803
WASHINGTON, DC 20004

Dear Ms. Hall:

Thank you for your August 1, 2012 correspondence concerning the Canyon Mine and the effects to the Red Butte Traditional Cultural Property (TCP). We appreciate the ACHP's comments and concerns regarding the project and the adverse effect to the Red Butte TCP.

First, I would like to clarify a fact about the history of Canyon Mine. Paragraph 4 of your letter states that "After the (court) decision, the Applicant was permitted to implement the approved Plan of Operations, including sinking the shaft and extracting uranium, but we understand it did not do so because the commodity market was not favorable at the time." By 1992 the mining company had completed construction of their entire surface facility and had partially drilled the shaft. Although operations were officially placed on standby in 1997, the facility remained in place and the Plan of Operations remains in effect to this day.

In 2011, Denison Mines informed the Kaibab National Forest that they would resume operations under their existing Plan of Operations, including completion of the shaft and extraction of ore. The Kaibab conducted a review of the existing Canyon Mine Final Environmental Impact Statement, Record of Decision, Plan of Operation and associated documentation to determine if a new or amended Plan of Operation was needed prior to the resumption of operations. The review was completed in June and it was determined that no new or amended Plan of Operations was required and consequently, there is no new federal undertaking that would trigger additional Section 106 consultation. However, we acknowledged that the full extent of the effect to the TCP from the mining operations was not completely identified at the time of approval, in part because a determination of eligibility on the TCP was not done until 2010. Consequently, we found that there would be unanticipated effects to a previously unknown historic property, and began implementing 36 CFR 800.13(b)(3).

During our review process, on January 6, 2012, Kaibab Heritage Program Manager, Margaret Hangan, discussed this issue with Katry Harris. Ms. Harris seemed to agree that 800.13(b)(3) was appropriate. Therefore, we are confused by your suggestion that the Kaibab should proceed under 800.13(b)(1) rather than 800.13(b)(3). It does not appear that 800.13(b)(1) would apply here, but instead this situation fits under the plain language of 800.13(b)(3) because the undertaking was already approved in the Plan of Operations, and construction had already commenced. We are puzzled at your statement that "because of the nature and timing of this undertaking and the current request to resume previously halted operations, we believe consultation in accordance with Section 800.13(b)(1)…is the appropriate way forward." We are

not aware of any law, guidance, or precedent that intermittent operations would restart Section 106 consultation under Section 800.13(b)(1), as if an authorization had never been issued and construction had not commenced. Please advise us if you are aware of any precedent or authority for your suggestion that Section 800.13(b)(1) would apply here.

We agree that there is great value in "reaching an agreement with the consulting parties." When we initiated consultation on June 25, 2012, pursuant 800.13(b)(3), we informed the tribes that we would be extending the 48-hour consultation timeframes to allow for time to meet and seek ways to minimize the effects to Red Butte, and if successful, to develop a Memorandum of Agreement (MOA). However, we feel that it is necessary to act expeditiously to develop measures to address the adverse effect of ongoing operations. Therefore, we have begun to set up consultation meetings with the tribes and have sent a preliminary draft of an MOA to the AZSHPO for review.

In your August 1 letter, you stated that "should the Forest Service follow Section 800.13 (b)(1) and Section 800.6, the ACHP would be willing to participate…." Please let us know if you are interested in participating in our ongoing consultation under 800.13(b)(3).

Again thank you for working with the Kaibab National Forest on the Canyon Mine Project. Should you have any additional questions or need information, please contact Margaret Hangan at 928/635-8342 or mhangan@fs.fed.us

Sincerely,

/s/ Michael R. Williams
MICHAEL R. WILLIAMS
Forest Supervisor

cc: David M Johnson, Katry Harris, James W. Garrison

Canyon Mine Power Line Maintenance Project Review
September, 2012

Proposal: Energy Fuels Resources proposes to perform standard maintenance activities within the Canyon Power Line corridor of the Canyon Mine Project Area. The project and its associated maintenance activities, analyzed under Maintenance activities include vegetation removal within a 20 foot buffer along each side of the power line, and piling and burning of non-merchantable material.

Background: The Canyon Power Line Maintenance Project is covered under the Final Environmental Impact Statement (EIS) for the Canyon Uranium Mine released in September 1986 by the Kaibab National Forest. The purpose of the project is to allow for maintenance clearing below the power line previously constructed and addressed within the EIS. The overhead power line follows an access road previously constructed, also addressed by the EIS. The purpose of this review is to notify the Interdisciplinary Team members of the maintenance clearing and verify the absence of new issues or concerns not previously addressed by the EIS.

- **Proposed Activity:** Maintenance clearing involves the cutting and removal of all trees within the power line corridor. Clearing will occur within a 40' wide cutting unit which buffers 20' along each side of the power line corridor for its entire length. The project area boundary extends to a 100' buffer on each side of the power line corridor to allow for operational feasibility and piling of cut material. Please see the attached project map, below. No additional ground disturbance will be created by the maintenance clearing that was not previously analyzed under the original EIS.

Cutting Guidelines (all species)

- Cut all trees designated by RED dot "cut tree" breast mark.
- Stumps heights must be < 6" in height.

Slash Treatment

- Pile slash, including tops, limbs, and boles < 8.9" in diameter at the widest end in designated piling locations.
- Do not pile boles > 9" in diameter at the widest end, scatter and leave on site to provide fuelwood opportunities.
- Locate piles between 40-80 feet from power line and at least 10 feet from road edge.
- Utillize forest openings as pile locations to minimize residual tree mortality.
- Do not locate piles within 25' of the south and west side of residual trees >16" DBH.
- Piles must be located at least 20 feet apart.
- No material should protrude more than 2 feet out from the pile.
- Piles must be a minimum of 5' tall and 5' wide and a maximum of 7' tall and 7' wide.

Mitigation Measures

- Four archaeological sites have been identified within the cutting units and their boundaries have been marked with Pink Flagging for avoidance. The sites requiring avoidance are located between the following distances along the power line from Highway 64: *03070400717*: 1.6 to 1.65 miles; *03070400183*: 1.7 to 1.95 miles; *03070400717*: 2.55 to 2.65 miles; and *03070400572*: 3.6 to 3.65 miles. Within site boundaries, crews may only hand thin, lop and scatter trees. No piling of slash may occur within site boundaries. If slash piles are burned, fire managers must work with archaeologist to take appropriate actions to ensure its protection of site 03070400573 prior to igniting the piles. Finally if there are any changes to the proposed activities, additional consultation will be needed with the Zone and Forest Archaeologist.

- Project work sites will be cleaned up at the end of each day to avoid trash accumulation that may attract condors. If a condor shows up near project-related activities, a Forest Service wildlife biologist will be contacted immediately and any project-related activity likely to harm the condor will halt temporarily until the condor flies away or is driven away by permitted personnel. Project workers will be instructed to avoid any interaction with condors. The wildlife biologist will be notified if any project-related vehicle fluid leak or spill occurs that could result in condor poisoning.

Specialist Review:

Fuels: See mitigation measures in Slash Plan above.

Wildlife: No new wildlife concerns have been identified. A biological evaluation was completed as part of the original EIS and no adverse effects to threatened or endangered or sensitive wildlife species have been identified within the project. The Canyon Mine Review, completed on June 25, 2012, reviewed the original EIS, Record of Decision and other earlier documents to ensure there was no new information on threatened, endangered or sensitive wildlife species. Informal consultation on the California condor was completed in February 2012.

Timber: No new timber concerns have been identified. A 100% cruise of merchantable timber was completed is attached in Appendix B.

Heritage: The survey has been completed and four archaeological sites were identified and the boundaries have been marked with pink flagging within the cutting unit. This project will be in compliance with Section 106 of the National Historic Preservation Act if all of the mitigation measures listed above are followed. If there are any changes to the proposed activities, additional consultation will be needed with the Zone and Forest Archaeologist.

Recreation: There are no issues with recreation in this area. The power line follows the road length, which is driven by the recreating public; however, it does not intrude on the scenery and has been in place since the late 1980s.

Lands and Minerals: There are no land management issues in this area. The power line is in place for Canyon Mine which is re-starting their operation to mine uranium on the Canyon mineral claims. There are no other active claims in this area.

Species	Size Class Recorded	Total # Tallied Trees	% Tallied Trees Measured	Avg. DBH (in.)	Avg. DRC (in.)	Avg. Height (ft)	Avg. Defect (%)	Avg. Meas. Tree Net Volume (CF)	Avg. Tallied Tree Net Volume (CF)	Total Net Volume (CF)	Total Net Volume (CCF)	Total Net Volume (Cords)	$/Cord	Total Value
Sell to Denison ($10/green corc														
Juniper	5-12"	168	21%	7	9	16		3.8	1.7	280.5	2.81	3.12	$10.00	$31.17
Pinyon	5-12"	581	4%	7	9	22		4.7	4.1	2386.3	23.86	26.51	$10.00	$265.15
Ponderosa	5-9"	6	67%	6.3		17		1.4	1.4	8.3	0.08	0.09	$10.00	$0.92
Ponderosa	9-12"	2	100%	11		35	0	6.2	6.2	12.5	0.12	0.14	$10.00	$1.38
Totals		**757**	**23%**							**2687.59**	**26.88**	**29.86**		**$298.62**
Sell to public via paid personal use/commercial permits ($5-10/cord)														
Juniper	12-18"	10	40%	13	18	29		25.9	19.4	194	1.94	2.16		
Juniper	18-24"	2	50%	23	26	38		71.1	71.1	142.1	1.42	1.58		
Pinyon	12-18"	46	26%	15	17	33		25.3	25.3	1163.6	11.64	12.93		
Pinyon	18-24"	13	15%	20	21	32		36.7	36.7	476.8	4.77	5.3		
Ponderosa	12-18"	7	86%	16.7		59	3	28.7	28.7	200.8	2.01	2.23		
Ponderosa	18-24"	5	100%	19.9		62	7	42.3	42.3	211.4	2.11	2.35		
Ponderosa	24+"	3	100%	24.8		60	5	67.7	67.7	203.1	2.03	2.26		
Totals		**86**	**38%**							**2591.86**	**25.92**	**28.8**		

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Form 1221-2
(June 1969)

	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MANUAL TRANSMITTAL SHEET	Release 3-336 Date 09/17/2012

Subject

H – 3809-1 – Surface Management

1. **Explanation of Materials Transmitted: This release transmits an entirely new Handbook Section, H-3809-1 - Surface Management. The Handbook incorporates changes in policies resulting from the revision of regulations in 43 CFR 3809.**

2. **Reports Required: None**

3. **Materials Canceled: None**

4. **Filing Instructions: File as directed below**

REMOVE	INSERT
N/A	H – 3809 -1 (339 pages)

/s/ Michael D. Nedd

Michael D. Nedd
Assistant Director, Minerals and Realty Management

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Surface Management Handbook

BLM Handbook H-3809-1

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Chapter 1 Introduction

1.1 Purpose

This handbook provides the procedures and processes for the Bureau of Land Management (BLM) employees to implement the BLM's surface management program. This handbook conveys the BLM policies and procedures applicable to all surface disturbing activity conducted under the Mining Law of 1872, as amended,[1] the Federal Land Policy and Management Act of 1976 (FLPMA), and intersecting laws as given below under Authorities. Any interpretation of the guidance contained in this handbook is subservient to the applicable legal and regulatory mandates.

1.2 Objective

This handbook is to facilitate the administration of exploration, mining, and milling activities on the public lands, or interests in such lands in order to prevent unnecessary or undue degradation (UUD) of these lands.

1.3 Authorities

1.3.1 Statutes

Mining Law of 1872 (30 U.S.C. 22-42) as amended

Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701) as amended

Surface Resources Act of 1955 (30 U.S.C. 612)

1.3.2 Regulations

43 CFR 3809 - Surface Management

43 CFR 3715 - Use and Occupancy under the Mining Laws

43 CFR 3730 - Public Law 359 Mining in Powersite Withdrawals

43 CFR 3821 - Oregon and California (O&C) Lands

43 CFR 3838 - Special Procedures for Locating and Recording Mining Claims and Tunnel Sites on Stock Raising Homestead Act (SRHA) Lands

[1] Note that minerals that are considered locatable minerals under the Mining Law are leaseable minerals on acquired lands and are not covered by the Surface Management Regulations.

1.4 Roles and Responsibilities

1.4.1 BLM Director

The Director, through the Assistant Director for Minerals and Realty Management, provides national oversight for the BLM's surface management program. This includes developing and implementing programmatic policies and guidance, and conducting internal program reviews. Surface management program resources are allocated to the BLM State Offices through the budget process and program priorities are set at the national level.

1.4.2 BLM State Director

The State Director provides oversight to the District/Field Offices regarding program implementation in the state. This responsibility is delegated to the appropriate Deputy State Director, who allocates surface management program resources to the various District/Field Offices and sets statewide priorities. The State Office provides technical support and review to ensure uniform application of the regulations by the District/Field Offices. The role and responsibilities of the State Office are to:

- Review and approve mineral reports before authorizing mining operations on lands with suspected common variety minerals and lands segregated and withdrawn from mineral entry under the Mining Laws.

- Adjudicate all financial guarantees; this includes acceptance, obligation, termination, modifications, collection of financial guarantees, and tracking bankruptcy filings. Also, the office responsible for adjudicating financial guarantees will maintain the physical possession of all original bond contracts and their accompanying financial instruments.

- Conduct State Director Reviews and forward any appeals of the State Director's decision to the Interior Board of Land Appeals (IBLA) within 10 business days of receiving a Notice of Appeal.

- Enter into statewide agreements with state and other Federal agencies concerning the management of operations authorized by the mining laws on public lands.

- Provide oversight and program guidance to the District/Field Offices.

- Provide technical support and review to ensure uniform application of the regulations by the District/Field Offices.

1.4.3 District, Field, and Monument Managers

District, Field, and Monument Managers are responsible for the day-to-day implementation of the surface management program. They provide direction to Program Specialists to implement program activities and resolve program issues. They ensure that the Program Specialists receive

the necessary technical, administrative, and safety training. In addition, the managers oversee the program budget and budget submissions at the District/Field Office level. Manager responsibilities are to:

- Serve as the line officer for accepting Notices and approving or denying Plans of Operations (Plan).
- Establish the amounts of financial guarantees for reclamation of exploration and mining activities.
- Ensure that UUD does not occur from accepted Notices and approved Plans of Operations.
- Determine the appropriate enforcement action to take.
- Forward appeals to the appropriate parties (either the State Director or IBLA, and Office of the Solicitor) within 10 business days of receiving a Notice of Appeal.
- Sponsor public visits to mines if requested.
- Enter into agreements for management of site specific operations.
- Determine if escrow accounts are needed for a Notice or Plan until the status of the mineral material is determined.
- Maintain administrative records, case files, and the Legacy Rehost 2000 (LR2000) system database in accordance with BLM data and recordkeeping standards.
- Ensure that the qualifications of the program specialists are appropriate for the scope of the duties performed.
- Organize interdisciplinary teams (ID Teams), if necessary and when appropriate, to conduct environmental analysis and verify an operation's compliance with the terms and conditions of 43 CFR 3809.

1.4.4 Program Specialist

The program specialists, acting through the District/Field Manager, are responsible for the day-to-day implementation of the surface management program. They coordinate with other BLM resource specialists and applicable state or Federal agencies on the review of Notices and Plans of Operations. The roles and responsibilities of program specialists are to:

- Review submitted Notices, Plans of Operations, and associated modifications.
- Review and verify the amounts of reclamation cost estimates submitted by the operator for proposed activities and recommend the reclamation cost estimate amount to the manager.

- Identify the need for a trust fund or other funding mechanism to ensure the continuation of long-term, water quality, and post mining maintenance requirements.
- Conduct field inspections and make compliance determinations for operations conducted under a Notice or Plan.
- Identify situations of noncompliance or prohibited actions and recommend corrective actions to the manager.
- Ensure enforcement actions are implemented and monitored for a noncompliance situation.
- Serve as the point-of-contact between the BLM and an operator conducting activities on public lands.
- Prepare necessary documents to implement cost recovery.
- Prepare, or coordinate preparation of, the appropriate National Environmental Policy Act (NEPA) documents for approval of Plans of Operations and associated Plan modifications.
- Prepare, or cause to be prepared, mineral reports for determining mining claim validity before approving mining activity within a withdrawn area, or common variety determinations before approving operations under the Mining Law.
- Receive and properly handle confidential business information and information protected under the Privacy Act.
- Maintain administrative records and case files for surface management activities.
- Update the LR2000 database in accordance with BLM standards.

1.4.5 Delegation of Authority

The BLM Manual 1203, *Delegation of Authority,* and State Manual Supplements should also be consulted. These manuals are updated on a regular basis and will clarify the level at which decision-making authority is held within your respective state.

Chapter 2 Casual Use Activity

Under 43 CFR 3809.5, activities that ordinarily result in no or negligible disturbance of the public lands or resources are termed "casual use." In general, the operator may engage in casual use activities without consulting, notifying, or seeking approval from the BLM.[2] The operator does not need to file a Notice or Plan and does not need to provide the BLM with a financial guarantee. Such activities, including suction dredging (see Section 8.4 Suction Dredging) in certain situations, are considered to be casual use under the surface management regulations. This chapter provides guidance for determining when an operation is considered casual use under the 3809 regulations.

2.1 Negligible Disturbance

Activities that generally cause no or negligible disturbance would be considered casual use for purposes of 43 CFR 3809.5, including collecting geochemical, rock, soil, or mineral specimens using hand tools; hand-panning; or non-motorized sluicing. Use of certain equipment, such as small portable suction dredges, metal detectors, gold spears, small drywashers,[3] and other battery-operated devices, would generally be considered casual use. Operators may use motorized vehicles for casual use activities provided the use is consistent with the applicable regulations,[4] off-road vehicle use designations contained in the BLM land-use plan(s), and the terms of any temporary closures ordered by the BLM.

As the term "negligible disturbance" is subjective, the field staff and management must use their professional judgment in determining what activities would ordinarily result in no or negligible disturbance. Except for the use of equipment specifically listed in the regulations, the type of equipment itself or the commercial intent of the operator does not define whether an activity can be considered casual use. The amount and type of disturbance created by the activities of an operator, or the cumulative disturbance caused by the proximity of several operators, ultimately determines whether or not a particular activity will be determined to be casual use.

While no financial guarantee is required for casual use activity, the operator(s) remains responsible to prevent UUD and ensure full reclamation of any disturbance created while engaging in casual use activities, as required by 43 CFR 3809.1 and 43 CFR 3809.10.

2.2 Not Casual Use

Activities that result in more than negligible disturbance are not considered casual use. As defined in 43 CFR 3809.5, use of certain equipment, including mechanized earth-moving equipment, truck-mounted drilling equipment, and motorized vehicles in areas closed to off-road vehicle use, are not casual use. Operations that use chemicals in the recovery or processing of minerals, e.g., cyanide leaching, or explosives are also not considered casual use.

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[2] 43 CFR 3809.10(a).
[3] Battery-powered and gas-powered drywashers under 10 horsepower (hp) may be considered casual use as long as the activity only results in no or negligible disturbance.
[4] 43 CFR 8340.

2.2.1 Cumulative Effects

Within certain areas, the cumulative effects of activities that individually would normally be considered casual use may result in more than negligible disturbance when the activity is conducted by a group, at a larger than usual scale, or over time. Whether these activities are conducted by an individual or a group, they are not considered casual use and require a Notice or Plan of Operations.

The State Director may designate specific areas where individuals or groups must contact the BLM before beginning such activities. These designated areas are established through the BLM's land use planning process. When established, the responsible BLM District/Field Office must notify the public via publication in the *Federal Register* of the boundaries of such specific areas and such information must be posted in each local District/Field Office having jurisdiction over those lands. A party that desires to undertake activities in these areas must notify the District/Field Office prior to commencing such activities. See Section 8.7 Land Use Plans for guidance on the cumulative effects of casual use activities.

Where an individual or group intends to conduct casual use activities within one of these designated areas, they must contact the District/Field Office a minimum of 15 calendar days before beginning activities.[5] Within that 15-day period, the District/Field Office will determine whether a Notice or Plan is required or that the activity is casual use and does not contribute to the cumulative effects of other disturbance in the area, and notify the individual or group of such finding in writing. Where required, submission and review of the Notice or Plan of Operations must conform to the requirements of 43 CFR 3809.300 through 3809.336 or 43 CFR 3809.400 through 3809.434, whichever is applicable.

2.2.2 Occupancy

Under 43 CFR 3715.0-5, occupancy on the public lands longer than 14 days in any 90-day period within a 25-mile radius of the initially occupied site, for purposes of conducting activities under the Mining Law, does not qualify as casual use and must be conducted under a Notice or a Plan of Operations.[6] Occupancies must be authorized by the District/Field Manager under the Use and Occupancy Regulations at 43 CFR 3715. The information reporting requirements of 43 CFR 3715.3-2 must be met through the submission of a Notice or a Plan.

2.2.3 Operator Notification

Official communications with the operator concerning their proposed activity must be made in writing. A decision will be issued when the District/Field Office makes a decision that the proposed activity does not qualify as casual use (see Appendix A, Template 2.2-1, Proposed Activity does not qualify as Casual Use). Where the District/Field Office is simply requesting additional information, a letter may be the most appropriate communication.

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[5] 43 CFR 3809.31(a).
[6] 43 CFR 3809.5.

Chapter 3 Operations Conducted Under Notices

This chapter provides guidance for processing notice-level operations conducted under the regulations at 43 CFR 3809.300 through 3809.336. A Notice is required for exploration activity, greater than casual use, causing surface disturbance of 5 acres or less on public lands.[7] Activity causing more than negligible disturbance (Section 2.2 Not Casual Use) that does not qualify as a notice-level operation, including all mining, must be conducted under an approved Plan of Operations (Section 4.1 Requirement to File a Plan of Operations).

The following are section-by-section descriptions of the filing, reviewing, and operating requirements for notice-level operations.

3.1 Pre-January 20, 2001 Notice-Level Operations

Specific provisions of the regulations apply to notice-level operations that were on file with the BLM on January 20, 2001.[8]

3.1.1 Continued Pre-2001 Operations

Under 43 CFR 3809.300(a), an operator identified in a Notice on file with the BLM on January 20, 2001, was authorized to conduct operations for 2 years after that date, under the terms of the existing Notice and the regulations in effect immediately before that date. The ability to continue operating through the provisions of 43 CFR 3809.300(a) applied to all Notice operations that were on file with the BLM on January 20, 2001, even those operations that would have required a Plan of Operations under 43 CFR 3809.11 because they were for mining activities, rather than exploration activities.

An operator may modify such Notice operations or the District/Field Manager may require a modification under 43 CFR 3809.330 and 3809.331 (see Section 3.3 Notice Modification).

3.1.2 Extended Pre-2001 Notice

Pre-January 20, 2001, Notices that were extended for 2 years under 43 CFR 3809.333 may continue to be extended (see Section 3.4.2 Notice Extension). However, after January 20, 2003, operations conducted under the terms of an extended[9] Notice are subject to the enforcement and other procedural requirements of the current surface management regulations. In addition, before operations may continue under an extended Notice, the operator must provide the BLM with an acceptable financial guarantee (see Chapter 6 for the reclamation cost estimate and financial guarantee review and acceptance requirements).

The ability to continue operating on an extended Notice after January 20, 2003, applies to all pre-2001 Notice operations, even those operations that would require a Plan of Operations under 43

[7] 43 CFR 3809.21(a).
[8] 43 CFR 3809.300.
[9] 43 CFR 3809.333.

CFR 3809.11. The operator may modify the extended Notice, or the District/Field Manager may require a modification under 43 CFR 3809.330 and 3809.331. However, if the modification materially changes the terms of the original Notice or allows surface disturbance outside the outline of the acreage described in the original Notice, the operations will be subject to all provisions of the current surface management regulations.

3.1.3 Change of Operator on Pre-2001 Notice

If there is a change of operator to a pre-2001 Notice on file with the BLM, the new operator, upon satisfying the financial guarantee requirements of 43 CFR 3809.552, assumes the roles and responsibility of the previous operator[10] (see Section 3.3.6 Change of Operator). The new operator is not required to file a new Notice under 43 CFR 3809.301 or Plan of Operations under 43 CFR 3809.401.

3.1.4 Modified Pre-2001 Notice

The operator may modify, or the District/Field Manager may require a modification, as provided at 43 CFR 3809.330 and 3809.331. If the modified Notice does not alter the terms of the Notice, i.e., does not include additional acreage or otherwise make any material changes, the operator may continue to conduct operations under the regulations in effect immediately before January 20, 2001.[11] To be able to continue operating under the original Notice, the terms of the Notice, including operations facilities and activities described in the Notice, may not be modified in any material way. If the proposed modifications will cause material changes to the pre-2001 notice, then the new activities and surface disturbance are subject to current regulations.[12] Material changes are defined in the regulations as:

> *Changes that disturb areas not described in the existing Notice; change your reclamation plan; or result in impacts of a different kind, degree, or extent than those described in the existing Notice.*[13]

3.1.5 Additional Acreage on Pre-2001 Notice

When a modified Notice includes operations on any additional acreage not identified in the pre-2001 Notice, the operations on that additional acreage are subject to all provisions of the current surface management regulations, including 43 CFR 3809.11 and 3809.21.[14] The operator may be required to submit a Plan of Operations under 43 CFR 3809.401, if the modification causes the total unreclaimed disturbance to exceed 5 acres, or if the proposed operations meet one or more of the criteria requiring a Plan of Operations. If a Plan of Operations is filed in these circumstances, the entirety of the operations is subject to the current regulations. Before the additional surface disturbance may occur the Notice must be accepted or Plan of Operations approved, and an acceptable financial guarantee must be provided to the BLM (see Section 6.1 Financial Guarantee Requirements).

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[10] BLM Form 3809-5, Notification of Change of Operator and Assumption of Past Liability.
[11] 43 CFR 3809.300(c)(1).
[12] 43 CFR 3809.300(c)(2).
[13] 43 CFR 3809.331(a)(2).
[14] 43 CFR 3809.300(c)(2).

3.1.6 Expired Pre-2001 Notice

If the pre-2001 Notice expires because the operator failed to notify the BLM as to its intent to extend the Notice on or before the expiration date, had not provided additional information within the specified timeframe, or had not provided a financial guarantee within the specified timeframe (see Section 3.4 Notice Term and Section 3.5 Expired Notice), the operator may file a new Notice or Plan of Operations subject to all provisions of the current surface management regulations, including 43 CFR 3809.11 and 3809.21.

3.2 Filing a Notice

3.2.1 Required Filing

For exploration activity greater than casual use and which causes surface disturbance of 5 acres or less of public lands, the operator must file a complete Notice with the responsible BLM District/Field Office 15 calendar days before commencing operations.[15] Mining activity, regardless of acreage disturbed, may not be conducted under a Notice filed under the current regulations.

Figure 3.2-1, Filing and Reviewing a Notice, presents the main operator responsibilities in filing a Notice and the BLM District/Field Office's responsibilities in reviewing the filing. Proposed operations that require submittal of a Plan of Operations are addressed under 43 CFR 3809.11 (see Section 4.1, Requirement to File a Plan of Operations).

3.2.1.1 Complete Notice

The BLM does not require that a Notice filing be on a particular form. However, for a Notice to be considered complete under 43 CFR 3809.301(b), the operator must provide specific operator information, activity description, reclamation plan, and reclamation cost estimate (RCE). An example format for a Notice submission is provided in Appendix C – Example Formats, Format 3.2-1 Notice.

3.2.1.2 Notice Content

The content requirements for a Notice are listed below and should be applied as thoroughly as needed in order to understand what the operator is proposing. The content of the Notice will determine whether the operation qualifies as a notice-level operation and will not cause UUD. The District/Field Office will not require the submission of operational details that are not relevant to this objective.

[15] 43 CFR 3809.21.

Figure 3.2-1 - Filing and Reviewing a Notice
(1 of 2)

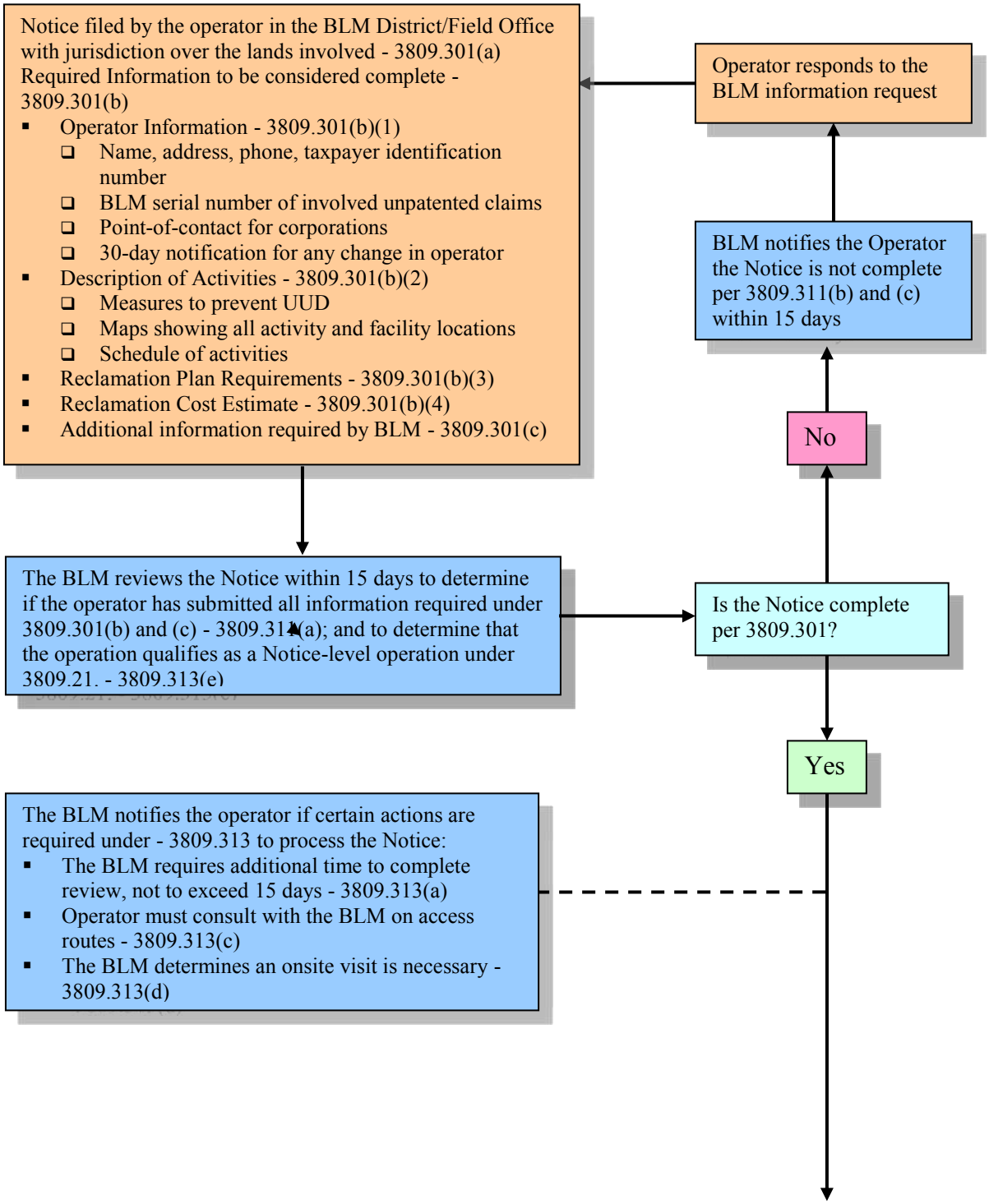
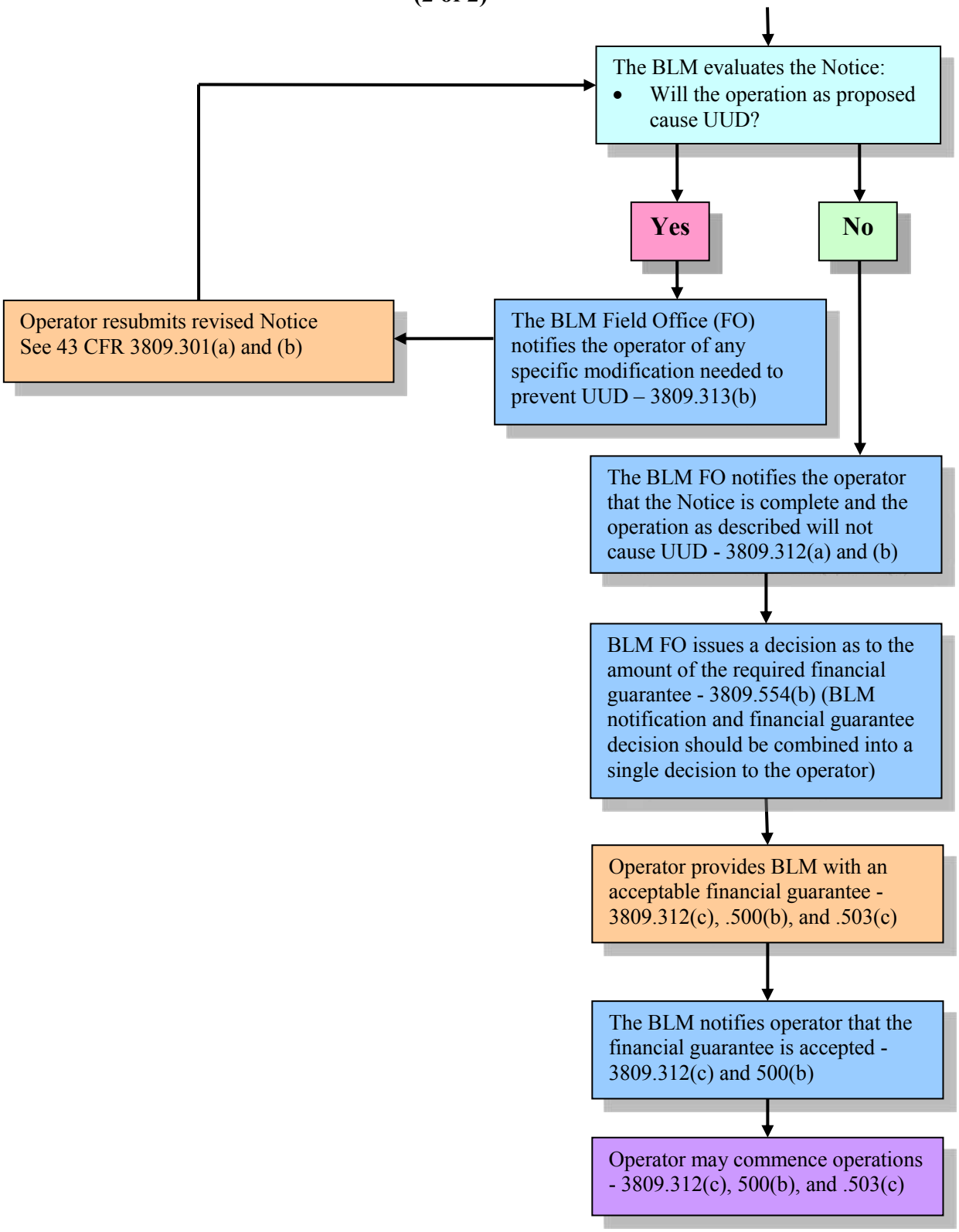


Figure 3.2-1
Filing and Reviewing a Notice
(2 of 2)



3.2.1.2.1 Operator Information

The operator(s) must provide their name, mailing address, phone number, U.S. taxpayer identification number, and the BLM serial number(s) of any unpatented mining claim(s) where the disturbance would occur.[16] If the operator is a corporation, the filing must identify one individual as the point of contact. Procedures for dealing with individual taxpayer identification numbers (Social Security number for an individual) and other protected privacy information are addressed in Chapter 13 Records Management. This issue is addressed in 43 CFR part 2, subpart G. The Collection and Billing System (CBS) also has procedural rules that prohibit the release of a person's Social Security number.

3.2.1.2.2 Activity Description

A complete Notice must include a description of the proposed activity with a level of detail appropriate to the type, size, and location of the activity. The description[17] must include:

- The measures that the operator will take to not cause UUD during operations.
- A map showing the location of the project area in sufficient detail for BLM to be able to find it and the location of access routes the operator intends to use, improve, or construct.
- A description of the type of equipment the operator intends to use.
- A schedule of activities, including the date when the operator expects to begin operations and the date the operator expects to complete reclamation.

3.2.1.2.3 Reclamation Plan

The Notice must describe how the operator will complete reclamation to the standards described at 43 CFR 3809.420.[18] The operator must provide sufficient information for the BLM to assess the adequacy of the proposed reclamation plan. This may involve the operator providing a description of the equipment, devices, or practices they propose to use during reclamation to meet the performance standards. See Section 5.3, Specific Performance Standards for Notices and Plans of Operations, and BLM Handbook H-3042-1, *Solid Minerals Reclamation Handbook,* for additional guidance on the reclamation requirements.

The reclamation plan must provide for the regrading and reshaping of disturbed areas, where applicable. Typical reclamation plans should include a description of the equipment to be used, slope grade, location and size of any runoff controls, cross-sections, etc. A post-grading topographic map showing the planned regrading, though not required, can be the best way to illustrate the regrading plan.

The reclamation plan needs to describe the location, plant species, seeding or planting rates, and any treatment methods proposed to re-establish vegetation over disturbed areas. Also, the plan

[16] 43 CFR 3809.301(b)(1).
[17] 43 CFR 3809.301(b)(2).
[18] 43 CFR 3809.301(b)(3).

must propose the criteria for what would constitute successful revegetation and describe any additional measures, such as temporary fencing or noxious weed control, which might be used on the reclaimed area.

Where applicable, the reclamation plan must describe how drill holes are going to be plugged. The District/Field Office's review must verify that plugging procedures will be in compliance with applicable state drill-hole plugging requirements.

3.2.1.2.4 Reclamation Cost Estimate

An estimate acceptable to the BLM of the cost to fully reclaim the operations, as required at 43 CFR 3809.552 (see Section 6.2, Reclamation Cost Estimates), must be included for the Notice filing to be considered complete.[19] The RCE must be based on the standards set forth at 43 CFR 3809.554(a) and adequate to meet all operator obligations identified in the reclamation plan.

3.2.2 Reviewing the Filing

3.2.2.1 Completeness

Within 15 calendar days of receipt of a Notice, the District/Field Office will review the filing to determine if it is complete according to 43 CFR 3809.301(b)[20] and includes the operator information, activity description, reclamation plan, and RCE as discussed in Section 3.2.1.2, Notice Content. The reclamation plan must include all reclamation, closure, and post-reclamation requirements needed to meet the performance standards described at 43 CFR 3809.420. The District/Field Office's review must determine that the submitted information is not only complete but also accurate.

3.2.2.2 Unnecessary or Undue Degradation

The BLM review is to confirm that the operations conducted under the Notice will not cause UUD. This means determining that there is a reasonable expectation that the proposed operation will:

- Comply with the performance standards.[21]
- Comply with the terms of the filed Notice.
- Comply with other Federal and state laws related to environmental and cultural resource protection.
- Conform to the requirements of 43 CFR 3715.

As part of this review, the District/Field Office will, whenever possible, conduct an onsite visit prior to determining if the proposed operation will cause UUD. As part of this onsite visit the BLM will document all existing disturbance.

[19] 43 CFR 3809.301(b)(4).
[20] 43 CFR 3809.311(a).
[21] 43 CFR 3809.420.

3.2.2.3 Enforcement Program

The BLM review and acceptance of a Notice is part of its enforcement program to ensure that operators comply with their legal responsibility to not cause UUD (see Section 9.2, Enforcement Actions). Any decision concerning the need, amount, acceptability, and/or forfeiture of a financial guarantee is also part of the BLM's compliance and enforcement program, but not an approval of the Notice (see Section 6.1, Financial Guarantee Requirements).

3.2.2.4 Additional Information

The District/Field Manager may require the operator to provide additional information to ensure that the operations will comply with the regulations.[22] For example, the District/Field Office may require some fairly simple baseline information, such as the depth to groundwater, or specific operations information, such as the nature and types of drilling fluid additives to be used. However, the District/Field Office should not require the operator to submit details that are not relevant to determining whether the operations will cause UUD or otherwise qualify as notice-level operations.

3.2.2.5 Additional Reviews

If the District/Field Manager takes any action listed at 43 CFR 3809.313, operations, having otherwise filed a complete Notice and provided the BLM with an acceptable financial guarantee, will not begin until the action is completed and any additional conditions are satisfied. If additional reviews are being required according to 43 CFR 3809.313, the responsible BLM District/Field Office must give written notice to the operator within 15 calendar days of receipt of the complete Notice.

3.2.2.5.1 Additional Review Time Needed

Where a complete Notice has been submitted, but the District/Field Office needs additional time to review the Notice to ensure the proposed operation will not cause UUD, the District/Field Manager will immediately give written notice to the operator. Operations may not begin until the District/Field Office has completed its review. The District/Field Office review is limited to 15 additional calendar days.[23]

3.2.2.5.2 Modifications Required

If the District/Field Office notifies the operator that the Notice must be modified to prevent UUD, the Notice must be modified before operations may commence.[24] The District/Field Manager will provide a written notification informing the operator that a modification is necessary.

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[22] 43 CFR 3809.301(c).
[23] 43 CFR 3809.313(a).
[24] 43 CFR 3809.313(b).

3.2.2.5.3 Access Routes

Any concerns with existing and proposed access routes must be addressed before operations may commence.[25]

3.2.2.5.4 Onsite Visits

If the District/Field Office determines that additional time is necessary to conduct an onsite visit, operations may not commence until this site has been examined.[26] Any concerns arising from the visit must be resolved to the BLM's satisfaction before operations may begin. If a site visit cannot be conducted within the initial 15-calendar day review period, the BLM will notify the operator and include the reason(s) for the delay.

3.2.2.5.5 Plan Required

If the District/Field Office notifies the operator that the proposed operation does not qualify as a notice-level operation under 43 CFR 3809.21, the operator must submit and obtain approval of a Plan of Operations before beginning operations.[27] For example, bulk sampling that proposes to remove 1,000 tons or more of presumed ore (taking into consideration all material to be tested, whether or not it ultimately is determined to be ore grade material) requires the operator to file a Plan of Operations. Onsite field-scale testing using chemicals such as cyanide or sulfuric acid to evaluate leachability (e.g., test heaps) does not qualify for a Notice and must be done under a Plan of Operations, regardless of test sample size. Areas closed to off-road vehicle use require a Plan of Operations.[28] In addition, mining may not be conducted under a Notice filed under the current regulations.

If the District/Field Office determines that the proposed project has been segregated by filing a series of Notices for the purpose of avoiding filing a Plan of Operations, the District/Field Office will notify the operator that a Plan is required.[29]

The District/Field Manager will issue the determination that the proposed operation does not qualify for a Notice in a written decision that includes the appropriate appeals provisions (see Appendix A, Template 3.2-1, Proposed Operation does not qualify as a Notice).

3.2.2.6 Coordination with Other Agencies

Other Federal, state, and local agencies may require similar information concerning the proposed operation. The BLM should coordinate its information requirements with these other agencies to arrive at a standard level of detail. Since no particular form is required, the use of information required by other agencies, where appropriate, can be used to satisfy the BLM's Notice content requirements. If appropriate under existing agreements the BLM has with state and/or local agencies, the District/Field Office will ensure the appropriate state or local agency is provided a copy of the Notice.

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[25] 43 CFR 3809.313(c).
[26] 43 CFR 3809.313(d).
[27] 43 CFR 3809.313(e).
[28] 43 CFR 3809.11(c)(5).
[29] 43 CFR 3809.21(b).

3.2.2.7 Multiple Operators' Filings

If two or more operators file Notices (or Plans of Operations) on the same area, the BLM will notify the respective operators and identified mining claimants of the potential conflict. Resolving mining claim ownership or a Notice and/or Plan conflict is a matter between the private parties. A conflict does not warrant the BLM taking any action under 43 CFR 3809.313 that would delay operations from commencing. The BLM will review each Notice based solely on its obligation to prevent UUD.[30]

If, because of mutually exclusive or conflicting activity, the BLM is not able to determine whether the operator(s) will cause UUD, the District/Field Manager may suspend the review until the conflict is resolved. The suspension will be issued in the form of a decision (see Appendix A, Template 3.2-2, Processing Notice or Plan Suspended).

3.2.3 Operator Notification

Official communications with the operator concerning the Notice filing must be made in writing, whether it is in the form of a letter, notice, or decision. A decision will be issued when the District/Field Office takes final action on a Notice or when the District/Field Office determines the amount of the required financial guarantee (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount). However, where the District/Field Office is notifying the operator that specific information is needed for the Notice filing to be complete, a letter may be the most appropriate communication.

3.2.3.1 Incomplete Filing

If the Notice is incomplete, the District/Field Manager will give written notice to the operator of the additional information required.[31] Prompt notification is necessary to comply with the requirement in the regulations to make a determination within 15 calendar days of the filing. Appendix A, Template 3.2-4, Notice Not Complete, provides an example notification to the operator that the filing does not meet the requirements at 43 CFR 3809.301.

3.2.3.1.1 Written Notice Required

The BLM District/Field Manager must give written notice of those areas deemed deficient. The District/Field Manager may, at his or her discretion, suggest corrective actions for any identified deficiencies.

3.2.3.1.2 Unacceptable Reclamation Cost Estimate

A Notice is not complete if the RCE is not acceptable.[32] For example, the BLM must advise the operator to incorporate the appropriate administrative costs if they are not included in the RCE. The responsible BLM District/Field Manager may suggest procedures for determining specific cost components or may provide the operator with the BLM's cost estimate for reclaiming the proposed operation.

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[30] 43 CFR 3809.311.
[31] 43 CFR 3809.311.
[32] 43 CFR 3809.554(b).

3.2.3.1.3 Timeframes

The timeframes identified at 43 CFR 3809.311, 3809.312 and 3809.313 are not effective until the District/Field Office determines that the operator has filed a complete Notice. The Notice is not complete until the District/Field Office receives all of the information requested.[33]

In requesting additional information from the operator, the District/Field Manager should attempt to identify all deficiencies in the initial review and notification, and may establish a timeframe within which the additional information must be submitted. If a timeframe is included, the notification will let the operator know that the BLM will discontinue processing the Notice if the required information is not submitted in a timely manner.

The District/Field Office will review, within 15 calendar days, any additional information submitted by the operator.

3.2.3.2 Complete Filing

The District/Field Manager must notify the operator when the Notice is determined to be complete and issue a decision on the amount of the required financial guarantee.

The notification must be in writing, specifying the date the Notice is complete. This notification must be made within 15 calendar days of receipt of an acceptable Notice.[34] The notification must include a statement that the BLM has determined that the operation as proposed will not cause UUD.

When the BLM has received a RCE and finds that it is acceptable, the District/Field Manager must provide the operator with a written decision which will state the amount of the financial guarantee required (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount).[35] The decision will state that operations may not commence until an acceptable financial guarantee has been obligated by the BLM (see Section 6.3, Reclamation Cost Estimates) for the operation. A copy of this decision must be provided to the BLM office responsible for adjudication of the financial guarantee.

Notification that the Notice is complete and the decision on the amount of the required financial guarantee will, where practical, be combined into a single decision.

3.2.3.3 Modification Required

The District/Field Manager must notify the operator to modify a notice when necessary to prevent UUD.

3.2.3.3.1 New Operations

When a modification is required during the initial completeness review, the District/Field Manager will notify the operator that the Notice will cause UUD and modification is required

[33] 43 CFR 3809.311(c).
[34] 43 CFR 3809.311(a).
[35] 43 CFR 3809.554(b).

before the BLM can accept the Notice. In the notification, the District/Field Manager will inform the operator that operations must not begin until the Notice is modified to prevent UUD. The District/Field Manager will provide written notification to the operator.[36] The notification will state the reason(s) for which the notice was determined to cause UUD (see Appendix A, Template 3.2.5, Modification Required).

3.2.3.3.2 Existing Operations

At any time, the District/Field Manager may require the operator to modify the Notice to prevent UUD.[37] When a modification is required, the District/Field Manager will provide written notification informing the operator that a modification is necessary to prevent UUD. The notification will include the reason(s) for which the notice was determined to cause UUD.

3.2.4 Authorization

The BLM does not approve a Notice and therefore notice review does not require an environmental review under NEPA.[38] The BLM accepts Notice filings, and reviews a complete Notice to ensure the proposed operation qualifies as a notice-level operation according to 43 CFR 3809.11 and that the operator is able to conduct the proposed operations without causing UUD. The BLM will not issue a decision "approving" a notice; however the District/Field Office will issue a decision, Determination of Required Financial Guarantee Amount (see Appendix A, Template 3.2-3), stating the amount required for the financial guarantee. The BLM office responsible for adjudicating financial guarantees will issue a decision on the obligation of the financial guarantee.

Any decision concerning the need for, amount of, and/or acceptability of the RCE is considered part of the BLM's compliance and enforcement responsibilities, and not an approval of the Notice. The BLM office responsible for adjudicating financial guarantees will notify the operator and other affected entities when the BLM obligates a financial guarantee for the Notice. A copy of this decision will be provided to the BLM District/Field Office. Decisions concerning the required financial guarantee amount also do not require an environmental review under NEPA. All compliance and enforcement decisions are, however, subject to appeal under the provisions at 43 CFR 3809.800 through 3809.809.

The notice-level operation may be subject to authorization under the Use and Occupancy Regulations at 43 CFR 3715[39] if the proposed operations involve occupancy (e.g., placement of fences, gates, signs or occupancy at the site). Any proposed occupancy associated with notice-level operations must be approved by the District/Field Manager according to the 3715 regulations.

A completed Notice constitutes off-highway vehicle (OHV) authorization in areas designated as "limited" to off-road vehicle use, as defined by 43 CFR 8340.0-5(h). A separate authorization under 43 CFR 8344.1 and subpart 2930 is not required for notice-level operations in "limited" areas.

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[36] 43 CFR 3809.313 (b).
[37] 43 CFR 3809.331(a).
[38] 43 CFR 3809.312(a).
[39] 43 CFR 3809.312(d).

3.2.5 Commencing Operations

If the BLM does not take any of the actions described in 43 CFR 3809.313, the operator may begin operations after 15 calendar days from the date the District/Field Office received the complete Notice and the BLM has obligated a financial guarantee.[40] If the operator does not receive an acknowledgement from the BLM, or has any doubt about the date the BLM received the complete Notice, the operator should contact the office to which the Notice was submitted. If the BLM provides the operator with a written notification that the review of the Notice has been completed before the end of the 15-calendar day period and the BLM has obligated the financial guarantee, the operator may begin operations.

Operations conducted under a Notice must meet all applicable performance standards;[41] see Section 5.3, Specific Performance Standards for Notices and Plans of Operations, for a full discussion of the applicable performance standards.

3.3 Notice Modification

3.3.1 Modifying a Notice

The operator may submit a modification to its Notice at any time, if the operator wants to materially change or modify the Notice activity.[42] The operator is required to modify the Notice before any material changes are made to the operation.[43] Material changes are changes that propose to disturb areas not described in the Notice on file with the BLM, change the reclamation plan, or change the type, intensity, or scope of activity. The operator must submit a Notice modification at least 15 calendar days before making any material changes to the operation. Information required for the Notice modification is at 43 CFR 3809.301(b), and the review process is similar to that required for the original Notice. The operator must not modify the activity/operation described in the current Notice until the modification has been reviewed and accepted.

3.3.2 BLM Required Modification

At any time, the District/Field Manager may require the operator to modify the Notice to prevent UUD.[44] Modification may be required by the BLM based on results of a compliance inspection, a change in site conditions, or availability of new information.

When a modification is required, the District/Field Manager will provide written notification informing the operator that a modification is necessary. The BLM will require the operator to modify the Notice when UUD is occurring and whenever the District/Field Manager determines a modification is needed to prevent UUD from occurring.

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[40] 43 CFR 3809.312(a).
[41] 43 CFR 3809.420.
[42] 43 CFR 3809.330(a).
[43] 43 CFR 3809.331(a)(2).
[44] 43 CFR 3809.331(a).

3.3.3 Modification Review

The District/Field Office will review the Notice modification in the same manner as a new Notice.[45] The District/Field Office will provide a written notification to the operator providing the date a complete Notice modification was accepted. If the modification results in the District/Field Office establishing a new RCE, the District/Field Manager will issue a decision setting that new amount.

3.3.4 Commencing Operations

Except in the instance where immediate action is necessary to prevent UUD, the operator must provide the BLM an acceptable financial guarantee that meets the requirements of the regulations and is obligated by the BLM before beginning operations under the modified Notice.[46]

3.3.5 Continued Operations

Unless otherwise directed by the BLM District/Field Manager to prevent UUD, operations described in the original Notice may continue, pending completion of BLM's review of the proposed modification.

3.3.6 Change of Operator

The operator must notify the responsible BLM District/Field Office, in writing, within 30 calendar days of any change of operator or corporate point of contact, or of the mailing address of the operator or corporate point of contact.[47] The operator must notify the responsible BLM District/Field Office using Form 3809-5, Change of Operator, of any proposed change of operator. The BLM District/Field Office must approve the operator change subject to satisfactory financial guarantee being accepted and obligated to cover the proposed operator. The BLM District/Field Office will update LR2000 accordingly, as soon as possible.

3.4 Notice Term

3.4.1 Initial Term

A Notice remains in effect for 2 years from the date the BLM issued a decision on the amount of the required financial guarantee[48] unless the operator requests a Notice be terminated before that date or the BLM nullifies a Notice as part of an enforcement action under 43 CFR 3809.602 (see Section 9.2, Enforcement Actions). The BLM decision establishing the amount of the required financial guarantee must state the effective date and expiration date of the Notice.

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[45] 43 CFR 3809.330(b).
[46] 43 CFR 3809.312(c).
[47] 43 CFR 3809.301(d).
[48] 43 CFR 3809.332.

3.4.2 Notice Extension

An operator may extend the Notice for an additional 2 years according to 43 CFR 3809.333. The Notice may be extended more than once.

3.4.2.1 Notification

To extend the original Notice, the operator must provide the District/Field Manager with written notice on or before the expiration date, indicating the operator intends to continue operations under the terms of the existing Notice for an additional 2 years. A Notice may not be extended if it has already expired.

Any information required for a complete Notice, according to 43 CFR 3809.301(b), that has changed or was never provided in the original filing must be included in the extension notification. Further, the operator must provide a revised RCE based upon the proposed operations.

Regardless of when the operator provides an extension notification or when the operator provides the BLM with an acceptable financial guarantee, the Notice expiration date is 2 years from the date the BLM issued a decision, Determination of Required Financial Guarantee Amount (see Appendix A, Template 3.2-3), as to the amount of the required financial guarantee.

If a decision has been issued by the District/Field Manager establishing a revised cost estimate for an entire operation, and the operator requests a Notice extension in compliance with the regulations,[49] the Notice expiration date is the 2-year anniversary date of that decision. Normally this situation would occur when the Notice is modified.

The District/Field Manager may consider an extension request anytime within the 2-year term of the Notice.

3.4.2.2 Notification Review

Where the BLM has received notification of an extension, the District/Field Manager must review the original Notice and any additional information submitted by the operator to verify that (1) the Notice qualifies for an extension (i.e., that it has not already expired), (2) the operation will not cause UUD, and (3) all information required for a complete Notice[50] has been submitted, including an acceptable revised RCE. If it is determined the Notice is complete and the operations as described in the filing will not cause UUD, the District/Field Manager must issue a decision as to the amount of the required financial guarantee (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount).

If the District/Field Manager determines that the Notice has already expired, the BLM will notify the operator that the Notice cannot be extended due to the operator's failure to comply with the requirements at 43 CFR 3809.333 and 3809.335 (see Appendix A, Template 3.4-1, Notice Expired).

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[49] 43 CFR 3809.333.
[50] 43 CFR 3809.301(b).

Where an operator has filed for an extension of the Notice and the operator is also in noncompliance, the responsible BLM office will notify the operator of this noncompliance and any corrective actions necessary (see Section 9.2, Enforcement Actions). The existence of an outstanding noncompliance order will not, by itself, preclude a Notice from being extended. However, where a suspension order or immediate temporary suspension order has been issued, an extension will be withheld until such time as the order has been terminated.

3.4.2.3 Conditional Extension

When the operator notifies the BLM of its intent to extend the Notice on or before the expiration date, but the District/Field Manager determines that updated or additional information is required, and that information cannot be obtained before the expiration date, the Notice may be extended, conditioned upon the receipt of the required information.

Where the Notice has been extended subject to certain conditions, the operator and District/Field Office must promptly take the required actions to ensure those conditions are addressed. For the BLM, the required action may include notifying the operator of the required information (see Appendix A, Template 3.4-2, Conditional Extension) or issuing a decision on the amount of the required financial guarantee (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount). Whether it is a letter requesting additional information or a decision on the amount of the required financial guarantee, the communication with the operator must include a due date when the information and/or financial guarantee must be provided and a statement that failure to provide the required information and/or acceptable financial guarantee within the specified timeframe will result in the Notice expiring immediately upon conclusion of the timeframe. At that point, the BLM will notify the operator that the Notice has expired, that all activities except for reclamation must cease, and that the operator may submit a new Notice or Plan of Operations if the operator intends to continue operations (see Appendix A, Template 3.4-1, Notice Expired).

3.4.2.3.1 Additional Information Request

Where the District/Field Manager requires the submission of additional information, the operator must submit the required information within 30 days. Failure to provide the required information within the specified timeframe will result in the Notice expiring immediately upon conclusion of the timeframe unless the District/Field Manager determines an additional information request is warranted. If the District/Field Manager determines that additional information not originally requested or received is necessary, the manager may issue one additional request for information. The operator must submit the required information within 30 days of this second notification. Failure to provide the required information within the specified time will result in the Notice expiring immediately upon conclusion of the response period (see Appendix A, Template 3.4-1, Notice Expired).

3.4.2.3.2 Increased Financial Guarantee Required

Where an increase in the amount of the existing financial guarantee is required, the operator must provide the BLM with an acceptable financial guarantee within 60 days from the date when the District/Field Manager issues the decision on the amount of the financial guarantee (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount). Failure

to provide an acceptable financial guarantee increase within the specified timeframe will result in the Notice expiring immediately upon conclusion of the timeframe. A noncompliance order may also be issued for failure to maintain an adequate financial guarantee (see Appendix A, Template 9.2-1, Noncompliance Order).

3.5 Expired Notice

The Notice expires when (1) the operator fails to extend the Notice on or before the expiration date, (2) fails to provide any additional information required by the BLM within the timeframe provided, or (3) fails to provide the BLM with an acceptable financial guarantee within the time allowed. The BLM will notify the operator that the Notice has expired, that all activities except for reclamation must cease, and that the operator may submit a new Notice or Plan of Operations if the operator intends to continue operations (see Appendix A, Template 3.4-1, Notice Expired).

When a Notice expires, the operator must cease all operations, except reclamation.[51] The operator must promptly complete all reclamation according to the Notice. See Section 7.1, Activity Conducted under a Notice, for requirements when a Notice expires.

If an operator wishes to continue mining operations after expiration of a Notice, the operator must immediately submit a new Notice or Plan of Operations, if required by 43 CFR 3809.11. The new Notice must be accepted or Plan of Operations approved, and a financial guarantee obligated before operations, other than reclamation, may commence again.

3.5.1 Inspection

When a Notice has expired, as provided at 43 CFR 3809.332, the BLM District/Field Office will promptly conduct an inspection to verify whether the operator has met the reclamation obligations and will provide the operator with written notice of its findings, including a decision as to the amount of the required financial guarantee based on successful reclamation. Where appropriate, that decision would indicate that no financial guarantee is required.

Where the operator has let the Notice expire and has not commenced reclamation or submitted a new Notice or Plan of Operations, the responsible BLM District/Field Office must take the necessary enforcement actions at 43 CFR 3809.601 through 3809.605 and/or 43 CFR 3715 (see Section 9.2, Enforcement Action and Appendix A, Template 9.2-1 Noncompliance Order). If necessary, the BLM will initiate forfeiture procedures of the financial guarantee according to 43 CFR 3809.595 through 3809.599 (see Section 6.5, Forfeiture of Financial Guarantee) (see Appendix A, Template 6.5-1, Forfeiture of Financial Guarantee).

3.5.2 Closing the Case File

An operator's reclamation obligations continue beyond the expiration or any termination of the Notice until all reclamation requirements are satisfied.[52] Before the case file may be closed, the BLM must inspect the site, notify the operator of any outstanding reclamation requirements, and

[51] 43 CFR 3809.335.
[52] 43 CFR 3809.335(d).

ensure all required reclamation has been completed. The District/Field Office must not close the case file until the operator has completed all reclamation obligations, or in situations where the operator fails to reclaim the operation, the BLM completes the reclamation. In such cases, the case file may need to remain open until the debt is collected or written off.

When the District/Field Manager is notified that operations have ceased and reclamation is complete before the Notice expires, the District/Field Office will promptly conduct an inspection to verify if all reclamation responsibilities have been fulfilled. The District/Field Manager will notify the operator in writing of its findings (see Appendix A, Template 3.5-1, Reclamation Required). The District/Field Manager may then terminate the Notice[53] and close the case file (see Chapter 7 Cessations and Abandonment).

[53] 43 CFR 3809.332.

Chapter 4 Plan of Operations – Content and Processing

This chapter explains the operator's filing requirements and the BLM District/Field Offices' review and approval procedures for a Plan of Operations. It includes guidance on when a Plan of Operations is required, what needs to be included in the Plan, the steps for review, approval, or denial of a Plan, and the procedures to follow when considering a modification to a Plan of Operations.

4.1 Requirement to File a Plan of Operations

A Plan of Operations is required for surface disturbance greater than casual use, unless the activity qualifies for a Notice filing.[54] Surface disturbance greater than casual use on certain special category lands requires the operator to file a Plan of Operations and receive BLM approval (i.e., operations may not be conducted under the Notice provision of the regulations at 43 CFR 3809.11(c). Special category lands include the following:

- Lands in the California Desert Conservation Areas (CDCA) designated by the CDCA plan as "controlled" or "limited" use areas.

- Areas in the National Wild and Scenic Rivers System, and areas designated for potential addition to the system.

- Designated Areas of Critical Environmental Concern (ACEC). This does not include lands merely nominated for ACEC designation, but lands that have been designated through the land use planning process.

- Areas designated as part of the National Wilderness Preservation System administered by the BLM are subject to the 3809 regulations. Because such lands are withdrawn from location, subject to valid existing rights, the processing of a Plan of Operations requires a full mineral examination under 3809.100(a) and a determination that the mining claim is valid before approving the Plan. Note the regulations at subpart 3802 apply to lands under wilderness review (Wilderness Study Areas). Consult those regulations to process operations proposed in BLM Wilderness Study Areas.

- Areas designated as "closed" to off-road vehicle use, as defined in 43 CFR 8340.0-5(h). Note that a Plan of Operations is <u>not</u> required for areas with a "limited" designation, even if such a designation limits travel to existing roads and trails and the surface disturbance would occur off-road. An accepted Notice constitutes OHV authorization in limited areas. An approved Plan of Operations constitutes OHV authorization in limited or closed areas. A separate authorization under 43 CFR 8344.1 and subpart 2930 is not required for operations in these areas.

- Any lands or waters known to contain federally proposed or listed threatened or endangered species or their proposed or designated critical habitat, unless the BLM allows for other action under a formal land use plan or threatened or endangered species

[54] 43 CFR 3809.11.

recovery plan. The requirement to file a Plan of Operations does not apply where the habitat is not occupied unless the habitat has been proposed or designated as "critical" in a recovery plan. In proposed or designated critical habitat, a recovery plan or land use plan may be used to establish a Notice-Plan threshold for exploration at less than the 5-acre disturbance threshold. This threshold would be based upon a programmatic review of mineral activity in the recovery area and development of standard operating practices through consultation between the BLM and the U.S. Fish and Wildlife Service (FWS).

- National Monuments and National Conservation Areas administered by the BLM. A Plan of Operations is always required for surface disturbance greater than casual use in these areas. In addition, many of these areas are withdrawn from location, subject to valid existing rights, and the processing of a Plan of Operations requires a full mineral examination under 3809.100(a) and a determination that the mining claim is valid before approving the Plan.

- Lands patented under the SRHA with Federal minerals. A Plan of Operations is required for activity greater than casual use on these lands only when the operator does not have the written consent of the surface owner. The requirements at 43 CFR 3814 are also applicable for processing these Plans.

- On split estate lands other than those patented under the SRHA, either a Notice or Plan of Operations must be filed with the BLM regardless of whether the operator has surface owner consent.

4.1.1 Existing Plans of Operations

For Plans of Operations that were either already approved or pending approval when the 43 CFR 3809 regulations were promulgated in 2001, the operator does not have to comply with the new Plan content requirements or the new performance standards unless the operator chooses to have those sections apply. Instead, the Plan content and performance standards that were in effect before January 20, 2001 are applicable.[55] All other portions of the current regulations such as the financial guarantee requirements, inspection and enforcement procedures, appeals processes, etc., must be followed. See Section 4.6.4 and 4.6.5 for a discussion on processing modifications to these Plans.

4.2 Plans of Operations - Overview of Processes

The stages in the BLM's review of a Plan of Operations can be divided into six general categories:

- Completeness review.

- Environmental analysis.

- Financial guarantee establishment.

[55] 43 CFR 3809.400.

- Approval decision.
- Monitoring.
- Reclamation and Closure.

These processes are not strictly sequential. The completeness review and environmental analysis are iterative, i.e., involve review, evaluation, modification, and reevaluation in order to develop both a complete Plan and a final environmental analysis. In addition, there can be overlap as the Plan completeness review may identify issues for the environmental analysis; scoping for the environmental analysis may target areas in the Plan of Operations where additional detail is needed to describe the proposed action for study in the environmental analysis document. Plan review and environmental analysis will likely result in changes to the financial guarantee requirements.

Plans may also be modified after they are approved, either by the operator or as required by the BLM. The BLM decisions approving, approving with conditions, or denying a Plan of Operations can be appealed or challenged in court. The general relationship between these processes is shown in the flowchart in Figure 4.2-1, Plan of Operations Processes.

4.2.1 Plan Review Timeline

The amount of time required to review and approve a Plan of Operations will vary considerably depending upon the type and complexity of the activity being proposed, resources potentially affected, required level of environmental analysis, amount of interagency coordination needed, and level of public controversy.

4.2.2 Plan Review Level of Detail and Effort

The intensity of the review effort is determined by the BLM's mandate to prevent UUD. This means that the scrutiny during Plan review is determined by the proposed level of activity and the anticipated impacts. A Plan of Operations for a one season, 6-acre exploration proposal will probably require less extensive review and analysis than a Plan of Operations for a 1,300-acre open pit, heap leach operation that is to be conducted over a 15-year mine life. The Plan content and processing regulations at 43 CFR 3809.401 through 3809.411 are to be applied as thoroughly as needed to determine whether the operation will cause UUD while review of operational details not relevant to this objective is to be avoided.

The level of detail needed in a Plan of Operations should be driven by site-specific conditions. BLM State Offices can develop state-specific review criteria or checklists, but the BLM reviewer must exercise considerable judgment in identifying the applicable information and levels of detail required from the operator and not rely on a one-size-fits-all approach.

For example, usually it is not important for the operator to specify the size of the dozer that will be used to reduce a dump slope, only that the slope will be reduced to a specific grade. In other situations, the size of the dozer could be important factor because the width of the access road is limited or because the duration or noise level of equipment operation could affect a particular wildlife species. In these cases, the Plan of Operations must describe the size/type of equipment to be used so that the impacts can be evaluated.

For a more detailed description of the process regarding the review, approval, and management of a Plan of Operation refer to Figures 4.2-2 through 4.2-8.

4.3 Plan of Operations – Filing and Content

Operators who are required to file a Plan of Operations must file the Plan in the BLM District/Field Office that has jurisdiction over the lands involved. A specific form is not required but the Plan must contain all the information required under 43 CFR 3809.401(b) in order to be considered complete. An example format (Format 4.3-1, Plan of Operations) for a Plan submission is provided in Appendix C – Example Formats. Additional information on environmental conditions and reclamation costs is required to be provided under 3809.401(c) and (d), respectively. An operator does not need to provide the information requested under 3809.401(c) or (d) in order for the Plan to be considered complete; however, the BLM may be unable to process the Plan until such information is provided.

Plan content should be as specific as necessary for the BLM to determine whether the proposed action will cause undue or unnecessary degradation. However, consideration should be given to operational flexibility so that frequent modifications are not necessary. For example, an operator may wish to indicate a range of earth-moving equipment that may be used rather than identify a specific make and model. Operational flexibility is considered appropriate as long the scope and intensity of the of the plan is not altered.

4.3.1 Pre-Plan Coordination

The BLM is available to meet with the operator and other local, state, or Federal agencies that may be involved in the approval process to discuss (1) what to include in the Plan of Operations and (2) what may be needed to support the NEPA analysis, especially for large projects. It may be beneficial to all parties for the BLM to informally review a pre-plan, conceptual plan, or study plan prior to the formal filing of the Plan of Operations to give the operator guidance on what to include in the submission and how the review process will be conducted.

Pre-Plan discussions are especially beneficial when extensive baseline studies are necessary to support NEPA review of a Plan, where collection of baseline data is anticipated to take several years, or where cost recovery is required. The more common types of baseline studies include (1) rock characterization for acid rock drainage (ARD) analysis, (2) hydrologic baseline studies, (3) wildlife and plant inventories, and (4) cultural resources inventories. To ensure the Plan of Operations approval process proceeds in a timely manner, operators need to provide sufficient water-related baseline data to the BLM when the Plan is submitted. For example, groundwater baseline data to support review of a Plan involving a large heap-leach metallic mining operation may require 2 years to collect and the drilling of several deep monitoring wells. Advanced planning with the operator for this type of baseline data collection is encouraged.

Figure 4.2-1 - Plan of Operations Process

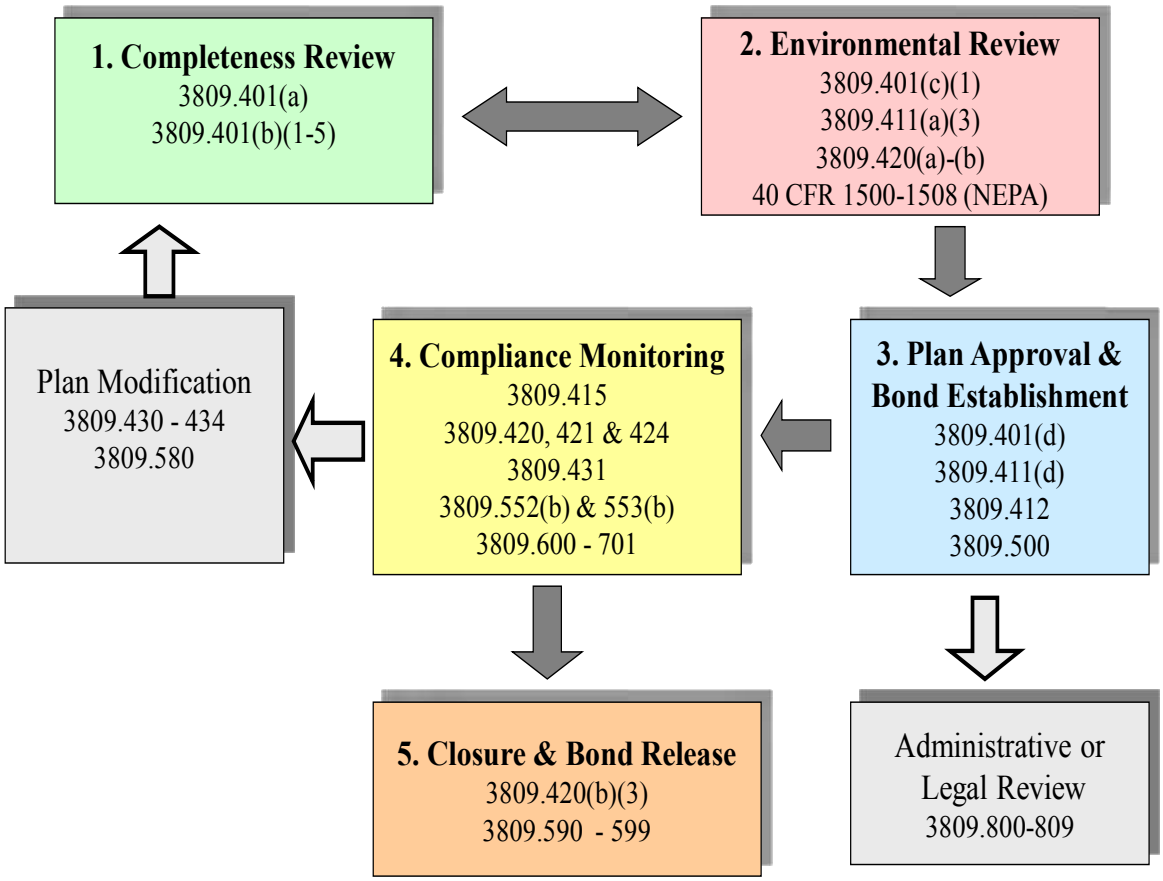


Figure 4.2-2 - Plan of Operations -- Completeness Review

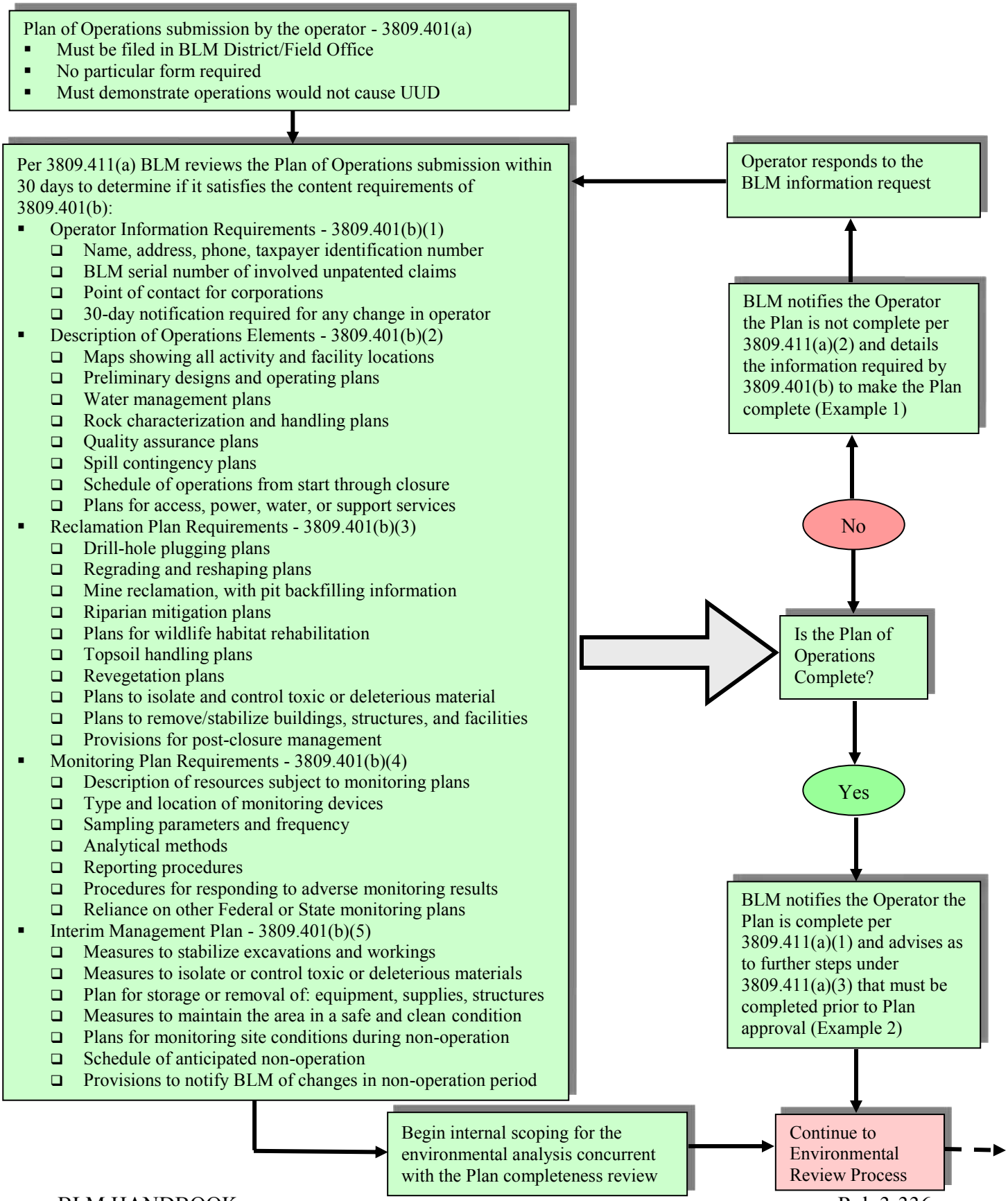


Figure 4.2-3 - Plan of Operations -- Environmental Review

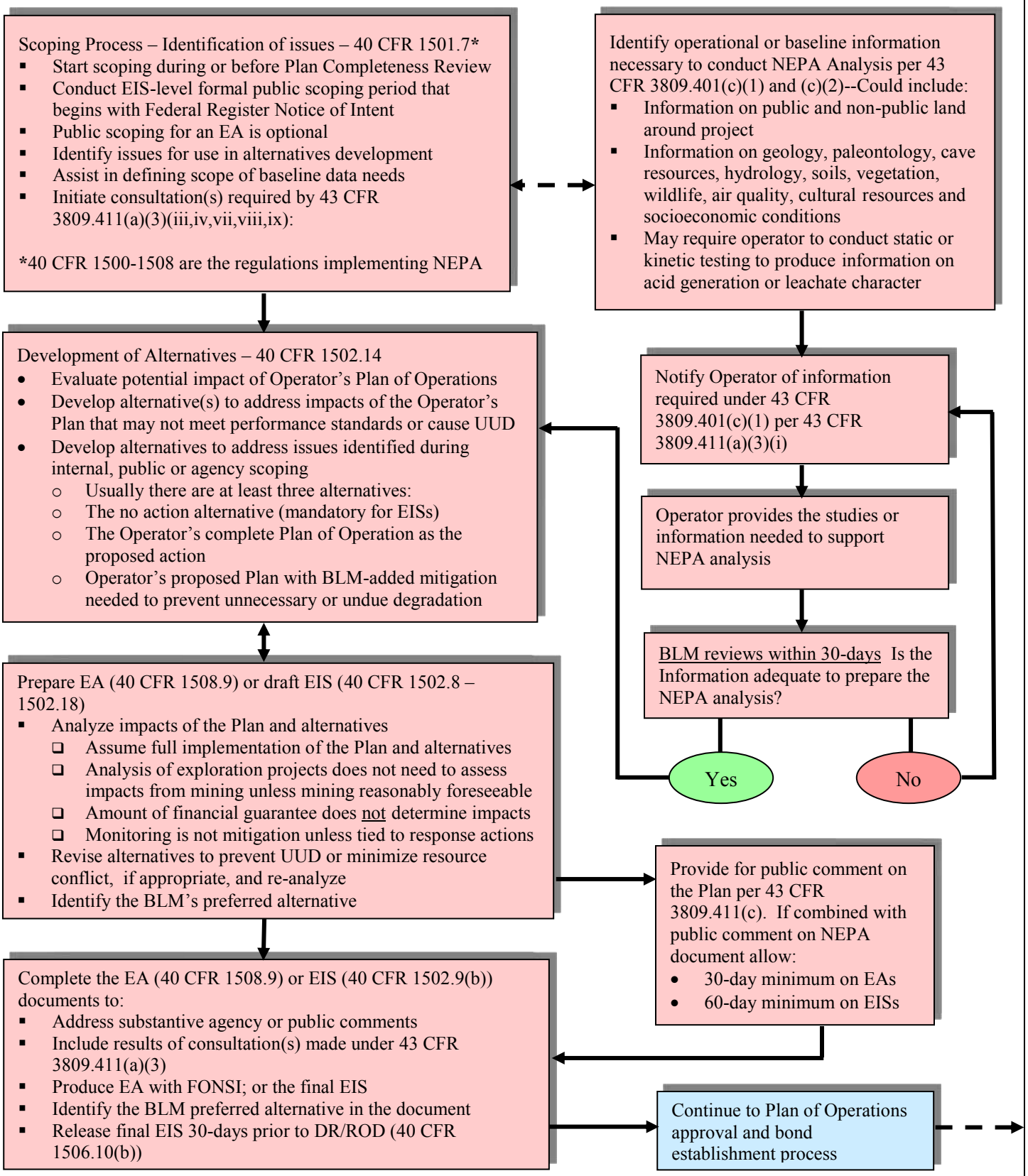


Figure 4.2-4 - Plan of Operations -- Approval and Financial Guarantee

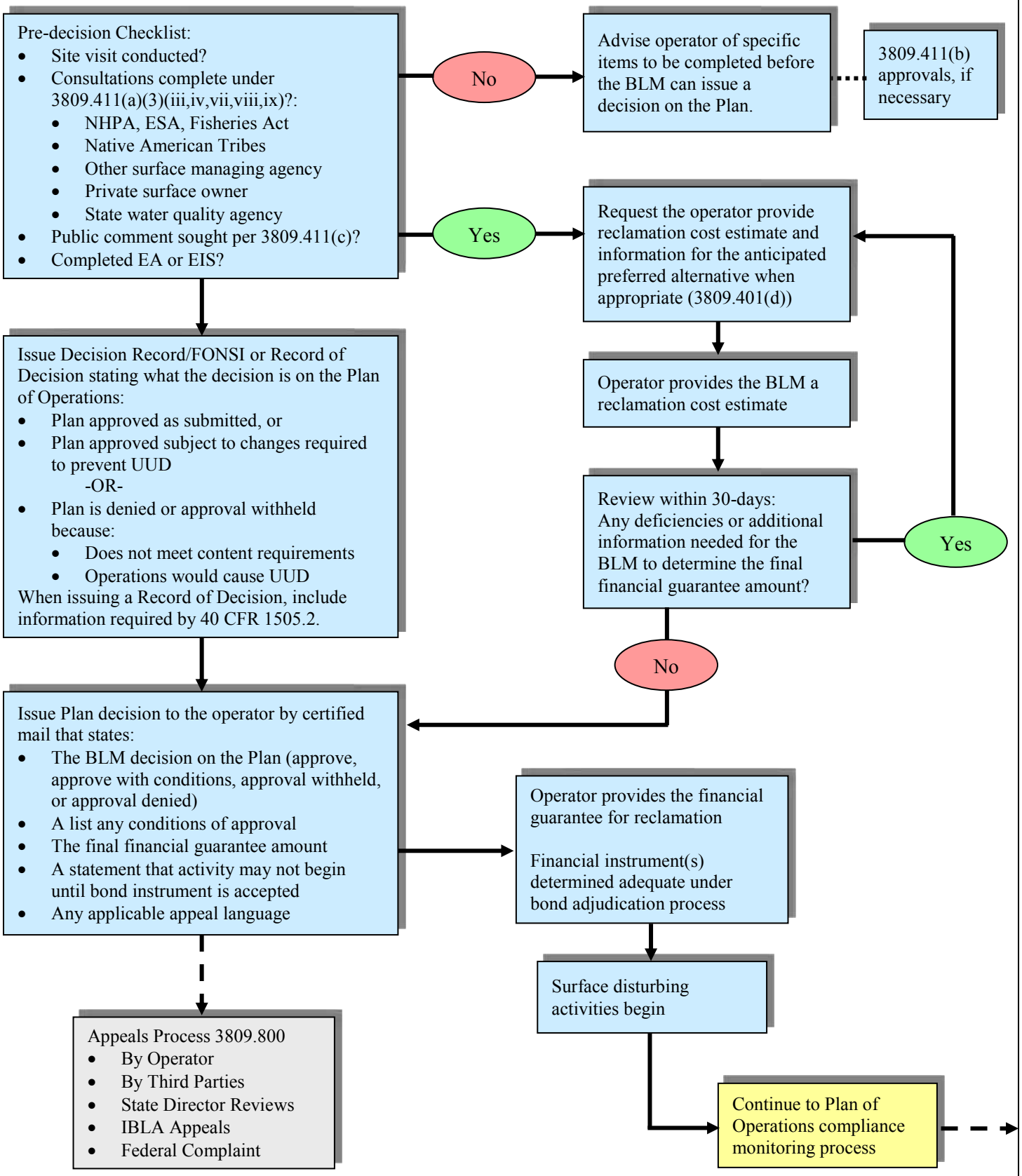


Figure 4.2-5 - Plan of Operations -- Compliance Monitoring

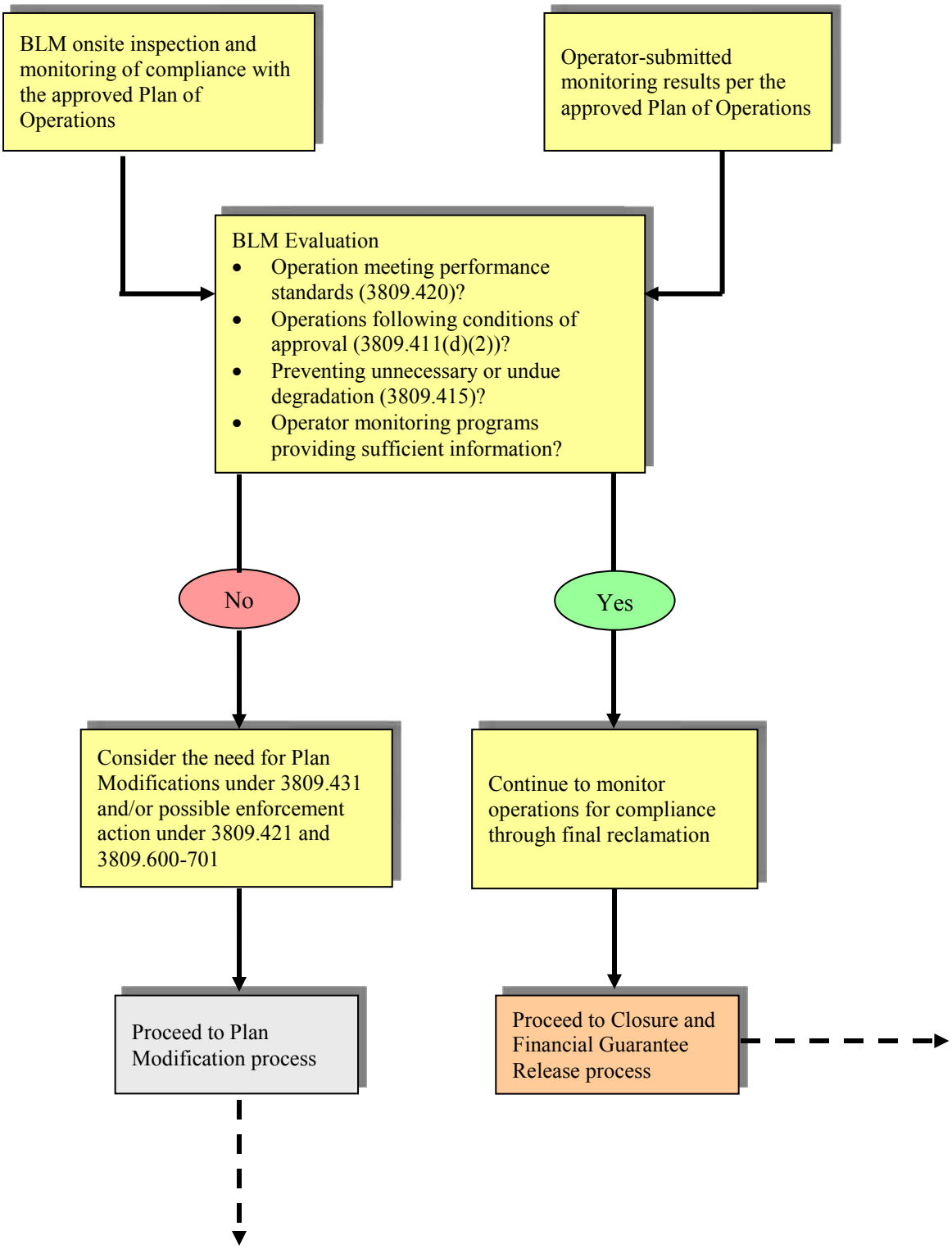


Figure 4.2-6 - Plan of Operations -- Closure and Financial Guarantee Release

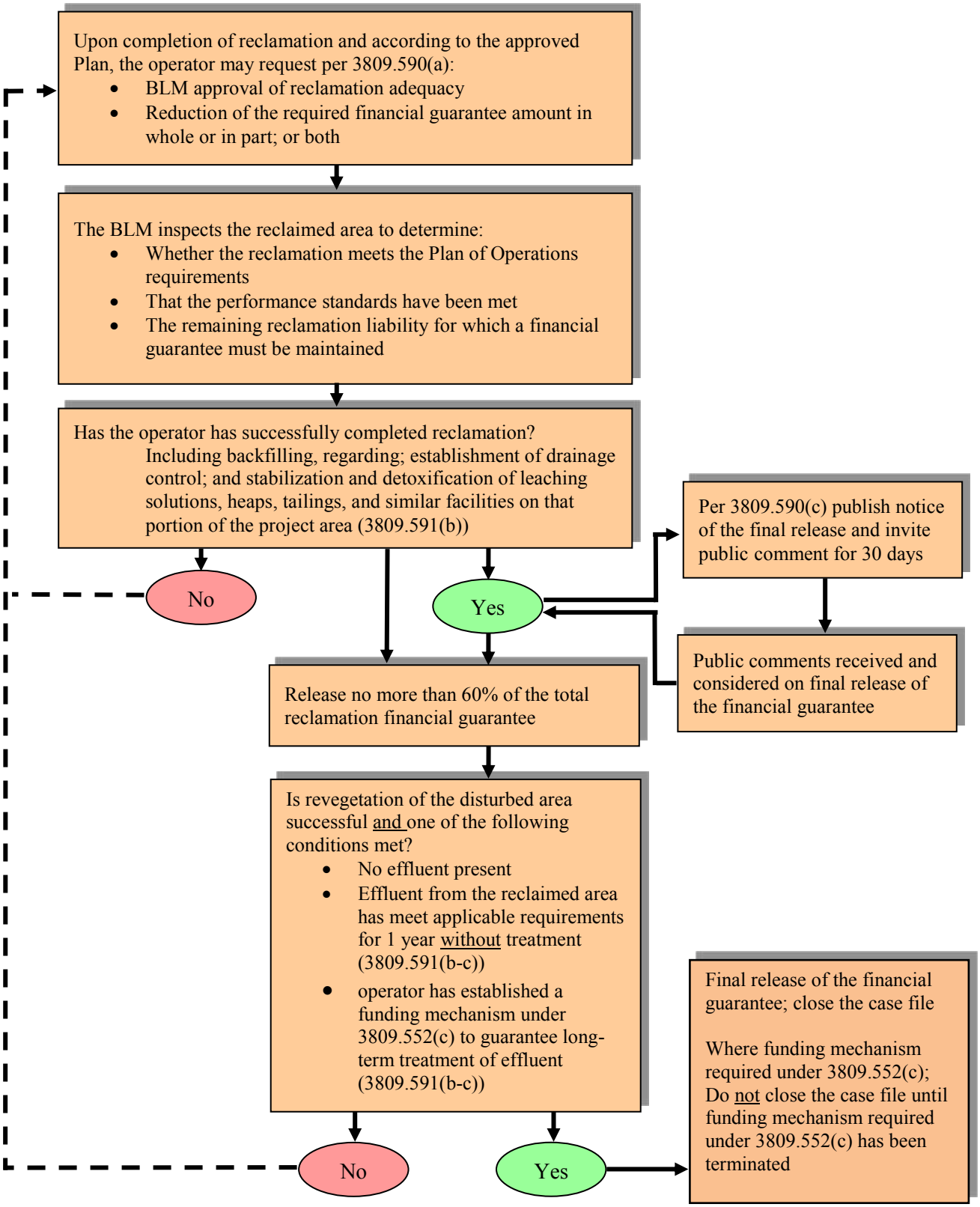


Figure 4.2-7 - Plan of Operations -- Modification

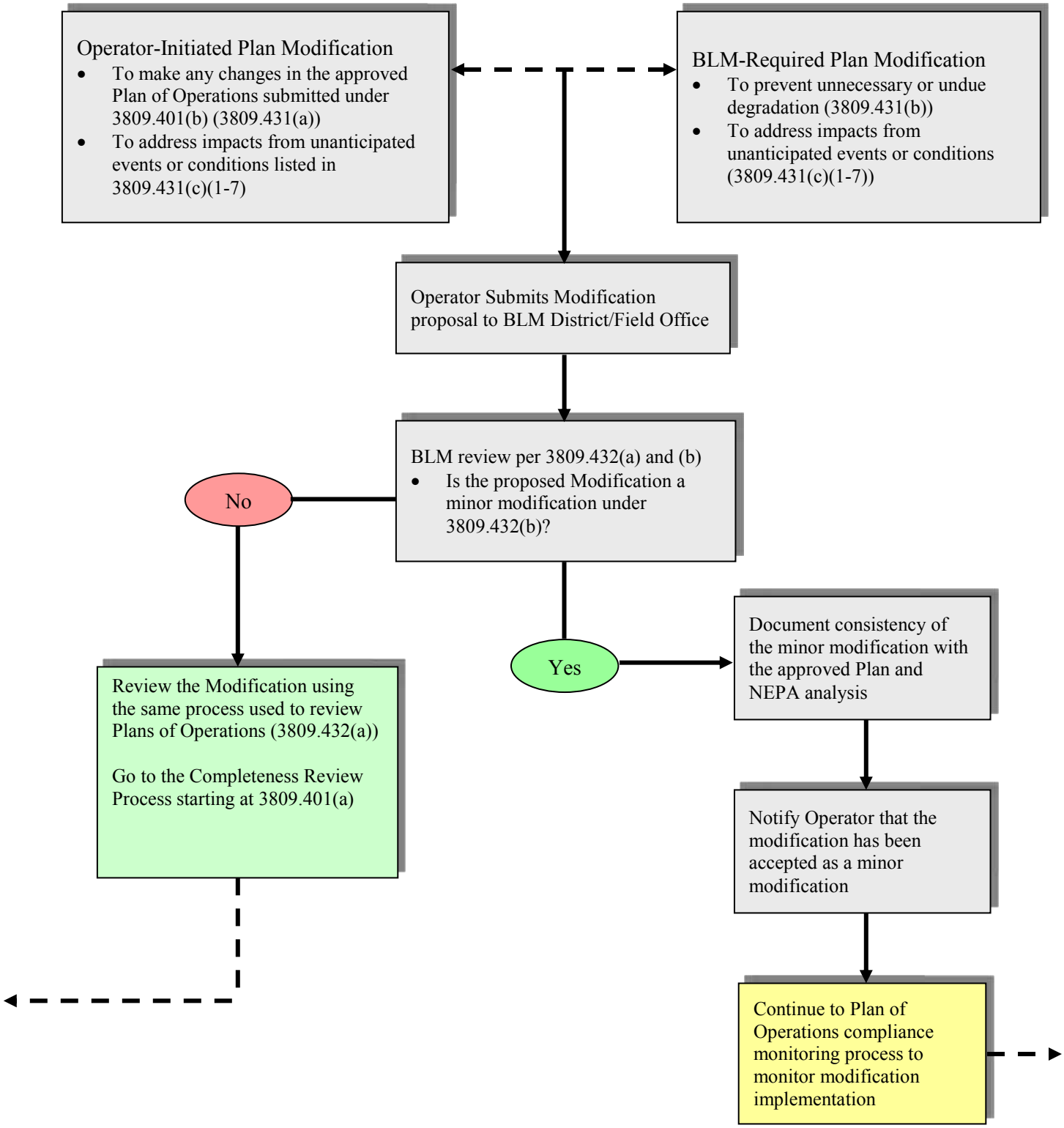
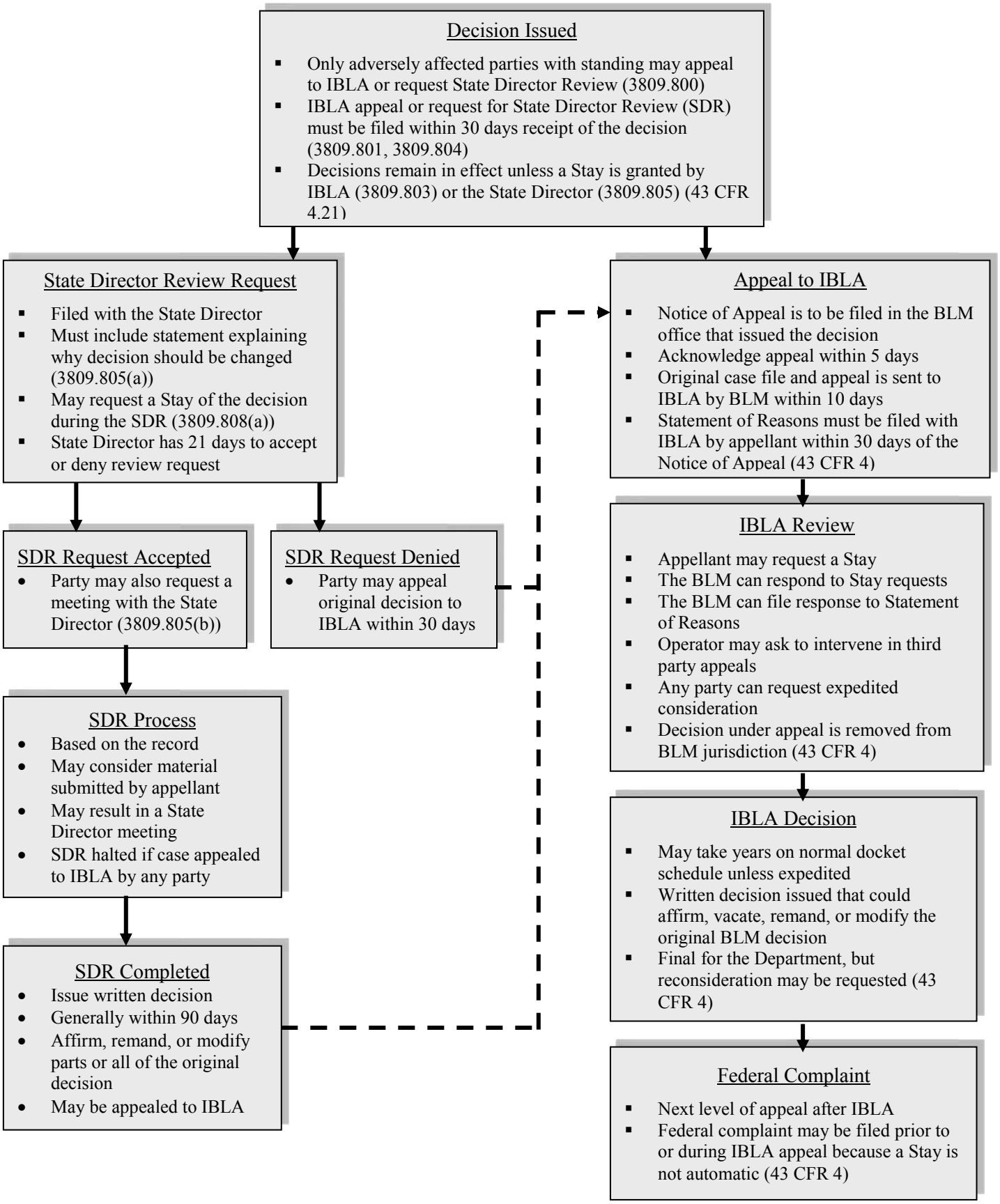


Figure 4.2-8 - Plan of Operations -- Administrative Review



This pre-Plan coordination is not required by the regulations, but may be arranged as a convenience to the operator. Be sure to document pre-Plan submissions and meetings for later inclusion in the case file if and when a proposed Plan of Operations is filed. Generally cost-recovery does not apply to pre-plan coordination (see Section 4.7).

4.3.2 Completeness Requirement

The regulations at 43 CFR 3809.401(b) list the items to be included in the Plan of Operations, when applicable to the proposed activity. Overall, the Plan of Operations must describe the proposed operation at a level of detail sufficient for the BLM to determine whether or not the proposed operations will cause UUD. Upon satisfying the requirements of 43 CFR 3809.401(b), the operator has submitted a complete Plan of Operations (see Section 4.4.1.1 and 43 CFR 3809.411(a)(1)).

A complete plan of operation will contain accurate operator information. To the extent that the information is verifiable, the BLM will review available public and internal records to ensure operator data in accurate. Provided mining claim data will be verified through the use of the BLM LR2000 mining claim database.

A complete Plan of Operations does not include environmental information needed to support the NEPA analysis, nor does it include the RCE (unlike a Notice which requires the RCE to be considered complete). The environmental information and the RCE are separate requirements. Rather, a complete Plan of Operations is a description of how the operator is proposing to conduct their operations. It contains information unique to that particular operation that only the operator can provide. It is this complete proposal that will constitute the proposed action in the NEPA analysis.

A complete Plan of Operations submission under 3809.401(b) may or may not be adequate to prevent UUD. The point of completeness is for the BLM to understand what the operator is proposing. It is only after the BLM conducts its environmental review that a determination can be made on whether the operator has proposed a Plan of Operations that would cause UUD.

4.3.3 Proposed Operations and Operator Identification

Section 3809.401(b) requires the operator to describe the proposed operations in five general categories. The categories are:

- Operator Information
- Description of Operations
- Reclamation Plan
- Monitoring Plan
- Interim Management Plan

The description must be at a sufficient level of detail for the BLM to identify the operator and to evaluate the proposed Plan of Operations to determine if the Plan would cause UUD.

4.3.3.1 Operator Information

The operator must provide basic identifying information. This includes the name, mailing address, phone number, taxpayer identification number(s), and the BLM serial number(s) of any unpatented mining claims upon which the surface disturbance would occur. Provided the land is open to mineral entry under the Mining Law, a mining claim is not required in order to conduct operations, and a Plan of Operations can be approved absent a mining claim.[56] In those cases, there may not be any mining claim serial numbers to include with the operator information.

4.3.3.1.1 Corporations and business entities

Corporations, LLCs, and other business entities must identify one individual as the point of contact. All business entities must provide a U.S. taxpayer identification number.

4.3.3.1.2 Individuals

For individual operators, the taxpayer identification number is the operator's social security number. Social security numbers are personally identifiable information under the Privacy Act and must be protected from disclosure. Operator social security numbers are not to be kept in the project case file that may be available to the public (see Chapter 13 Records Management).

4.3.3.1.3 Change of Operator

Operators must notify the BLM, in writing, within 30 days regarding any change in corporate point of contact or mailing address. Form 3809-5 is available for operators to file a proposed change of operator with the BLM. New operators must meet the operator information requirements, clearly acknowledge the assumption of any outstanding reclamation liability, and satisfy the financial guarantee requirements under 43 CFR 3809.551, 3809.581, and 3809.582 before a change of operator can be accepted. A change of operator is an administrative function and does <u>not</u> require a modification to the Plan of Operations under 43 CFR 3809.430 or 3809.431.

4.3.3.1.4 Multiple Plans

If two or more operators file Plans of Operations on the same area, the BLM will notify the respective operators of the potential conflict. The BLM will review each Plan based on the BLM's requirement to prevent UUD. See Section 4.4.3.3, Plan of Operations Denied or Approval Withheld, for guidance when there are mutually exclusive proposals that do not enable the BLM to evaluate whether the Plans would cause UUD.

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[56] The BLM employees must not advise operators on the need to locate or not locate a mining claim for their Plan of Operations, nor give operators the impression that by filing a Plan of Operations they are secure from rival operators. A mining claim is required for operations on split estate lands or in segregated or withdrawn areas. See Handbook Sections 8.1 and 8.3.

4.3.3.2 Description of Operations

The description of the operations[57] can require the preparation of large volumes of information by the operator. Please note that while this section requires the operator to describe the equipment, devices, or practices proposed for use during operations, it is conditioned by the statement "where applicable," (e.g., maps or designs of a tailings disposal area are not required for an exploration project). The regulations intentionally list general subject areas so the BLM can determine the level of detail needed for its review. Close coordination with state and other Federal agencies is necessary to arrive at a consistent level of detail needed to review the project. Since no particular form must be followed, information required by other agencies can be used to meet the BLM's Plan content requirements (see Appendix C – Example Formats, Format 4.3-1, Plan of Operations, for a Plan submission example). The following discusses the categories of information that may be required in the description of operations.

4.3.3.2.1 Map Requirements

Good maps are the key to understanding how the project is going to function and where the impacts are likely to occur. The operator must provide a map of the project area at an appropriate scale showing the location of exploration activities, drill sites, mining activities, processing facilities, waste rock and tailing disposal areas, support facilities, structures, buildings, and access routes.[58]

Maps vary in content, scale, etc., depending on the individual project proposed. Maps submitted to the BLM must be tied to the public land survey system so activities can be located on the ground and potentially affected public lands depicted with respect to the proposed exploration disturbance or mine facilities.

Maps must be of sufficient detail to allow the BLM can review, analyze, and make a decision on the proposed operations. For example, most exploration projects can be adequately reviewed from hand-plotted drawings made on enlarged U.S. Geological Survey (USGS) topographic quadrangles. At the other end of the spectrum, for review of complex mining projects, it may be advantageous for the operator to provide drawings, or maps and cross-sections in an agreed-upon electronic format, so that resource information can be overlaid and volume and area calculations conducted by the BLM. In addition to providing maps, the BLM District/Field Office may require the operator to mark or flag the proposed disturbance on the ground so that the area can be inspected concurrent with Plan review.

4.3.3.2.2 Preliminary or Conceptual Designs and Plans

Preliminary or conceptual designs, cross sections, and operating plans are required for mining areas, mineral processing facilities, waste rock or tailing impoundment locations, haul roads, etc.[59]

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[57] 43 CFR 3809.401(b)(2).
[58] 43 CFR 3809.401(b)(2)(i).
[59] 43 CFR 3809.401(b)(2)(ii).

The design information needed for the initial Plan review is feasibility or conceptual level information so the BLM can understand the basics of where the facility is going to be constructed, how big the facility is going to be, how it would operate, the types of waste generated, and the limiting engineering factors that may affect its performance. Final engineering designs or plans are not required at the beginning of Plan review and can be incorporated into the Plan of Operations as a condition of Plan approval per 43 CFR 3809.411(d)(2). In addition to engineering designs, information may be needed on the equipment size, type, traffic levels, and periods of operation for these same facilities in order to assess the effects from operation.

Often the operator may need to size certain structures such as a waste rock dump or leach pad to account for changes or uncertainty regarding cut-off grades or the limits of the deposit. In these cases, the operator can propose an upper limit on the facility size or operating rate to accommodate their potential needs and to avoid fragmenting the approval process later with modifications. Ensure the geotechnical analysis addresses the adequacy of the engineered structures at each operating level as construction or loading proceeds in phases.

4.3.3.2.3 Water Management Plans

Water management plans include plans for management of all waters on the mine site, stormwater control, management of process solutions in leaching facilities, and the handling of any mine drainage including acid rock drainage (ARD)[60] and pit lake waters.[61] Key components include establishment of the design storm event, a determination of runoff from the design storm event, the location and sizing of runoff control structures (especially those control structures whose construction requires disturbance of public lands), the ability to contain leaching solutions during wet periods or extreme precipitation events, and contingency plans for the disposal or treatment of excess solutions (see also the discussion of the performance standards in Section 5.3, Specific Performance Standards for Notices and Plans of Operations).

Water management plans should integrate requirements from state or Federal agency permits for discharge under the National Pollutant Discharge Elimination System (NPDES) or dredge and fill permits under the U.S. Army Corps of Engineers' 404 permit program, and be prepared in coordination with the Regional Water Control Board and other state regulations or standards. This will help to ensure consistency between the construction of water management structures and the location of mine facilities.

Detailed plans for water treatment that will be conducted during mine operations, or will continue post-reclamation, must be provided. This includes information on treatment methods, system design, outfalls, rates, treatment threshold, and the expected duration of treatment. Other Federal or state permits that may be needed for the operation of the treatment system must be identified.

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[60] BLM Technical Note – Passive Treatment System for Acid Mine Drainage (http://www.blm.gov/nstc/library/techno2.htm).
[61] 43 CFR 3809.401(b)(2)(iii).

4.3.3.2.4 Rock Characterization and Handling Plans

Rock characterization and handling plans describe how the operator will manage rock that may require special handling, e.g., due to its potential to generate acid or deleterious leachate, is to be managed.[62] The plans must include the analytical protocols and criteria that will be used to identify potential acidic or reactive rock. The plan must include how such material is to be (1) identified by testing prior to and during mining, (2) selectively handled, (3) processed or treated, and (4) reclaimed. These plans are integral to the "source control" of acid-forming, toxic, or other deleterious material as described in the performance standards (Section 5.3.11.1, Source Control Requirements).

Whether a particular deposit will be acid-generating requires a site-specific evaluation that considers factors such as deposit mineralogy, structure, hydrology, climate, mining method, milling process, etc. There is a large volume of technical information available on how to assess, handle, and reclaim potentially acid-forming materials. Consult BLM's *Solid Minerals Reclamation Handbook,* H-3042-1, for a list of information sources.

4.3.3.2.5 Quality Assurance Plans

Quality assurance plans describe the programs, plans, and procedures for how the operators intend to ensure their mine facilities are constructed as designed.[63] These plans include procedures and protocols for items such as compaction testing of foundation materials or seam testing of leach pad or pond liners. Even the best environmental engineering system designs will fail to function if not properly constructed and thus result in UUD. Therefore, the operator must incorporate thorough quality assurance and control procedures in the Plan of Operations to ensure the environmental compliance of mine facilities constructed on BLM lands.

Quality assurance plans for critical components such as leach pads, tailing impoundment, or solution storage ponds, may require operators to retain a third-party engineering firm to oversee facility construction and provide quality control reports to the BLM and applicable state agencies.

4.3.3.2.6 Spill Contingency Plan

A spill contingency plan is required for every Plan of Operations that involves chemical processing or the use or storage of hazardous substances.[64] These plans must describe what measures an operator will take to avoid spills of chemicals or hazardous substances including transport, storage, handling, and disposal as well as how an operator will respond to a spill, including containment and clean-up procedures, enhanced monitoring measures, and notification procedures to the appropriate regulatory agencies.

A copy of the spill contingency plan required by a state or other Federal agency will generally meet the BLM requirement for a spill contingency plan. However, the Plan must include who,

[62] 43 CFR 3809.401(b)(2)(iv).
[63] 43 CFR 3809.401(b)(2)(v).
[64] 43 CFR 3809.401(b)(2)(vi).

when, and how the operator will notify the BLM when a release or spill occurs on or that may affect BLM-managed lands. Review of the proposed spill contingency plan must be coordinated with the State Office or District/Field Office Hazardous Materials Coordinator.

4.3.3.2.7 Schedule of Operations

A schedule from startup through closure is needed to accurately predict potential impacts and ensure timely reclamation.[65] The schedule helps the BLM determine if the project would meet the performance standards in 43 CFR 3809.420, assess periods of non-operation under 43 CFR 3809.424, and evaluate the duration of potential impacts for the NEPA analysis.

An operation that intends to run for 5 years will likely have different potential impacts than one that will operate for 10 years, even if both are ultimately the same size and type. Similarly, knowing if the plan is to operate 24 hours a day compared to only during daylight hours, or seasonally compared to year-round, are critical to understanding the nature of the potential impacts, determining whether the impacts would result in UUD, and in developing necessary mitigating measures.

The schedule can be modified by the operator under 43 CFR 3809.430. While there is no limit on the duration an approved Plan of Operations can remain in effect, the BLM will not approve Plans with open-ended, or indefinite, operating schedules. Where Plans propose a mine life longer than 10 years, the BLM will include provisions in the approval decision for periodic reviews. Section 3809.431(c) can then be used to evaluate whether there are any changes in circumstances or conditions that may warrant requiring the operator to submit a Plan modification.

4.3.3.2.8 Support Facility Plans

Plans for access roads, conveyors, water supply pipelines, and power or utility services or any other such support facility to be built and run by the operator for the project are considered as part of the Plan of Operations and not as a separate right-of-way (ROW) permit where such facilities would be constructed to serve exploration or mining activity on BLM lands under a specific Plan of Operations.[66] However, an operator is not precluded from filing for a ROW under 43 CFR Group 2800, if the operator wants long-term protection or exclusive use of the route.

Plans for support facilities must include a basic description of the facility purpose, size, disturbance area, construction procedures, operating capacity, and reclamation procedures.

Third-party local or regional roads, power lines, or other utility services passing through or near the project area do not require approval as part of the Plan of Operations provided they exist independently of the Plan and have a separate authorization for where they cross public lands, most likely in the form of a right-of-way.

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[65] 43 CFR 3809.401(b)(2)(vii).
[66] 43 CFR 3809.401(b)(2)(viii).

If approval of the Plan of Operations would result in upgrades, expansions, or increased maintenance requirements to local or regional roads, powerlines, or other support facilities operated by the third parties, the potential impacts of such support facilities need to be analyzed in the NEPA document prepared for the Plan because the approval of such facilities is connected to the proposed action. Therefore, the potential impacts of these facilities must be analyzed in conjunction with the proposed action for direct, indirect, and cumulative impacts. Involvement of the BLM realty specialist will be necessary to determine how to handle these situations.

4.3.3.3 Reclamation Plan

The reclamation plan may be the most important component of the Plan of Operations for the long-term mitigation of impacts and achievement of sustainable development levels or objectives. The reclamation plan serves as the basic construction plan for calculating the reclamation cost and financial guarantee amount, so detail is important. The operator is required to provide a description of the equipment, devices, and practices the operator proposes to use during reclamation in order to meet the performance standards in 43 CFR 3809.420.

The operator also needs to provide estimated volumes or quantities of earthwork that will be conducted, as appropriate. It may not always be relevant or appropriate to require the information listed in this paragraph, as not all operations will include the features listed for reclamation. See the BLM's *Solid Minerals Reclamation Handbook* H-3042-1 for technical guidance on reclamation requirements.

4.3.3.3.1 Drill Hole Plugging

Drill holes include all exploration holes, monitoring wells, water supply wells, and piezometers associated with the project.[67] Reclamation plans must include a description of how drill holes (that are not approved to be mined-out) are going to be sealed or plugged. Drill hole plugging procedures must describe measures to prevent:

- Mixing of waters from different aquifers.
- Impacts to beneficial uses.
- Downward water loss.
- Upward water loss from artesian conditions.
- The inflow of surface water into the drill hole.
- The open hole from creating a surface hazard.

Plugging plans can be as simple as shoveling the cuttings back in the hole for shallow, dry drill holes, or as involved as engineered grouting requirements where groundwater is encountered

[67] 43 CFR 3809.401(b)(3)(i).

under artesian pressure. The BLM engineers in the oil and gas program have experience with plugging requirements and should be consulted where complex plugging procedures are proposed or needed. At a minimum, all proposed plugging plans must meet state drill hole plugging requirements.

4.3.3.3.2 Regrading and Reshaping Plans

The plans for the regrading and reshaping of disturbed areas must be provided in the Plan of Operations[68]. The plans must include:

- A description of the amount and location of material to be moved.
- Equipment to be used.
- Slope grade.
- Spacing of benches.
- Location and size of run-on/run-off controls.
- Cross-sections.

A post-operation topographic map showing the planned surface configuration is usually the best way to (1) illustrate the regrading plan, (2) allow for verification of the amount of material to be moved at closure, and (3) assess the adequacy of runoff controls needed to manage post-closure sedimentation. For some mine waste units, such as ore heaps, the location of the leach pad liner

relative to the regraded spent-ore is needed to determine the adequacy of post-closure leachate management.

Obtaining information on the overall stability of the reclaimed facility is a critical requirement. Elements needed to determine stability include, but are not limited to, pre- and post-disturbance landform, original site topography, geology, depth to groundwater, regrade slope, construction methods, and type of material.

4.3.3.3.3 Closure Plans for Mine Openings and Pit Backfilling Information

Information on closure of all mine openings is required, whether the opening is an open pit, an adit, a portal, or a shaft associated with an underground operation.[69] The plans must include information on where the closures would be constructed, the nature of the material or devices used to achieve closure, and a description of any long-term care or maintenance requirements associated with closure of the opening. Information required for closure of underground operations includes items such as gate or bulkhead design, backfill placement and amendments, and provisions to control hydrostatic pressure.

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[68] 43 CFR 3809.401(b)(3)(ii).
[69] 43 CFR 3809.401(b)(2)(iii).

Mine pit backfilling may be part of the reclamation plan proposed by the operator or required by the BLM as a condition of approval. Pit backfilling is one aspect of the reclamation plan where the operator must provide the BLM with specific information so the BLM can determine the appropriate amount of backfilling, if any, required. The operator is required to provide information and analysis on pit backfilling that details economic, environmental, and safety factors. This includes information on the anticipated backfilling costs, character of the potential backfill material, stability of highwalls or backfill material, size and quality of potential pit lakes, and safety issues that may be associated with backfilling. An operator statement of "pit backfilling is not feasible" without providing supporting technical, environmental, or economic data does not meet the Plan content requirement.

Reclamation plans for open pits must describe the likely presence or absence of a pit lake and the anticipated water quality and quantity over time, and include a description of post-closure safety controls around the pit.

While there is no set formula for how to consider information provided by the operator on the feasibility of pit backfilling, the BLM must weigh the costs, impacts, and difficulties of pit backfilling with the anticipated environmental and safety benefits on a case-by-case basis in order to determine the appropriate amount of pit backfilling, if any, needed to meet the performance standards (see Section 5.3.3.2, Reclamation Elements).

4.3.3.3.4 Riparian Area Mitigation Plans

The reclamation plan must describe how the operator proposes to avoid impacts to riparian areas, and if impacts cannot be avoided, plans to reclaim or restore the riparian area.[70] Mitigation plans must address the replacement of soil and re-establishment of riparian conditions and vegetation.

If the riparian area is not to be re-established after mining (i.e., if covered by a waste rock dump or other mine facility), then the reclamation plan must describe (1) the revegetation that will occur and (2) any new riparian areas proposed to be established during reclamation that may offset the loss in riparian acreage.

4.3.3.3.5 Wildlife Habitat Rehabilitation Plans

Wildlife habitat rehabilitation may include plans for re-establishing the same type of wildlife habitat, or plans for a change in habitat more suitable to the altered landform.[71] Plans for rehabilitation of wildlife habitat must be aligned with plans for revegetation. Providing for wildlife forage and cover through revegetation is part of wildlife habitat rehabilitation. The reclamation plans must place special emphasis on wildlife habitat rehabilitation measures to rehabilitate or restore critical value, pre-mine wildlife habitat, such as winter range or calving areas.

When a habitat is proposed to be restored or created, the plan must address how the proposed landform and vegetation will provide adequate shelter, habitat, and forage. To the extent

[70] 43 CFR 3809.401(b)(3)(iv).
[71] 43 CFR 3809.401(b)(3)(v).

practical, the BLM wildlife biologists are available to assist operators in development of their wildlife habitat rehabilitation plans.

4.3.3.3.6 Soil Handling Plans

The reclamation plan must describe the salvage, storage, redistribution, and treatment of topsoil (or growth medium) that is to be used in reclamation.[72] Soil handling plans must specify:

- How soil will be salvaged in advance of construction.
- Salvage depth.
- Salvage cutoff criteria.
- Segregation of topsoil and subsoil.
- Direct haul feasibility versus storage.
- Soil stockpile location and volumes.
- Measures to protect the stockpile from erosion.
- Measures to preserve soil viability.
- Placement thickness at reclamation.

4.3.3.3.7 Revegetation Plans

All reclamation plans must include plans for revegetation of the disturbed area.[73] Revegetation plans must specify:

- Seeding location.
- Species type.
- Seeding or planting rates.
- Treatment methods such as fertilization or inoculation.
- Stabilization of the reclamation area during vegetation establishment.

Revegetation plans must also include proposed criteria for what would constitute successful revegetation and describe any measures such as temporary fencing or noxious weed control that would be used on the reclaimed area.

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[72] 43 CFR 3809.401(b)(3)(vi).
[73] 43 CFR 3809.401(b)(3)(vii).

4.3.3.3.8 Plans to Isolate or Control Acid-Forming, Toxic, or Deleterious Materials

Reclamation plans must include plans for the isolation and/or control of any acid-forming, toxic, or deleterious materials.[74] Specific reclamation covers proposed to isolate or control these materials must be described in detail and take into account the nature of the materials being reclaimed. The reclamation plans must incorporate identification, handling, and reclamation measures appropriate for such materials into the overall mine plan. For example, soil placed directly over strongly acid-generating waste rock can acidify, impeding the revegetation effort.

Plans for the reclamation of acid-forming or deleterious mine wastes must follow the general hierarchy of:

- Source control of the material to prevent generation of contaminants.
- Migration control to prevent the movement of contaminants to where they can cause harm.
- Capture and treatment of contaminants.

Reclamation plans must be integrated with the rock characterization and handling plans used during mine operations.

While most waste from mineral extraction and processing is exempt (under the Bevill Exemption) from the Resource Conservation and Recovery Act (RCRA) and considered a solid waste, it is possible that certain aspects of the operation may generate some wastes which are not exempt. The plans for the isolation or control of toxic or deleterious materials must describe how the operator will remove or dispose of any nonexempt waste products which may constitute a hazardous waste under RCRA Subtitle C.

The disposal of other waste, such as solid wastes from office facilities, labs, packing materials, etc., must also be described in the reclamation plans.

4.3.3.3.9 Plans to Remove or Stabilize Buildings, Structures, and Support Facilities

Reclamation plans must include a description of what the operator is proposing to do with any buildings, process equipment, or support facilities that are used during operations.[75] Usually, this requirement means the removal or demolition of support facilities. It may be necessary to leave certain structures in place for long-term, post-reclamation use, such as monitoring wells, ponds for stormwater management, or powerlines for treatment facilities.

Reclamation plans may include provisions for the BLM to accept ownership of some buildings, structures, or facilities after operations cease through a written agreement with the operator.

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[74] 43 CFR 3809.401(b)(3)(viii).
[75] 43 CFR 3809.401(b)(3)(ix).

Operators may propose post-closure economic uses of facilities through partnerships with the local community and third-party business interests. These sustainable development opportunities may utilize the existing mine infrastructure (e.g., buildings, roads, power lines, water lines, etc.), such that reclamation and demolition of the site would be minimized to allow for use by a third party. For these options, it is critical the third party assumes the reclamation liability, if the operator transfers its interest in the facilities.

4.3.3.3.10 Post-Closure Management Plans

Sometimes reclamation-related activities must continue long after the majority of reclamation work has been completed.[76] Fencing may need to be maintained, signs replaced, water treatment systems operated or maintained, reclaimed slopes repaired, etc. The duration of such activity may be months, years, decades, or in the case of water treatment, the end date may be indefinite. The reclamation plan must clearly identify these post-closure activities and the operator's commitment to performing the required work over the necessary time period. See Section 6.3.4, Trust Funds or Other Funding Mechanisms for a discussion of post-reclamation financial guarantees to ensure performance of these requirements.

4.3.3.4 Monitoring Plans

4.3.3.4.1 Purpose

The Plan of Operations must include monitoring plans.[77] The purpose of monitoring is to:

- Demonstrate compliance with the Plan of Operations and other Federal or state laws and regulations.
- Provide early detection of potential noncompliance.
- Supply information to assist in directing corrective actions.

For each resource to be monitored the respective monitoring plan must describe the:

- Type and location of the monitoring devices.
- Sampling parameters and frequency.
- Analytical methods.
- Reporting procedures.
- Procedures for responding to adverse monitoring results.

[76] 43 CFR 3809.401(b)(3)(x).
[77] 43 CFR 3809.401(b)(4)

4.3.3.4.2 Resources to Monitor

Monitoring programs may be needed for the resources potentially affected and the issues identified during project review. The operator's monitoring plan must propose to monitor those resources with statutory monitoring needs or where monitoring may be essential to prevent the operator from causing UUD.

Examples of monitoring programs that may be required include surface and groundwater quality and quantity, air quality, meteorological conditions, revegetation condition, noise levels, slope movement, or wildlife mortality.

4.3.3.4.3 Type and Location of Monitoring Devices

The monitoring plan must describe what samples or measurements will be collected, by whom, and how often. A map should be included to show the location of monitoring points (whether for air, water, soil etc.) with respect to the mine facilities or activity, and tied to a description or table that lists the constituents to be sampled and states the frequency in which samples will be collected.

4.3.3.4.4 Sampling Parameters and Frequency

Monitoring programs can include sampling by the operator, a consultant, or some combination of the two. Quality control and assurance procedures must be included in the monitoring plan to ensure that samples collected are representative of site conditions. The BLM may take check samples to verify the results provided by the operator or consultant.

4.3.3.4.5 Analytical Methods

The monitoring plans must describe how samples will be analyzed, observations taken, and results documented. This includes:

- Whether it will be a field measurement or laboratory analysis.
- Whether the analysis will be done internally or by an outside lab.
- The specific test method to be employed.
- The quality control and assurance program that will be followed to ensure accurate results.

There can be considerable variation between field and lab results. Certain analytical methods are required by regulatory agencies for compliance purposes and their input should be sought when reviewing the operator's monitoring plans.

4.3.3.4.6 Reporting Procedures

The monitoring plan must describe how the results will be reported and to whom. Monthly monitoring reports may be standard for larger projects. Smaller projects may only warrant quarterly or annual monitoring reports to be submitted to the BLM. Reporting requirements depend on the resources being monitored. For example, while daily reporting may be necessary for water quality at a sensitive spring or wetland, the submittal of annual reporting may be all that is necessary for air quality. Issues identified during Plan review should be used to assist in determining the desired reporting frequency for the monitoring plan.

4.3.3.4.7 Response Actions to Adverse Monitoring Results

Monitoring does not constitute mitigation. The monitoring plan must be tied to a mitigation, response action, or corrective measure to reduce or prevent impacts if the monitoring results are adverse or unacceptable.

All monitoring plans must contain trigger levels that would require some action being taken to prevent the operator from causing UUD. Trigger levels may be linked to statutory requirements, such as a water quality standard or developed for that particular site, as in the case of acceptable soil loss on a reclaimed slope. Response actions could vary from enhanced monitoring to remedial actions. Development of trigger levels and response actions is a site-specific consideration that depends on the resources present and the activity proposed by the Plan of Operations.

4.3.3.4.8 Reliance on other Federal or State Monitoring Programs

Another important aspect of monitoring plans is to avoid duplication with the monitoring requirements of state or other Federal agencies. The operator can, and is encouraged to, incorporate other monitoring requirements into their Plan of Operations. In the following example, the monitoring described may be part of a state groundwater protection permit or an Environmental Protection Agency (EPA) discharge permit under the NPDES permit system. Combining the review of the Plan of Operations with the development of these permits is preferable to conflicting or duplicative monitoring programs, or to developing monitoring programs before it is known where and under what conditions the mine facilities might be approved by the mine permitting agencies.

4.3.3.4.9 Monitoring Example

The following is a hypothetical description from a monitoring plan for a single water quality parameter to illustrate the monitoring concepts:

> Monitoring well X-1 will be completed in the shallow alluvial aquifer 200 feet downgradient of the leach pad as shown on map 1. The well will be sampled daily by mine personnel and tested for cyanide. The test will be conducted using a DR100 colorimeter. All test results will be submitted on a monthly basis to the BLM and the state. Any test results showing free cyanide at greater than 0.05

mg/L will be reported to BLM and the state within 24 hours. In the event that results exceed 0.05 mg/L, a sample will be collected and send to an outside lab for analysis. The well will be continuously pumped and the solution discharged into the leach pad until such time as cyanide levels drop to below 0.05 mg/L as confirmed by an outside lab analysis.

As shown in this simple example, the monitoring plan describes what is to be monitored, where and how it is monitored, and what is done when adverse results are reported. Whether the monitoring plan in the example is adequate to prevent the operator from causing UUD is determined during review of the Plan of Operations. Perhaps the well should be sampled twice a day, or maybe only once a week. The level of detail provided in the operator's monitoring plan allows the BLM reviewer to make that judgment.

A good monitoring plan has the effect of building mitigation into the Plan of Operations. This allows the BLM to include the effectiveness of the monitoring and associated response action when assessing impacts in the NEPA analysis. In the above example, perhaps the daily monitoring and pump-back contingency reduces potentially significant impacts to less than significant. It is preferred to review the Plan of Operations concurrently with state or other Federal permitting requirements that involve monitoring. This concurrent review ensures the monitoring program provides useful feedback on the Plan of Operation's effectiveness in preventing UUD and avoids duplication of effort.

4.3.3.5 Interim Management Plans

All Plans of Operations must contain an interim management plan. These plans establish actions required during periods of temporary or seasonal closure under 43 CFR 3809.424 to avoid causing UUD. There are six items that must be covered by the interim management plan:[78]

- Measures to stabilize excavations and workings.
- Measures to isolate or control toxic or deleterious materials.
- Provisions for the storage or removal of equipment, supplies, and structures.
- Measures to maintain the project area in a safe and clean condition.
- Plans for monitoring site conditions during periods of non-operation.
- Schedule of anticipated periods of temporary closure.

Operators may have prepared or other government agencies may have required a "care and maintenance" plan, which is the mining industry equivalent to a an interim management plan. Such a plan may be accepted by the BLM if it contains the content required at 43 CFR 3809.401(b)(5).

[78] 43 CFR 3809.401(b)(5).

The interim management plan also provides the BLM with a basis for determining when an operation might be considered abandoned. Interim management plans that propose inactive status for longer than 5 years are generally not acceptable.

4.3.3.5.1 Stabilize Excavations and Workings

If the project has any open excavations or drill holes, the interim management plan must describe how such openings will be closed during the period(s) of non-operation.[79] Temporary closure is usually accomplished by temporary measures: adits may be gated, trenches may be partially filled or fenced, temporary plugs or surface plugs can be placed in drill holes, and soil stockpiles, roadcuts, or slopes can be seeded with cover crops to limit erosion. If the period of non-operation is only a few days and the proposal is to leave excavations open, the proposal must also be clearly described as part of the interim management plan.

4.3.3.5.2 Isolate or Control Toxic or Deleterious Materials

The interim management plan must describe measures the operator proposes to prevent impacts from a variety of materials and conditions during the period of non-operation.[80] Interim fluid management plans are required in order to maintain leaching solution volumes at low levels to avoid overtopping or spills during the period of non-operation. For example, if there is a particularly reactive stockpile of sulfide waste rock that should be covered, or a cyanide process pond that needs to be detoxified prior to the period of non-operation per 43 CFR 3809.420(c)(12)(vii), the interim management plan must clearly describe the measures the operator will take to avoid causing UUD.

4.3.3.5.3 Storage or Removal of Equipment, Supplies, and Structures

The interim management plan must provide for the storage or removal of equipment and supplies during the period of non-operation.[81] If equipment and supplies are to be stored onsite, the plan must describe where they are proposed to be stored and how they will be secured, both for liability reasons and to ensure environmental protection.

4.3.3.5.4 Maintain the Project Area in a Safe and Clean Condition

Interim management plans must address how the operator proposes to keep the project area in a clean and safe condition during the period of non-operation.[82] A simple commitment to remove trash and unneeded equipment may address the "clean" requirement. To address safety, the interim management plans must include measures to remove public safety hazards during periods of non-operation, such as measures to secure mine openings, fuel, and processing reagents. The operator must also commit to maintaining any necessary permits during the period of non-operation.

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[79] 43 CFR 3809.401(b)(5)(i).
[80] 43 CFR 3809.401(b)(5)(ii).
[81] 43 CFR 3809.401(b)(5)(iii).
[82] 43 CFR 3809.401(b)(5)(iv).

4.3.3.5.5 Monitoring During Non-Operation

The interim management plan must address the monitoring that will be conducted during the period of non-operation.[83] This could vary from no monitoring during the seasonal shutdown of an exploration or small mining operation, to continued implementation of the approved Monitoring Plan described in 43 CFR 3809.401(b)(4) for large mines. The amount and type of monitoring needed during a period of non-operation depends upon a variety of factors including the type of operation, risk of environmental impacts, and duration of the non-operational period.

4.3.3.5.6 Schedule of Temporary Closure or Non-Operation

The interim management plan must include a schedule of anticipated periods of temporary closure and describe the timing of any temporary closure or planned non-operation, as in the case of anticipated seasonal shutdowns. During these periods, the operator would implement the interim management plan, including provisions for notifying the BLM of any additional unplanned or extended temporary closures.[84]

Unplanned or extended periods of non-operation are, by definition, difficult to address in the interim management plans as part of the Plan of Operations. Many operations may not "plan" to have a period of non-operation at all. However, factors beyond the operator's control may force a situation where the operator has to shut down, sometimes for years. This may be the result of depressed commodity prices, changing financial conditions, natural disasters, or personal difficulties. It is therefore important that every Plan of Operations interim management plan include procedures for managing the project area should it enter a period of unplanned and/or extended non-operation. In addition, all interim management plans need to include provisions for notifying the BLM if the period of non-operation will exceed that originally anticipated. This notification allows the BLM to determine what, if any, changes need to be made to interim management plans to account for the new circumstances and will factor into the BLM's analysis when determining whether operations should be considered "abandoned" under 43 CFR 3809.424(a)(4).

4.3.4 Additional Information Requirements

The BLM may require the operator to provide information under 43 CFR 3809.401(c) in addition to the completeness requirements under paragraph 3809.401(b). This may include information to assist the BLM with its environmental analysis under NEPA, its National Historic Preservation Act (NHPA) consultation, or any other review process associated with the Plan of Operations. A Plan of Operations can still be considered "complete" without this information, but the BLM may not be able to finish processing the Plan until the information is provided (see also Section 4.4.1.3, The Plan is Complete - Other Information or Actions Required).

4.3.4.1 Operational or Baseline Information for NEPA Analysis

Under 43 CFR 3809.401(c)(1), the BLM may require the operator to conduct operational and baseline environmental studies so the BLM can analyze potential environmental impacts as

[83] 43 CFR 3809.401(b)(5)(v).
[84] 43 CFR 3809.401(b)(5)(vi).

required by NEPA and to determine if the operator's Plan of Operations will prevent UUD. The BLM may require the operator to supply baseline studies on a variety of resource subjects, including, but not limited to geology, paleontology, cave resources, hydrology, soils, vegetation, wildlife, air quality, cultural resources, and social and economic conditions. Resource information may be required on both Federal lands and for resources present on adjacent non-public lands, where the potential effects have to be considered and disclosed in the environmental analysis. See BLM's *National Environmental Policy Act Handbook,* H-1790-1, for further guidance.

4.3.4.1.1 Assisting the Operator

The BLM will assist the operator by detailing the operational or baseline information required. The BLM must independently evaluate the information submitted, verify its accuracy, and follow the procedure outlined at 40 CFR 1506.5(a) to use the information in preparing the environmental analysis.

4.3.4.1.2 NEPA and Cost Recovery

While the BLM can require the operator to supply environmental information needed to support the NEPA analysis, the BLM cannot require the operator to prepare or pay for an environmental assessment (EA). If the operator chooses to have a contractor prepare the EA, an agreement must be entered into with the BLM that details roles and responsibilities for the analysis consistent with the regulations at 40 CFR 1506.5(b). Regardless of who prepares the EA, the BLM has responsibility for the scope and content of the EA, and must independently evaluate the document.

If the NEPA analysis on the Plan of Operations is to be done at the EIS-level, then the cost recovery provisions at 43 CFR 3800.5(a) apply and the operator must pay for both the EIS preparation and for the BLM's internal costs to process the action. If a contractor is used for the preparation of an EIS, the BLM must follow the requirements of 40 CFR 1506.5(c) to avoid a conflict of interest. Like the EA, the BLM is ultimately responsible for the content and scope of the EIS.

4.3.4.1.3 Required Testing

The BLM can require testing of the overburden, waste rock, and ore in order to evaluate the acid-forming potential of the material. Testing may include, but is not limited to, acid-base accounting tests, simulated weathering tests, leachate extraction tests, and whole rock analysis. Consult the BLM's *Solid Minerals Reclamation Handbook,* H-3042-1, for additional information regarding the appropriate level of testing and test protocols for rock characterization. Because these characterization tests can be time-consuming and expensive, the BLM and the operator must jointly develop an acceptable testing plan. State or other Federal agencies are to be consulted to ensure the testing program will meet all parties' requirements.

4.3.4.2 Other Required Information

The BLM may require the operator to supply other information as described at 43 CFR 3809.401(c)(2) in the event additional information is needed to evaluate the Plan of Operations

that is not covered by the Plan content or environmental data requirements listed above. Examples of other required information include slope stability studies, special air or water quality modeling, and ethnographic studies.

4.3.4.3 Scope of Required Information

The BLM must not use the Plan of Operations to require an operator to obtain information or perform studies that are not relevant to evaluating the Plan of Operations. Environmental inventories and studies required from the operator are to be driven by the issues associated with the Plan of Operations, and not by research proposals or planning inventories that would normally be funded out of the agency's budget. The project-level NEPA analysis drives the environmental information requirements.

4.3.5 Reclamation Cost Estimate Information Requirement

The operator is required to provide the BLM with an RCE. However, the cost estimate cannot be determined until the Plan review and approval process has progressed to the point where the BLM and the operator can anticipate what the approved Plan might look like. Therefore, at 43 CFR 3809.401(d), the BLM is directed to advise the operator when it is appropriate to submit the RCE during the Plan review and approval process (see Appendix A, Template 4.3-1, Reclamation Cost Estimate for Plan Required).

For small, non-controversial Plans, the operator may be requested to provide the cost estimate with or soon after the BLM receives the Plan of Operations in anticipation that the Plan will be approved much as it was submitted. For other Plans with complex issues and alternatives, it may not be appropriate to request the RCE until after an EA or Final EIS is published identifying a preferred alternative and including all mitigating measures that will likely be required as conditions of approval.

4.3.5.1 Reclamation Cost Estimate Review

The operator's RCE must include all costs as outlined in 43 CFR 3809.552 and 3809.554 (see Section 6.2, Reclamation Cost Estimates, for further information on cost estimating). Within 30 days of receipt, the BLM will review the cost estimate and notify the operator of any deficiencies in the RCE and/or additional information required.

The types of information the BLM may identify as deficient or incomplete in the operator's RCE could include, but are not limited to, assumptions regarding equipment rates, material volumes to be moved, equipment time and efficiency factors, mobilization locale, heap pumping volumes, material costs, labor costs, overhead and contingency costs, or availability of onsite equipment. The BLM's response will specifically identify any area of disagreement with the operator's RCE and propose any alternative cost assumptions that the BLM believes to be appropriate (see Appendix A, Template 6.2-1, Unacceptable Reclamation Cost Estimate).

4.3.5.2 Establishing Financial Guarantee Amounts

The financial guarantee amount is set by the District/Field Manager, usually in consultation with the state, and after considering the operator's RCE and any supplemental information provided in response to the BLM. For some projects, the process of cost estimate review, revision, and resubmission may undergo several iterations. Also, it may take several meetings between the operator, the BLM, and the state before all factors are considered and a final RCE is established. The final RCE is the basis for the amount of the financial guarantee for the approved operations. The BLM will not obligate a financial guarantee until it receives a copy of the District/Field Office's decision establishing the amount of the financial guarantee.

The decision on the final RCE setting the financial guarantee amount is subject to appeal. Therefore, the process used to establish the RCE and the resulting financial guarantee amount must be carefully documented in the 3809 case file (see Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount).
Close coordination between the adjudication staff and District/Field Office staff is necessary to ensure:

- Copies of appropriate correspondence concerning the RCE and financial guarantee are included in the State Office bond case file.
- Copies of appropriate bond adjudication and decisions are included in the District/Field Office case file.
- If an agreement or Memorandum of Understanding (MOU) exists between the BLM and the state, copies of all pertinent BLM and operator correspondence are sent to the state.
- LR2000 Plan of Operations data corresponds to appropriate Bond and Surety System (BSS) data, and vice versa.

4.4 Processing the Plan of Operations

This section discusses the steps the BLM takes when processing the Plan of Operations submitted by the operator. It covers the completeness review process and NEPA analysis procedures, consultation requirements, and the issuance of a final decision on the operator's proposed Plan. The BLM review, environmental analysis, and approval process should be coordinated with other evaluation or permitting procedures of local, state, or Federal agencies as much as possible in order to avoid conflicting or overlapping requirements or delays.

4.4.1 Completeness Review

The regulations require the BLM to review the operator's proposed Plan of Operations for completeness and give notice within 30 calendar days as to one of three possible outcomes of that review.[85] The BLM may determine that the Plan is complete, not complete, or complete but other information or actions are required before a decision can be issued on the Plan.

[85] 43 CFR 3809.411(a).

Figure 4.2-2, Plan of Operations - Completeness Review Process, illustrates the completeness review procedures and requirements.

4.4.1.1 The Plan is Complete

A complete Plan of Operations is one that meets the content requirements at 43 CFR 3809.401(b). Once the operator has submitted all the information required at 43 CFR 3809.401(b), the BLM must notify the operator that the Plan is complete (see Appendix A, Template 4.4-1, Complete Plan Submitted) and that the next step in the review process is for the BLM to solicit public comment on the Plan of Operations under 43 CFR 3809.411(c), either separately from or as a part of the NEPA process. This step must occur before making an approval decision on the Plan of Operations according to 43 CFR 3809.411(d). The operator is to be advised as to the probable time required for the BLM to complete its review and make an approval decision on the Plan.

A complete Plan of Operations is not necessarily adequate to meet the performance requirements of the regulations and avoid UUD. The completeness determination states the operator has submitted sufficient information about its proposed operation as required under 43 CFR 3809.401(b) for the BLM to begin evaluating whether the plan complies with the 3809 regulations.

4.4.1.2 The Plan is Not Complete

A Plan of Operations is not complete if the Plan is missing any of the information required by 3809.401(b). Within 30 days of receiving the Plan of Operations, the BLM must send the operator, by certified mail return receipt requested, a letter clearly identifying the missing information required by 3809.401(b) that must be provided to the BLM before the BLM can continue processing the Plan of Operations.

Completeness questions or deficiencies can range from the very specific (e.g., What is the thickness of the PVC liner for the leach pad?) to the general (e.g., Provide the interim management plan required under 3809.401(b)(5)). An example completeness letter is shown in Appendix A, Template 4.4-2, Plan Not Complete.

The operator is not required to submit the identified information to the BLM within a certain timeframe. The cycle of operator submission and completeness review by the BLM may be repeated until the BLM determines that the Plan of Operations is complete. On major mining projects it would not be unusual for the completeness review process to take over a year and involve four or five iterations. For each information request, it is important for the District/Field Office to document the completeness review and correspondence in the case file.

4.4.1.3 The Plan is Complete - Other Information or Actions Required

The BLM may determine that the description of the proposed operation is complete under Section 3809.401(b), but that the BLM cannot make a decision on the Plan of Operations until certain additional processes are completed or information provided. There are a variety of

factors which influence when the BLM can make a decision on the Plan of Operations. The BLM will send a letter notifying the operator that the Plan is complete (i.e., meets the content requirements of 3809.401(b)), but advising the operator as to any baseline data requirements or reviews that must conducted before the BLM can issue a decision on the Plan of Operations. Appendix A, Template 4.4-1, Complete Plan Submitted, and Template 4.4-3, Additional Actions Required, are examples of such a notification to the operator.

4.4.1.3.1 Baseline Data

In addition to providing a complete description of the operations, the operator must also provide operational or baseline environmental information for the BLM to analyze impacts under NEPA and assess the potential for UUD.[86] Providing additional baseline data is separate from, but just as important as, the operator requirement to provide a complete Plan of Operations. Until the BLM has adequate baseline data on the project area, the necessary reviews cannot be completed to reach a decision on the Plan of Operations.

While ideally any baseline data requirements are communicated to the operator early in the process, perhaps even before a Plan of Operations is submitted, it could be that the long-term nature of some baseline data collection will have to continue after the Plan of Operations is determined complete (see Section 4.3.3.4 Monitoring Plan). The operator is to be advised as to any outstanding data collection requirements that must be satisfied before the BLM can process the Plan of Operations.

The BLM reviewer may need to consult the Council on Environmental Quality (CEQ) regulations at 40 CFR 1502.22 on incomplete or unavailable information to determine what information is required to support an agency decision under NEPA (see also BLM's *National Environmental Policy Act Handbook,* H-1790-1).

4.4.1.3.2 NEPA Analysis

The BLM must complete the environmental review required under NEPA (either with an EA or EIS) before it can issue a decision on the Plan of Operations.[87] Whether the environmental analysis is prepared by the BLM or by an outside contractor, the NEPA analysis has to be reviewed and accepted by the BLM. The operator will be advised as to the anticipated timeframe for completion of the NEPA process. Guidance regarding NEPA analysis of a Plan of Operations is discussed in detail in Section 4.4.2, NEPA Analysis on a Plan of Operations (see BLM's *National Environmental Policy Act Handbook,* H-1790-1).

4.4.1.3.3 NHPA or Wildlife Consultations

The BLM will notify the operator of any consultation that must be completed by the BLM under the NHPA, the Endangered Species Act (ESA), or the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) before the BLM can make a decision on the Plan

[86] 43 CFR 3809.411(a)(3)(i).
[87] 43 CFR 3809.411(a)(3)(ii).

of Operations.[88] These Acts require consultation with other government agencies and parties in timeframes not always determined by the BLM.

The operator will be informed about any consultation requirements under these Acts and invited to participate in the consultation process where appropriate (see Appendix A, Template 4.4-3, Additional Actions Required). Consultation required under NHPA, ESA, or the Magnuson-Stevens Acts is to be initiated as soon as practical after receipt of the initial Plan of Operations so that concerns and comments of these agencies can be considered during the completeness review process.

Completion of consultation may require the adoption of certain operating requirements or constraints that cause the operator to change the Plan of Operations or result in the BLM placing certain conditions of approval on the Plan. The District/Field Office must document the consultation process and results in the case file.

4.4.1.3.4 Native American Consultation or Other Responsibilities

The operator will also be notified of any other BLM or Department of the Interior (DOI) reviews or consultations that must be conducted along with an anticipated timeframe for completion.[89] For some Plans, the BLM must complete consultation with Native American governments before making a decision on the Plan of Operations.

Consultation with Native American governments regarding the potential impacts of the Plan of Operations on Tribal trust resources is a responsibility of the BLM and DOI that cannot be delegated.

Consultation may occur at a variety of levels and in different forums. It may involve written correspondence, discussions between the respective Tribal government staff and BLM program specialists, on-the-ground visits to the project area, and meetings between the Tribal government and the BLM decision maker. The appropriate level and extent of consultation will depend upon the site-specific circumstances and the potential for the Plan of Operations to affect trust resources. Tribes are entitled to confidential discussions with agency officials on the identification and protection of trust resources. While it is desirable to include the operator in such consultation, the operator can only participate with the concurrence of Tribal officials.

The consultation process does not mean Tribes have veto authority over the Plan of Operations; however, when necessary, measures must be adopted to identify and protect Tribal trust resources.[90] The result of consultation may not always be agreement between the BLM and the Tribal government on the acceptability of the Plan of Operations or even on the measures needed to protect trust resources. The consultation process and results must be thoroughly documented in the case file.

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[88] 43 CFR 3809.411(a)(3)(iii).
[89] 43 CFR 3809.411(a)(3)(iv).
[90] 43 CFR 3809.420(a)(4).

4.4.1.3.5 Onsite Visit

The regulations give the BLM the option to delay action on a Plan of Operations until a site visit can be conducted.[91] The operator must be notified by letter that a site visit is required to process the Plan of Operations, citing the reason(s) for the site visit, when it might take place, and inviting the operator to be present (see Appendix A, Template 4.4-3, Additional Actions Required).

4.4.1.3.6 Public Comments

The BLM must not issue a decision on a Plan until it has considered all the public comments submitted within the comment timeframe.[92] If the public comment period is conducted as part of the NEPA analysis (either the EA or EIS) then there would normally not be a need to delay action on the Plan of Operations.

Section 3809.411(c) requires that after a complete Plan of Operations is filed, but before the BLM acts on it, that the BLM will publish a notice of the Plan's availability for review in either a local newspaper of general circulation or through the NEPA process. The BLM will accept public comments on the Plan of Operations for at least 30 calendar days. This means Plans of Operations, and Plan modifications made under 43 CFR 3809.432(a), are subject to public comment for at least 30 days. The requirement to solicit public comment includes all Plans, from the simplest exploration-level Plan, to Plans for large multi-year mining operations. The required public comment period does not apply to minor Plan modifications made under 43 CFR 3809.432(b).

While the mandatory public comment period cannot begin until after the Plan of Operations is determined complete under 43 CFR 3809.411(a), this provision does not preclude the BLM from formally beginning to solicit the public scoping process before the filed Plan is determined complete. In fact, public input on an EIS-level Plan in the form of scoping comments during the completeness review can be beneficial, especially on large projects. Similarly, internal scoping for an EA-level Plan can also be useful for identifying potential alternatives and issues.

The comment period required under 43 CFR 3809.411(c) may be conducted in combination with the release of an EA or draft EIS. Since there is a mandatory 45-day minimum comment period on all BLM draft EISs,[93] the comment period required under 43 CFR 3809.411(c) would not add to the overall processing time. Although EAs do not require a public comment, some form of public involvement is required.[94] It is recommended that any public review or comment sought on the EA be concurrent with the 30-day public comment period required on the Plan of Operations by 43 CFR 3809.411(c). Comments received on the EA and Plan can then be addressed in the Decision Record (DR) (and revised EA, if applicable).

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[91] 43 CFR 3809.411(a)(3)(v).
[92] 43 CFR 3809.411(a)(3)(vi).
[93] BLM NEPA Handbook H-1790-1, Sec. 9.3.2.
[94] BLM NEPA Handbook H-1790-1, Sec. 8.2.

Public notification of the comment period is provided for EIS-level Plans through the normal *Federal Register* notification that is issued on the availability of the draft EIS and the usual press releases. If there is no EIS, public notification is conducted through press release, legal notice(s), or distribution using a mailing list.

The requirement at 43 CFR 3809.411(c) is intended to solicit public comment on the Plan of Operations itself, not necessarily the attendant NEPA document. This distinction does not make much difference in the type of comments likely to be received since the Plan of Operations is the proposed action in the EA or EIS. However, it will be necessary to have copies of the complete Plan available to those requesting it, or a viewing copy for large volume/oversized Plan material. Another option is to make the Plan of Operations available through the State or District/Field Office website. All substantive comments received on the Plan of Operations and/or the environmental analysis must be addressed in the final EIS (or revised EA or Decision Record, if preparing an EA) prior to issuing a decision on the Plan.

Information on the RCE and/or the financial guarantee amount, while public information, is not included in the environmental analysis nor is public comment requested. The RCE and the financial guarantee amount are not required components of a complete Plan of Operations but are part of the BLM's enforcement program. The public comment period should focus on the Plan of Operations and the associated environmental analysis.

4.4.1.3.7 Surface Managing Agency

In cases where the BLM does not have responsibility for managing the surface, the BLM consults with the appropriate surface-managing agency before making a decision on the Plan of Operations.[95] While these situations are anticipated to be rare, they could occur on lands managed by the Bureau of Reclamation (BOR), FWS, or other Federal agencies. These agencies do not have surface management regulations for locatable mineral development, yet the land is open to location under the Mining Law or has valid existing development rights that predate the withdrawal of these lands.

In these situations, the BLM must work closely with the surface-managing agency and operator to incorporate the concerns of all parties into the Plan of Operations. The operator should be invited to participate in these discussions, where appropriate. It is desirable to include the surface managing agency as a joint lead, or cooperating agency, in preparation of the NEPA document. Joint lead status is only appropriate where the other agency has the authority to make a decision. Where the decision is ultimately the BLM's, cooperating agency status is more appropriate. When joint lead status is used, an MOU should clearly delineate the decision-making role of each agency.

4.4.1.3.8 Surface Owner

In cases where the surface is owned by a non-Federal entity, the BLM consults with the surface owner.[96] The BLM must work with the surface owner and the operator to incorporate concerns

[95] 43 CFR 3809.411(a)(3)(vii).
[96] 43 CFR 3809.411(a)(3)(viii).

of both parties into the Plan of Operations. The BLM must follow procedures under the regulations at 43 CFR 3814 for protecting the surface owner improvements if the project is located on SRHA lands. (See Section 8.3, Split Estate Lands, for further discussion on the requirements for split estate lands.)

4.4.1.3.9 Water Quality Compliance

The BLM may delay making a decision on a Plan of Operations until it completes consultation with the state to ensure operations will be consistent with state's water quality requirements.[97] If consultation with the applicable state authority is required, the BLM will notify the operator that the Plan of Operations cannot be approved until the BLM has completed consultation with the state (see Appendix A, Template 4.4-3, Additional Actions Required).

The BLM, the state, and the operator should jointly participate in these discussions and include any operational requirements for compliance with water quality laws into the Plan of Operations. Written certification from the state or the issuance of discharge permits by the appropriate state water quality authority (or by EPA in non-primacy states) will constitute evidence that the permitting authority believes the project capable of complying with the water quality laws and completes the consultation requirement. The District/Field Office must document all consultation efforts and results in the case file.

4.4.1.3.10 Mineral Examination Report

The BLM will not make a decision on a Plan of Operations until it completes preparation of a mineral examination report for proposed operations on lands that have been withdrawn from mineral entry to determine if the claim(s) are valid.[98] The operator will be advised as to the anticipated timeframe for completion of the report (see Section 8.1, Withdrawn and Segregated Lands).

4.4.1.4 Approval of Certain Actions During Plan Review

Pending approval of a Plan of Operations, the BLM may approve any operations that may be necessary for timely compliance with requirements of Federal and state laws, subject to any terms and conditions that may be needed to prevent UUD. This provision at 43 CFR 3809.411(b) provides a mechanism where the BLM may approve certain activities immediately if needed for the operator to comply with other laws. This could include environmental or Mining Law requirements, or court orders. Examples where this might be applied include construction of monitoring wells and capture systems after a contaminant release, remediation of slope failure or prevention of imminent slope failure, installation of access roads to support cleanup, construction of treatment facilities, and emergency installation of runoff controls. Use this provision to avoid a regulatory conflict where another agency orders certain surface disturbing activity to be taken immediately, yet the action is not covered by the operator's approved Plan of Operations.

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[97] 43 CFR 3809.411(a)(3)(ix).
[98] 43 CFR 3809.100(a).

The expedited approval of activity needed to comply with environmental laws or mitigate undesirable events may have to be given quickly, in a matter of days or even hours in the case of emergency actions. During that time, the BLM official must decide upon any terms or conditions that are to be placed on the activity to prevent UUD and communicate those in writing to the operator. This approval must be of limited duration and specify that the operator must follow up by filing for approval of the surface disturbing activity under the normal Plan of Operations process.

It may not be possible to complete the NEPA analysis required on these expedited surface disturbance actions prior to their implementation.[99] "Alternative arrangements" may be established to comply with NEPA in an emergency. Alternative arrangements do not waive the requirement to comply with NEPA, but establish an alternative means for compliance. In the event of an emergency, you must contact the BLM Washington Office, Division of Decision Support, Planning and NEPA (WO-210) and complete the appropriate level of NEPA analysis for any activities approved under this provision of the regulations, as soon as practical. Where emergency circumstances necessitate that the BLM approve operator actions that BLM believes have significant environmental impacts without completing the NEPA process, the BLM must consult with the CEQ as described in 40 CFR 1506.11 and the BLM's *National Environmental Policy Act Handbook,* H-1790-1, Section 2.3.

It may also not be possible to get an acceptable reclamation financial guarantee in place prior to such surface disturbances. As soon as practical, the amount of the reclamation financial guarantee will be modified to reflect the additional reclamation liabilities on the ground.

The District/Field Office may decide actions taken under this provision of the regulations must be disclosed to the public by letter or through the press. All such disclosures will be released through the local or state Public Affairs office.

4.4.2 NEPA Analysis

The BLM must complete the environmental review required under NEPA (either with an EA or EIS) before the BLM can issue a decision on the proposed Plan of Operations or on a modification to an existing Plan under 3809.432(a).[100] While BLM's NEPA Handbook provides general guidance on how to prepare an environmental analysis under NEPA, the following guidance is specific to NEPA analysis of a 3809 Plan of Operations, whether prepared by the BLM or for the BLM by an outside contractor:

- The operator's complete Plan of Operations constitutes the proposed action. Preparation of the NEPA document cannot proceed beyond the scoping phase until the Plan of Operations is determined to be complete under 3809.401(b).

[99] Emergency actions to prevent a public health and safety situation, and circumstances that require immediate action to prevent environmental damage are exempt from NEPA (43 CFR 46.150).
[100] A determination of NEPA adequacy (DNA) finding that the existing environmental analysis is sufficient to cover the modification is most likely the extent of the NEPA documentation required for a minor modification to a Plan of Operations under 43 CFR 3809.432(b). See Section 4.6.3.1-*Minor Modification Procedures*.

- The focus of the NEPA analysis is the Plan of Operations, and not the operator. The environmental analysis of potential impacts from a particular Plan of Operations is based on the merits of the Plan itself and does not change depending upon the compliance history, resources, or experience level of the operator (compliance history is, however, a factor when conducting inspection and enforcement activity—See Chapter 9 Inspection and Enforcement).

- Evaluate the Plan of Operations and any alternatives on their inherent merits assuming full implementation, including all operation, mitigation, monitoring, reclamation, closure, and post-reclamation actions. While risk analysis or stability discussions with respect to acceptable engineering practices may be appropriate, do not prepare the NEPA analysis assuming there will be deviations from the Plan, noncompliance events, or worst-case analysis.[101] Because the operator is required by regulation to follow the approved Plan of Operations, it is not appropriate to speculate on impacts from actions outside either the proposed action or one of the alternatives.

- Provided the subject land is open to entry under the Mining Laws, a validity examination is not required to process a Plan of Operations and the NEPA analysis does not need to address mining claim status or validity. Nor does the NEPA analysis need to discuss how the information gained under a Plan of Operations could support an application to patent a particular mining claim. The issuance of mineral patents is a separate nondiscretionary action not subject to NEPA review.

- No Action Alternative - The "no action" alternative (i.e., not approving the Plan) must be fully analyzed as an alternative. This alternative does not mean no mining indefinitely, but that this particular Plan or Plan modification would not be approved. While an EA is not required to fully present and analyze a "no action" alternative, the inclusion of this alternative helps identify baseline conditions and provides a contrast for the action alternative(s). At a minimum, the EA must contrast the impacts of the proposed action and alternatives with the current condition and expected future condition in the absence of the project. When the proposed action is a modification to an existing Plan, the no action alternative would be continued operation under the already approved Plan without the modification.

- Preferred Alternative - If BLM determines that mitigation is necessary to prevent UUD, the proposed Plan of Operations, with any BLM-added mitigation measures needed to prevent UUD, is usually analyzed as a separate alternative and normally constitutes the preferred alternative. The EA or EIS must also disclose any impacts of implementing the mitigation measures, the effectiveness of the mitigation measures proposed, and residual effects of adverse impacts that would remain after mitigation measures are taken.[102] [103] This allows the effectiveness of the mitigation measures the BLM recommends to be evaluated and compared to the Plan as proposed without the mitigation or with mitigation measures proposed by the operator. In addition, analyzing the potential impacts of

[101] There is no requirement to do a "worst case analysis" in a NEPA document.
[102] 43 CFR 46.130 .
[103] BLM NEPA Handbook, H-1790-1, Sec. 6.8.4.

mitigation measures (for example, building a pipeline to bring supplemental water to mitigate the impacts of dewatering) in the EIS will allow all the mitigation measures to be implemented immediately if the need arises, rather than having to authorize the mitigation measure as a separate Federal action later. Including a simple list of mitigation measures in the NEPA document that might be required without an assessment of how they would change the impacts does not satisfy the environmental analysis requirement.

- Sustainable Development Alternatives - Opportunities for sustainable development, whether proposed by the operator as part of the reclamation plan or developed as a separate alternative, must be addressed in the NEPA document. If appropriate, this can be addressed as part of the Preferred Alternative.

- Baseline Data - Baseline data required under 3809.401(c) are usually reflected in the Affected Environment and Impacts sections of the analysis. Do not request the operator to supply additional baseline data or studies unless it is needed to support the analysis.

- Mining Claims - Mining claim status is not an environmental issue to be covered in the NEPA analysis. Nor is a validity examination required to process a Plan of Operations, unless the provisions or 43 CFR 3809.100 or 3809.101 apply.

- Exploration Plans - NEPA analysis of exploration Plans of Operations may need to analyze the potential environmental impact of possible mine development. Exploration does not always lead to mining, but may be considered an indirect or cumulative effect as defined at 40 CFR 1508.7 and 1508.8. When analyzing indirect and cumulative effects of an exploration plan, you must include reasonably foreseeable actions.[104] The analysis should not be limited to funded or licensed projects, but should also avoid speculation. The discussion of the potential environmental impacts should be commensurate with the size, stage, and history of the operations. See BLM NEPA Handbook, H-1790-1, Sec. 6.8.3, for more information about how to analyze indirect and cumulative effects.

- Financial Guarantee - The amount of the financial guarantee or a long-term trust is not subject to NEPA analysis, but is part of the enforcement program. The operating and reclamation plans determine potential impacts and constitute mitigation, not the reclamation financial guarantee amount. When assessing impacts, assume full implementation of the operating and reclamation plans independent of the financial guarantee amount. The financial guarantee does not constitute mitigation.

- Mitigation vs. Monitoring - Monitoring requirements are not to be confused with or be substituted for mitigation requirements. Monitoring by itself is not mitigation. The mitigation is the planned response action triggered by an undesirable monitoring event at a preset level of impact. Remember, the NEPA analysis is an estimate or prediction and not a guarantee as to the impacts that would occur.

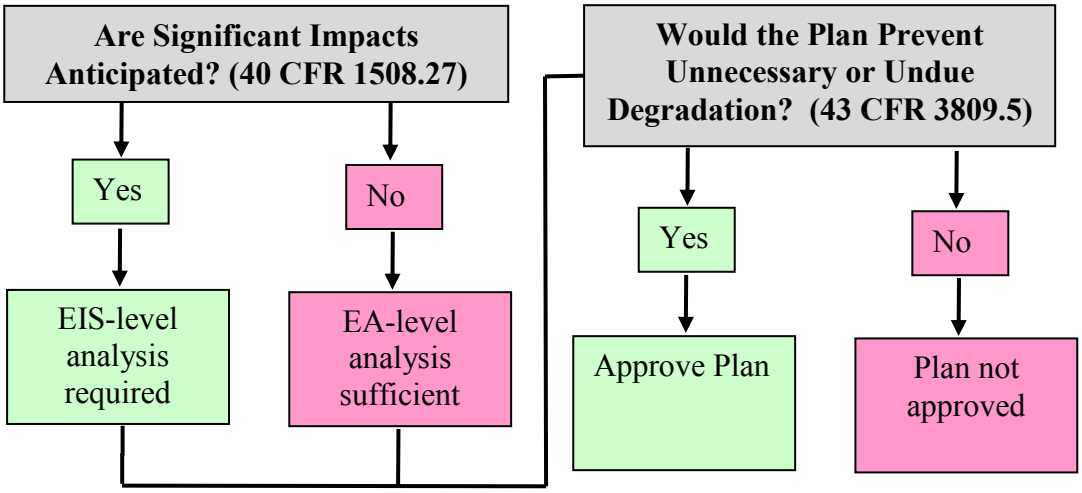
[104] BLM NEPA Handbook, H-1790-1, Sec. 6.8.3.4.

- New information and/or changed circumstances - If, prior to making the decision about whether to approve the Plan, there is a significant change in the affected environment or significant new information, it may be necessary to supplement the NEPA analysis and/or require changes to the Plan before making the decision. See BLM NEPA Handbook, H-1790-1, Sec. 5.3.2, page 30, for more information about how to address new information in the context to NEPA.

4.4.2.1 Unnecessary or Undue Degradation

The relationship between the procedural requirements of NEPA to evaluate and disclose impacts, and the substantive requirement of FLPMA to prevent UUD when making the decision analyzed in the NEPA document, is shown in Figure 4.4-1 – Approvable Plans and NEPA Analysis.

Figure 4.4-1 - Approvable Plans and NEPA Analysis



For a Plan of Operations to be approved, the Plan, including any required mitigation measures, must be adequate to prevent UUD and the appropriate level of NEPA analysis must be completed before the BLM makes the decision regarding whether to approve the plan. The level of NEPA analysis is independent of the requirement to prevent UUD. The two requirements, while different, are interrelated:

- The level of required NEPA analysis for a Plan of Operations depends upon the anticipated impacts of the Plan and whether they are "significant" as defined by 40 CFR 1508.27. Actions that are anticipated to result in significant impacts, or actions that have been analyzed in an EA and determined to have significant impacts, require the preparation of an EIS. Actions that would not normally result in significant impacts can be approved after preparation of an EA, if the analysis in the EA results in a Finding of No Significant Impact.[105] [106]

[105] Minor Plan modifications under 3809.432(b) can be accomplished with a DNA, but must also not result in UUD.
[106] NEPA is a procedural law, requiring the agency to analyze the proposed action, but not necessarily select the

- A Plan of Operations that would result in significant environmental impacts can be approved after an EIS is prepared as long as operations under the Plan would not result in UUD. Example: A Plan to disturb 2,500 acres and mine 400 million tons of rock would likely result in significant impacts. The Field Office would be required to prepare an EIS before deciding whether to approve the Plan. However, based on the analysis in the EIS, the Field Office may very well determine that the impacts, while significant, do not rise to the level of UUD and/or that the mitigation measures required under the selected alternative are adequate to prevent UUD.

- Plans that would result in or not prevent UUD cannot be approved.

- Occasionally a Plan may be submitted where it is obvious that UUD would not be prevented. Use the Plan completeness review process (Figure 4.2-2) to obtain at least a nominally acceptable Plan from the operator before beginning the NEPA analysis (i.e., do not waste time or resources preparing NEPA analysis on a grossly inadequate Plan).

- As the Plan review and analysis progresses, the EA or EIS may identify impacts (significant or insignificant) that indicate UUD would occur. In these instances, the applicant may need to develop mitigation or new alternatives to include in the NEPA analysis so that one or more of the Plan alternatives will be approvable (green column).

- Mitigation in the form of conditions of approval in the Decision Record (DR) or Record of Decision (ROD) and in the 3809 decision document can be applied to prevent UUD, thus making the Plan approvable. The mitigation could also reduce what would be significant impacts to less than significant, allowing for Plan approval at an EA-level of NEPA analysis.[107]

4.4.2.2 NEPA Decision Documents

The DR or ROD must explain how the selected alternative (the approved Plan) meets the requirements of the regulations to prevent UUD and is in conformance with the applicable land use plan(s).

Mitigating measures to the operator's proposed Plan must be required as "conditions of approval" in the DR or ROD and the 3809 decision document, with an explanation as to why the measures are needed to prevent UUD.

If the Plan contains any elements of occupancy,[108] the approval decision must also contain a written determination of concurrence or non-concurrence regarding the occupancy.[109]

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alternative with the least potential environmental impacts.
[107] BLM NEPA Handbook, H-1790-1, Sec. 7.1.
[108] 43 CFR 3715.3-4 and 3715.3-5.
[109] Appeals of decisions issued under the regulations at 43 CFR 3715 are directly to the IBLA, without a State Director Review. If a "3715" determination is combined with a Plan approval decision, the separate appeal procedures should be noted.

4.4.3 Issuing a Decision

Section 3809.411(d) describes the actions the BLM may take after finishing the Plan of Operations review, including the analysis and decision documents under NEPA, consideration of public comments, and completing any consultation requirements.

There are three possible courses of action BLM may take when issuing its decision on a Plan of Operations. The BLM may decide to:

- Approve the complete Plan basically as submitted.
- Approve the Plan subject to certain conditions imposed to ensure the operation meets the performance standards (see Chapter 5 Performance Standards) and does not result in UUD.
- Disapprove or withhold approval of the Plan.

The BLM decision must be sent to the operator via certified mail, return receipt requested, and include the appropriate appeals language (see Appendix A, Template 4.4-4, Decision on Plan). The BLM District/Field Office decision on Plan approval goes into effect immediately and remains in effect while appeals are pending unless a written request for a stay of the decision is granted (see Chapter 10 Decisions and Appeals). The decision may be included as part of the DR or ROD; there is no requirement that the ROD be a separate document from the decision. However, if the decision is included in the same document as the DR or ROD, it must still be sent to the operator as described above (in other words, publication of the document including both the DR or ROD and plan decision alone will not constitute the service on the operator described above).

4.4.3.1 Plan of Operations Approved

A complete Plan of Operations that will not cause UUD may be approved basically as submitted. Small exploration Plans, or Plans in areas without sensitive resource issues will generally not take as long to review and approve. In these situations, the BLM may sign the approval decision after completing the NEPA analysis and public comment period, and communicate the reclamation financial guarantee amount to the operator.

4.4.3.2 Plan of Operations Approved Subject to Conditions

The BLM may approve a Plan of Operations subject to any changes or conditions of approval needed to prevent UUD. The difference between what the operator is proposing in the Plan and actions that the BLM determines are needed to prevent UUD will become the conditions of approval that the BLM attaches to its decision. The conditions of approval must be written so that the desired on-the-ground results are achieved without mandating a specific design.

All mitigation measures applied as conditions of approval must be analyzed in the environmental analysis so that their effectiveness is determined and the residual impacts after

implementation of the mitigation are disclosed.[110] The conditions of approval must be clearly stated in the DR or ROD on the Plan with an explanation as to why the conditions are being required.[111]

A decision approving the Plan of Operations and stating the conditions of approval must be sent to the operator by certified mail, return receipt requested. The decision must state the estimated reclamation cost determination and the financial guarantee amount. The decision must also remind the operator that surface disturbing activity cannot begin until the financial guarantee has been accepted and obligated by the BLM (see Appendix A, Template 4.4-4, Decision on Plan).

Also, post-approval, the BLM may require the operator to update or revise the Plan content so as to reflect other agency permits, final designs, or certain stipulations. This allows for a single document describing the approved operation in detail that can be checked without having to consult other supplemental plans or permits. For example, the BLM may approve the Plan but condition it with the requirement that 18 inches of growth medium be placed over a certain waste rock dump instead of the proposed 12 inches. To create a comprehensive Plan of Operations document, the operator would supply replacement pages to the Plan, wherever needed, to change the reference from 12 inches to 18 inches.

For example, if another agency permit is required, such as an National Pollution Discharge Elimination System (NPDES) permit for discharge, it could be committed to by the operator and appended to the Plan once issued by the authorizing state or Federal entity. Deciding what and whether to require incorporation of such material into the Plan of Operations is a project-specific determination to be made by the individual District/Field Office.

In addition, the BLM must also include any other BLM requirements in the Plan approval decision. For example, inclusion of the BLM's determination regarding concurrence or non-concurrence on proposed use and occupancy is required by 43 CFR 3715.3-4 to be included in the BLM decision approving, modifying, or rejecting a Plan of Operations.

4.4.3.3 Plan of Operations Disapproved or Approval Withheld

The third possible outcome from the BLM review of a Plan of Operations is for the BLM not to approve the Plan.[112] The BLM may either disapprove or withhold approval of a Plan of Operations. There is a distinct difference between the two decisions.

4.4.3.3.1 Disapprove the Plan of Operations

A decision that disapproves the Plan of Operations is synonymous with denying the Plan of Operations. "Disapprove" or "Deny" should be used in the BLM decision when the intent is to issue a final BLM decision on the Plan's adequacy in preventing UUD. The decision must clearly state why the proposed Plan was denied (see Appendix A, Template 4.4-4, Decision on Plan).

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[110] BLM NEPA Handbook, H-1790-1, Sec. 6.8.4.
[111] BLM NEPA Handbook, H-1790-1, Sec. 8.5.1.
[112] 43 CFR 3809.411(d)(3).

4.4.3.3.2 Withholding Plan of Operations Approval

A decision that says the BLM is "withholding" approval on the Plan of Operations is usually based on some procedural or legal requirement that must first be satisfied before the BLM can make a final determination on whether to approve or disapprove the Plan of Operations (see Appendix A, Template 3.2-2, Processing Notice or Plan Suspended).

4.4.3.3.3 Rationale

Four situations where it would be appropriate to disapprove or withhold approval on a Plan of Operations are discussed below.

Inadequate Information[113] **-** The BLM cannot approve or even begin analyzing the Plan until sufficient and appropriate information is received to make the Plan complete and to prepare the associated NEPA analysis. The BLM decision to *withhold* Plan approval can be issued after an extended time has elapsed without a response from the operator to one or more of the content requirements in 43 CFR 3809.401. In these cases the decision is conditional because the BLM would resume processing the Plan of Operations if the information were provided within time established in the decision. As such, no appeals language is included in a decision to withhold plan approval pending submission of adequate information.

A BLM decision to *disapprove* a Plan should be issued if the operator refuses to provide the required information within the specified timeframe or when there is no expectation of a meaningful response from the operator to BLM's information requests.

Lands Closed to Operation under the Mining Law[114] **-** If a Plan of Operations is proposed on lands and a valid existing rights determination of the involved mining claims is pending under 43 CFR 3809.100, the BLM may issue a decision *withholding* final action on the Plan of Operations pending the outcome of the mineral examination/valid existing rights determination. If the mineral examination concludes that some or all of the mining claims or mill sites located on withdrawn or segregated lands do not have valid existing rights, and if the Plan could not be modified to include only the valid claims and/or open lands, the BLM will continue the suspension of its processing of the Plan of Operations pending final Departmental decision declaring the mining claims null and void and any subsequent appeal. Following final Departmental decision to void the claim, the BLM will reject the proposed Plan and order any reclamation that may be necessary. See Section 8.1 Withdrawn and Segregated Lands for additional discussion on the requirements for segregated or withdrawn lands.

If a Plan of Operations is received that has no potential for the existence of valid existing rights (i.e., the Plan is proposed on segregated or withdrawn lands with no mining claims present), the Plan of Operations is to be "rejected." The Plan is to be *rejected* without going through the completeness review or NEPA analysis processes because there is no mechanism for the BLM to approve such a Plan under the surface management regulations.

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[113] 43 CFR 3809.411(d)(3)(i).
[114] 43 CFR 3809.411(d)(3)(ii).

Plan of Operations Does Not Prevent UUD[115] - In some cases it may not be possible to develop the mitigation measures needed to prevent UUD. If after consideration of all reasonably available mitigation measures that might be imposed under 43 CFR 3809.411(d)(2) as conditions of approval, the Plan of Operations would still result in UUD, it must be disapproved. Examples include actions that would violate the Endangered Species Act, or actions that would not meet one or more of the performance standards in 43 CFR 3809.420 because those actions would be considered de facto UUD.[116]

If the BLM anticipates problems with the approvability of a portion of the Plan, the BLM must communicate its concerns early in the review process so the operator has the opportunity to modify the Plan before the BLM must issue a decision disapproving the Plan of Operations. A fundamental consideration is, at what point does BLM disapprove an unacceptable Plan of Operations versus trying to make it approvable through the imposition of mitigation measures. While there is no set threshold, the BLM is not to assume the responsibility for redesigning the operator's Plan. As a general rule, the BLM should simply disapprove the Plan of Operations instead of imposing conditions of approval so extreme that the conditions radically change the design of the operation (e.g., require underground vs. open-pit mining or vat leach vs. heap leach, etc.).

The BLM decision to disapprove the Plan of Operations must clearly state why the proposed project would result in UUD and why BLM was unable to develop mitigation measures that would prevent the UUD. The decision should not be written in a fashion that precludes any future re-submittals by the operator once the matter of UUD is resolved, and the operator may modify the Plan of Operations and resubmit it to the BLM at a later time.

Multiple Plans that are Mutually Exclusive - Generally, when there is more than one Plan of Operations proposed in the same geographic area, the BLM reviews each Plan based on its own merit and whether it will cause UUD. However, circumstances may exist where two or more Plans of Operations (or Notices) are filed that contain mutually exclusive activity. In such cases, the BLM does not get involved in disputes between rival claimants and/or operators. Relief for mine operators in such cases must be sought in a court of competent jurisdiction and not from the BLM.

For example, if one operator proposed to mine at a certain location at the same time a second operator proposed to construct a waste rock dump or facility on the same ground, the approval of such conflicting Plans would be almost impossible to assess in a NEPA analysis or in the analysis of whether operations under the plans would cause UUD. In addition, it would be extremely difficult for the BLM to calculate the RCE for each of the Plans, or take other enforcement action for the Plans after they are approved in cases of noncompliance.

In these cases, the BLM will withhold approval on conflicting or overlapping segments of either Plan until the priority rights have been resolved between the operators in a court of competent jurisdiction (see Appendix A, Template 3.2-2, Processing Notice or Plan Suspended).

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[115] 43 CFR 3809.411(d)(3)(iii).
[116] 43 CFR 3809.5.

4.5 Beginning Operations

The operator must not begin operations until the BLM District/Field Office approves the Plan of Operations and the BLM office responsible for adjudicating financial guarantees issues a decision accepting and obligating the operator's financial guarantee for the estimated cost of reclamation.[117] All correspondence with the operator on Plan approval and financial guarantee decisions must clearly state when operations may begin.

4.5.1 State and Federal Permit Requirements

The BLM approval of a Plan of Operations does not constitute certification that the operator has obtained whatever other local, state, or Federal permits or approvals might be necessary for its operation (i.e., the BLM can approve a Plan without waiting for the operator to obtain other permits needed for the operation). Approval of a Plan of Operations by the BLM does not eliminate the requirement for the operator to obtain all other applicable local, state, and Federal permits (see Section 9.2.2 Regulatory Overlap of Enforcement Actions).

To prevent conflicting permit requirements and facilitate a comprehensive review, the BLM should coordinate its approval decision with the state or other Federal agencies that are also reviewing the operation when such permits are critical to the overall project plan (e.g., a National Pollutant Discharge Elimination System (NPDES) Permit for a tailing impoundment). Where the operator is relying on a particular permit to meet the Plan content requirements of 43 CFR 3809(b) (e.g., spill contingency plan or wetlands mitigation), the BLM may condition its approval on the operator obtaining the specific local, state, or Federal permit. The BLM may require the operator to provide a copy of the permit to be included in the Plan of Operations. Over the life of the operation, the BLM may ask the operator to provide proof that the permit is still in place.

4.5.2 Phased Approvals or Development

The scope of the BLM evaluation and decision on the Plan of Operations is to cover the entire operation. However, where the approved operation is to proceed in phases and the operator is posting a financial guarantee for only a part of the operation, the extent and limits of the on-the-ground activities that are being authorized must be clearly stated in the BLM decision.[118] For an authorized operation to proceed to a new phase, additional BLM authorization, other than those related to the RCE and financial guarantee, is not required.

Modifications to an approved Plan must be addressed under 43 CFR 3809.430 through 3809.434 and must not be incorporated into phased authorization (see Section 4.6 Modifications to Plans of Operations).

While phased approvals and financial guarantees are appropriate tools for the operator to manage project costs, at no time can the surface disturbance exceed the scope of the approval given for a particular Plan of Operations, nor can the reclamation liability exceed the amount of the financial

[117] 43 CFR 3809.412.
[118] 43 CFR 3809.553(a).

guarantee in place. See Section 6.2 Reclamation Cost Estimates and Section 6.3 Types of Financial Guarantees for further discussion of phased financial guarantees.

4.6 Modifications to Plans of Operations

Sections 3809.430 through 3809.434 of the regulations address modifications to the Plan of Operations, either at the request of the operator, or when required by the BLM.

4.6.1 Operator Requested Modifications

The operator may request a modification to their Plan at any time**.** Due to the incremental nature of exploration and mining, it is expected that operators may modify their Plans of Operations. As additional ore reserves are blocked out or cutoff grades change, or as areas are reclaimed, operators may propose to modify their Plans of Operations to increase or decrease the disturbance area, change mine facility layout, or modify mineral processing methods.

There is no limit on the number, type, or size of modifications that may be made to a Plan of Operations provided the modification is reviewed as required under the regulations. A single Plan of Operations may proceed through multiple modifications, from the early exploration stage through mine development and expansion, over decades, with some modifications exceeding the original disturbance acreage.

The NEPA analysis must capture the impact of all past modifications, as well as the present modification under review, in order to avoid overlooking the cumulative impacts of past, present, and reasonable foreseeable future actions on the environment.

4.6.2 Required Modifications

The operator must modify their Plan of Operations when making changes in the approved plan, to prevent unnecessary or undue degradation, and to address unanticipated events or conditions.

4.6.2.1 Before Making Changes in the Approved Plan

The operator cannot deviate from their approved Plan of Operations without a modification approved by the BLM,[119] During the initial approval, the BLM should communicate to operators that the approved Plan of Operations limits what can be done on the ground; and that any change outside the scope of the approved Plan the operator wants to make that alters the manner and degree of the plan must be made through the modification process. This may include adding disturbance area, changes in the size, configuration, timing, and equipment use as well. Modifications may also be needed for changes in monitoring plans or interim management plans.

The BLM and the operator need to have a common understanding as to the scope of the activity approved under the Plan and what changes in operation would trigger a minor or major modification of the Plan. For example, a change in equipment size or disturbance area to less

[119] 43 CFR 3809.431(a).

than that approved may not require a minor modification. The scope of the approval and when a modification (minor or major) is required is both site specific and project specific, depending on what impacts were analyzed and what limitations or conditions of approval were placed on the approved Plan.

4.6.2.2 To Prevent Unnecessary or Undue Degradation

If the BLM identifies or anticipates UUD (actions or conditions not meeting the performance standards) the BLM may order the operator to modify the Plan of Operations.[120] Modification orders can be made effective immediately as part of the inspection and enforcement program[121] (see also Chapter 9 Inspection and Enforcement). All BLM-ordered modifications still have to go through the review and approval process under 3809.432(a) if they do not qualify for acceptance under 3809.432(b) as a minor modification.

4.6.2.3 To Address Unanticipated Events or Conditions

A major or minor modification may be required before the final closure of operations in order to address impacts from unanticipated events, conditions, newly discovered circumstances, or information.[122] This requirement is intended to ensure that all Plans of Operations are reviewed prior to final closure in order to check for changes that need to be addressed during final reclamation. The above requirement does not preclude the BLM or the operator from addressing these concerns during operations. The following list is not exhaustive of the conditions or events that might lead to a modification of the Plan of Operations.

- Installation of treatment systems or changes in reclamation and monitoring plans may be needed to address development of acidic or toxic drainage.

- To the extent loss of surface springs or water supplies were not anticipated in the initial NEPA analysis, such events may warrant a Plan modification to address the conditions and develop mitigation.

- Operations where a need for long-term water treatment or other maintenance activities are later identified usually constitute a substantial change from the original Plan of Operations. To account for the long-term commitment, a modification in the Plan of Operations is usually needed. As a result of modifying the Plan of Operations it may become necessary to establish a long-term trust fund to address the long term water treatment costs. (See Section 6.3 Types of Financial Guarantees, for further discussion on trust funds.)

- To the extent repair and maintenance of reclamation were not addressed in the Plan of Operations, a modification may be necessary if it involves ongoing use of earthmoving equipment or changes in stormwater management structures.

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[120] 43 CFR 3809.431(b).
[121] 3809.421 and 3809.600 through 3809.605.
[122] 43 CFR 3809.431(c).

- Because the exact nature of mine waste or leachate may not be known in advance, a modification may be needed to include measures required to manage closed waste units. This would be especially appropriate if long-term care and maintenance involves the use of mechanized earthmoving equipment or the use of vehicles off-road.

- Specific plans for post-closure monitoring and maintenance may not be finalized until after the closure activity is completed and site conditions are known. In these situations the plans for post-closure management submitted under 43 CFR 3809.401(b)(3)(x) may need to be modified.

- Hazards to public safety that result from the Plan of Operations must be reduced or eliminated as part of final reclamation. New or unanticipated hazards may require a Plan modification so that the necessary protective measures are included in the final closure plan.

4.6.3 BLM Review of Plan Modifications

The BLM will review and approve a modification to a Plan of Operations in the same manner as it reviewed and approved the initial Plan under 43 CFR 3809.401 through 3809.420 unless the modification is considered minor.

Increasing the area of disturbance, adding new mine facilities, or substantially changing mineral processing would require a modification that is processed similar to the initial Plan of Operations under 43 CFR 3809.401 through 3809.420. Modifications to change mine facility design or capacity may require the operator follow the Plan of Operations approval process. For example, if waste rock dump stability were a major issue during the initial Plan approval, then modification to the dump configuration might not qualify as a minor modification and processing would have to follow the more formal review and approval process.

Whether an action requires a formal modification or a minor modification depends in a large part on what issues were identified during the initial Plan approval. If the adequacy of cover soil thickness for reclamation were an issue during Plan review, then reducing the amount of soil to be spread from 10 inches to 8 inches may require a formal modification as it could impact reclamation performance. On the other hand, if the soil thickness were to be increased from 10 inches to 12 inches, a formal modification may not be needed since impacts to reclamation performance would not be anticipated. Conversely, if the issue were dust and traffic from haul trucks, then increasing the amount of soil to be applied by 20 percent could trigger a modification if limits given for truck traffic in the initial Plan of Operations were to be exceeded.

The review and approval process for modifications should focus on the changes proposed to the Plan of Operations and not create a second review and approval for actions already approved in the initial Plan. The appropriate type of NEPA document should be determined in consultation with the local NEPA coordinator and by referring to the NEPA Handbook, H-1790-1. The NEPA document prepared for the modification must disclose the impacts of the past actions by

reference or by tiering[123] to the NEPA analysis that has already been completed in order to maintain an assessment of all the impacts of the project. An impact assessment is especially important if an EA is being used for the modification's NEPA analysis in order to ensure that impacts from the modification are not significant when considered in combination with past project approvals. Note: The environmental analysis for a modification may tier off prior analyses; this does not constitute a supplemental EIS.

4.6.3.1 Minor Modification Procedures

The regulations provide that the BLM will accept a minor modification without formal approval if the modification is consistent with the approved Plan of Operations and does not constitute a substantive change from the activity analyzed in the NEPA document.[124]

Examples of minor modifications may include, but are not limited to, minor road realignments, facility design changes within approved design limits, minor changes in monitoring parameters or frequency, some changes in the schedule of operations, variations in the seed mixture used for revegetation, and additional drill holes on existing disturbance.

The BLM will prepare a Determination of NEPA adequacy (DNA), or other checklist-type NEPA review, in order to document that the minor modification is consistent with the approved Plan of Operation and does not constitute a substantial change that requires additional environmental analysis (see BLM Handbook H-1790-1, *National Environmental Policy Act*, Chapter 3 Using Existing Environmental Analysis). All minor modifications are to be documented in the case file and tracked to ensure they do not cumulatively exceed the minor modification threshold. A public comment period is not required on a minor modification.

Although the modification may be minor, some adjustment in the amount of the financial guarantee may be necessary.

4.6.4 Modifications to Plans Approved before January 20, 2001

Where a Plan of Operations was approved prior to January 20, 2001, under the "old" regulations,[125] there are two types of Plan modifications that may be received by the BLM. The operator may request to build a new mine facility or the operator may request a modification that changes an existing mine facility that was initially approved under the old regulations. The applicability of the January 20, 2001, regulations to each of these situations is discussed below.

Under any modification submitted to the BLM, the operator can elect to have the new Plan content and performance standards apply.

4.6.4.1 Modification to Add a New Mine Facility

Modifications for new mine facilities must follow the review, approval, and performance standards listed in the new regulations. If the operator proposes to modify the Plan of Operations

[123] BLM NEPA Handbook, H-1790-1, Sec. 5.2.2.
[124] 43 CFR 3809.432(b).
[125] 43 CFR 3809.433.

by constructing a new facility, such as waste rock repository, leach pad, impoundment, drill site, or road, then the Plan contents requirements[126] and performance standards[127] of the surface management regulations apply to the new facility. Mine facilities not included in the modification may continue to operate under the terms of the Plan of Operations that existed prior to January 20, 2001.

4.6.4.2 Modification of an Existing Mine Facility

If the operator proposes to modify the Plan of Operations by modifying an existing facility, such as expansion of a waste rock repository, leach pad, or impoundment, layback of a mine pit, or widening of a road, then the plan contents requirements and performance standards of the current regulations apply to the modified portion of the facility, unless the operator demonstrates to the BLM's satisfaction it is not practical to apply the current regulations and standards for economic environmental, safety, or technical reasons[128]. If the operator makes the demonstration, the Plan content requirements[129] and performance standards[130] that were in effect immediately before January 20, 2001, apply to the modified facility (see 43 CFR parts 1000-end, revised as of November 21, 2000).

Regarding the cyanide leaching and acid-forming materials performance standards, every effort is to be made to achieve compliance with the standards in the current regulations at the modified facility. The cyanide leaching and acid-forming materials performance standards are critical to the prevention of UUD, usually required to meet state standards, and have been part of BLM policy since 1991 and 1996, respectively.

4.6.5 Modifications to Plans Pending on January 20, 2001

A pending modification is one that was submitted to the BLM prior to January 20, 2001 and the BLM had determined was substantially complete under the old 3809 regulations. If there are any pending modifications, the requirements are analogous to those described above for Section 3809.433.

4.7 Cost Recovery

The BLM regulations at 43 CFR 3800.5 require that an applicant for a Plan of Operations must pay a processing fee on a case-by-case basis as described in 43 CFR 3000.11 whenever the BLM determines that consideration of the Plan of Operations or Plan modification requires the preparation of an EIS-level environmental analysis. The processing fee must cover the cost of the BLM's review of the Plan of Operations, preparation of the EIS (or review of an EIS prepared by an outside consultant), and review of the RCE.

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[126] 43 CFR 3809.401.
[127] 43 CFR 3809.420.
[128] 43 CFR 3809.434(b).
[129] 43 CFR 3809.1-5 (revised as of November 21, 2000).
[130] 43 CFR 3809.1-3(d) and 3809.2-2 (revised as of November 21, 2000).

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Chapter 5 Performance Standards and Operating Requirements

This chapter explains the operating requirements and performance standards that operators must achieve when conducting prospecting, exploration, and mine development activities on BLM-administered public lands. It includes guidance on how to review a Notice or Plan of Operations to determine if the operations will cause UUD under 43 CFR 3809.415, and how to ensure that operators are complying with the performance standards under 43 CFR 3809.420.

FLPMA prohibits anyone using the public lands from causing "unnecessary or undue degradation" (UUD).[131] By definition in 43 CFR 3809.5 as well as under 3809.415, operators cause UUD when they fail to comply with all the applicable performance standards. These performance standards are divided into two types, *general performance standards* and *specific performance standards*. The performance standards in 43 CFR 3809.415 applies to activities conducted under either a Notice or Plan of Operations.

As a practical matter, these same performance standards are generally applicable to Notices or Plans that were in effect before January 20, 2001. This is because the regulations at 43 CFR 3809.420 incorporated the pre- January 20, 2001, performance standards, and the then-existing policy requirements for management of operations using cyanide or with potential to produce acid rock drainage. See also Section 3.1 and Section 4.6.4.

5.1 Requirement to Prevent Unnecessary or Undue Degradation

This section takes the definition of *unnecessary or undue degradation* from 43 CFR 3809.5 and restates it as operating requirements. Operators avoid causing UUD while conducting operations on public lands by operating in accordance with the requirements in 43 CFR 3809.415(a) through (c).

As defined at 43 CFR 3809.5, UUD means conditions, activities, or practices that meet one of the following:

- Fail to comply with one or more of the performance standards in 43 CFR 3809.420, the terms and conditions of an approved Plan of Operations, operations described in a complete Notice, and other Federal and state laws related to environmental protection and protection of cultural resources.

- Are not "reasonably incident" to prospecting, mining, or processing operations as defined in 43 CFR 3715.0-5.

- Fail to attain a stated level of protection or reclamation required by specific laws in areas such as the California Desert Conservation Area (CDCA), Wild and Scenic Rivers, BLM-administered portions of the National Wilderness System, and BLM-administered National Monuments and National Conservation Areas.

[131] 43 CFR 3809.415.

5.1.1 Requirements, Standards and Applicable Laws

To prevent UUD, operators must comply with the performance standards in 43 CFR 3809.420, which includes following their accepted Notice or approved Plan of Operations, and complying with other Federal and state laws related to environmental protection and protection of cultural resources.[132] Operators who deviate from the terms of their Notice or Plan are, by definition, causing UUD. This is true even if the action occurring on-the-ground is conducted exactly how it would have been if covered by a Notice or Plan. That is, one way operators cause UUD is by operating without a Notice or Plan for that particular activity, independent of the impacts to the public lands that may result.

If the operations do not fall within an accepted Notice or an approved Plan, fails to maintain an acceptable financial guarantee, or if the operations are not in compliance with applicable state and Federal laws (see section 5.2.6 for more information), the BLM will initiate enforcement action under 43 CFR 3809.600, *et seq*. The purpose of the enforcement action is to get the operator to file or modify the Notice or Plan of Operations to cover the operations, provide the required financial guarantee, or to bring the operations into compliance with applicable laws (see Section 9.2 Enforcement Actions).

5.1.2 Activities that are Reasonably Incident

Under the Surface Resources Act of 1955,[133] mining claims may not be used "for any purposes other than prospecting, mining or processing operations and uses reasonably incident thereto." Any activity that is not reasonably incident as defined in 43 CFR 3715.0-5 is by definition UUD within the meaning of 43 CFR 3809.5.

This means that all activities conducted under a Notice or Plan must be reasonably incident to prospecting, mining, or processing operations and uses. The BLM cannot accept any Notice or approve any Plan that proposes activities not related to mineral exploration or development, even if the activity itself will not harm the public lands.

5.1.3 Levels of Protection Required by Law

In some special management areas, operators must attain a certain level of resource protection or reclamation as required by specific laws.[134] Such areas include the California Desert Conservation Area Plan, as amended (CDCA), Wild and Scenic Rivers,[135] BLM-administered Wilderness Areas,[136] and BLM-administered National Monuments and National Conservation Areas. Such special management areas have separate statutory authority requiring operations to achieve certain levels of resource protection or certain standards of reclamation. An operation that does not meet these performance standards, in addition to those at 43 CFR 3809.420, is causing UUD.

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[132] 43 CFR 3809.415(a).
[133] 30 U.S.C. 612.
[134] 43 CFR 3809.415(c).
[135] BLM Manual 8351, and 43 CFR 8351 and 36 CFR 297.
[136] BLM Manual 8560 and 43 CFR 6300.

No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, et al.,
Plaintiffs/Appellants,

v.

HEATHER PROVENCIO, et al.,
Defendants/Appellees

and

ENERGY FUELS RESOURCES (USA) INC., et al.,
Intervenor-Defendants/Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-cv-8045 (Hon. David G. Campbell)

DEFENDANT-APPELLEES' SUPPLEMENTAL EXCERPTS OF RECORD
VOLUME 3 OF 3 (SER 502 - 778)

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5.2 General Performance Standards

The general performance standards for Notices and Plans of Operations are broad in nature, apply across a variety of environmental media (e.g., air, water, wildlife, vegetation, etc.), and to more than one type of operation or mine facility.

5.2.1 Technology and Practices

The operator must use equipment, devices, and practices that will meet the performance standards of the surface management regulations.[137]

This general standard gives the BLM some say in "how" the operator meets the performance standards. Specifically, in reviewing the Notice or Plan, the BLM looks to see if the equipment, devices, or practices that the operator is proposing to use are technically feasible to meet the performance standards, will perform the activity in a timely fashion, or will perform with minor or minimal secondary impacts. The intent is for the standard to screen out proposals on a broad scale that are not feasible, while not dictating the exact equipment or practice to be used by the operator.

For example, in recontouring a road constructed across an extremely steep slope, an excavator or backhoe would be considered appropriate equipment to meet the performance standard for road reclamation. A bulldozer cannot operate on side slopes or push uphill when the grade is steeper than about 50 percent and as such would generally not be appropriate equipment for such steep slopes.

5.2.2 Sequence of Operations

The operator must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining, and reclamation sequence,[138] This performance standard is designed to prevent unnecessary impacts from operations that are conducted out of sequence with the reasonable and customary mineral exploration, development, mining, and reclamation cycle. (See also 43 CFR 3715.0-5, which defines "reasonably incident," in part as, "using methods, structures, and equipment appropriate to the geological terrain, mineral deposit, and *stage of development*" (emphasis added).)

This standard is to be applied on a broad scale. For example, an operation that proposes stripping soil from an area for mining purposes prior to even attempting to identify the presence of a mineral deposit using standard industry practices would not meet this performance standard. Another example would be the construction of a large network of access roads without proposing any associated exploration activity. By contrast, this standard for determining UUD and "reasonably incident" should not be applied on such a small scale that the BLM is verifying exploration results on an individual drill hole basis or reviewing "ore" grades at every step in mine development.

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[137] 43 CFR 3809.420(a)(1).
[138] 43 CFR 3809.420(a)(2).

5.2.3 Land Use Plans

Consistent with the mining laws, operations and post-mining land use must comply with the applicable BLM land use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.[139] The NEPA analysis should document this compliance, usually within the "Proposed Action and Alternatives" section of an EA[140] or an EIS.[141]

This means that the BLM can use its land use plans to address, on a regional or area basis, the operating requirements to be followed to protect environmental and cultural resources anticipated to be found on public lands in the planning area. Part of the land use planning process identifies actions to take or avoid when operating in a particular part of the planning area. As part of developing land use plans, the BLM has to consider the potential impact on the mineral exploration and development as well as potential environmental benefit of any planning-level management prescriptions for locatable mineral activities.

Land use plans can be used to set reclamation objectives or identify the location of applicable measures needed to meet the performance standards. For example, a land use plan may be used to identify the location-specific measures that need to be in a fisheries rehabilitation plan submitted under 43 CFR 3809.401(b)(3)(v), in order to meet the fisheries rehabilitation requirement under 43 CFR 3809.420(b)(3)(ii)(E). Another example is for the land use plan to describe the species, seed mix, or treatments applicable to reclaiming surface disturbance in certain portions of the planning area. Providing such management prescriptions in the land use plan can assist both the operators and the BLM in processing Notices and Plans, and ensure reclamation consistency and performance.

Land use planning for locatable minerals activity can provide the operator with guidance on what is expected in the Notice or Plan submittal. It also provides the BLM reviewer some criteria for evaluating the consistency of the particular Notice or Plan of Operations with the land use plan and assist in preventing UUD.

5.2.4 Mitigation Measures

This performance standard[142] requires that the operator implement the mitigation measures specified by the BLM in order to protect public lands. "Mitigation," as defined by the CEQ at 40 CFR 1508.20, may include one or more of the following:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

[139] 43 CFR 3809.420(a)(3).
[140] BLM NEPA Handbook H-1790-1, Sec. 8.3.4.3.
[141] BLM NEPA Handbook H-1790-1, Sec. 8.2.7.
[142] 43 CFR 3809.420(a)(4).

- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

- Compensating for the impact by replacing, or providing substitute, resources or environments.[143]

In the context of Notices and Plans of Operations, the BLM has limited discretion to impose "mitigation" measures as defined under the CEQ regulations. In part, this is because the CEQ regulations do not apply to Notices because Notices are not subject to NEPA review. More importantly however, the BLM's authority to regulate mining operations under the Mining Law is limited to preventing UUD; consequently, the "mitigation" specified in the ROD and plan approval is more like a plan modification, rather than what is typically considered "mitigation" of direct, indirect, or cumulative impacts identified in the NEPA document. "Mitigation" measures required to prevent UUD include any required plan modifications that a state or other Federal agency informs the BLM are necessary to comply with applicable law. The BLM can work with the operator to develop further mitigation measures for impacts that do not rise to the level of UUD, and can, if the operator concurs, incorporate these measures as conditions of the BLM's approval of the Plan. However, without operator consent, the BLM cannot require "mitigation" or plan modification beyond what is necessary to prevent UUD.

Another aspect of mitigation is compensating for the impact by replacing or providing substitute resources or environments. Reclamation of surface disturbance is the major form of mitigation for most Notices or Plans. In certain circumstances requiring the operator to provide substitute resources or habitat may be appropriate mitigation. For example, providing an alternate water source for wildlife or replacement of critical winter range may be an appropriate mitigation strategy for a large project or where such resources are scarce.

Offsite mitigation on non-public lands may be used to reduce impacts on public lands. However, there must be an enforceable commitment from the operator to implement such mitigation or it cannot be relied upon to prevent UUD on the public lands. Before incorporating offsite mitigation into a Plan approval or Notice acceptance, contact the Solicitor's Office to verify that the commitment is enforceable.

5.2.5 Concurrent Reclamation

The operator must initiate reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that the operator will not disturb further. Early initiation of reclamation will stabilize soil, control runoff, and otherwise prevent UUD. This concurrent reclamation standard[144] means that the operator must reclaim parts of the operations even as activity is continuing in other portions of the project area. The intent is that operators not defer

[143] 40 CFR 1508.20.
[144] 43 CFR 3809.420(a)(5).

all the reclamation until the closure phase of the project. Waiting on some yet-to-occur technological breakthrough or change in economic factors, such as metal prices, does not justify withholding areas from concurrent reclamation.

Concurrent reclamation prevents open or unreclaimed areas from continuing to cause impacts even though mineral activities may no longer be occurring at that specific locale. Unreclaimed surface disturbance can continue to cause or exacerbate conditions such as loss of wildlife habitat, erosion, dust emissions, and noxious weed infestations. These conditions can lead to UUD on the public lands and increase reclamation costs for the mine operator.

When reviewing a Plan or Notice, the BLM must ensure that the Plan or Notice provides for ongoing reclamation. For example, the Plan or Notice may include provisions for direct hauling and application of stripped topsoil to previous disturbances, placement of waste rock at final grade with revegetation, backfilling of sequential mine pits, decommissioning and reclaiming heaps and dumps that have reached capacity, and other measure as applicable. It is generally economically and technically feasible to conduct concurrent reclamation when the mine facility (rock dump or heap) has reached its capacity or is no longer producing economically viable leachate. For more information about reclamation, see Section 5.3.3.

5.2.6 Pertinent Federal and State Laws

The operator must conduct all operations in a manner that complies with all pertinent Federal and state laws, including local requirements.[145] Failure to meet other Federal and state requirements means the operator has also failed to meet a BLM performance standard and is causing UUD.

A key consideration to administering this performance standard is that the BLM does not determine whether the operator has complied with the laws or regulations that are the responsibilities of other agencies, nor does the BLM enforce those requirements. Rather, the BLM relies on those other agencies to determine compliance with the laws or regulations they administer prior to the BLM determining whether or not the operator has met a particular BLM performance standard and is causing UUD.

If a violation of another Federal or State agency's rules or regulations is taken by that agency, a noncompliance order should be issued in conjunction with that agency's enforcement action.

5.3 Specific Performance Standards

The following are specific performance standards for a variety of environmental media or for certain types of the most common mine facilities. See the BLM's *Solid Minerals Reclamation Handbook,* H-3042-1, for a more complete discussion on the technical components of reclamation.

[145] 43 CFR 3809.420(a)(6).

5.3.1 Access Routes

The performance standard[146] for access routes addresses right of access and requirements for design, consultation, commercial hauling on existing roads, support facilities, roads within or to operating mines, and minimization of surface disturbance.

5.3.1.1 Design Requirements Generally

Access routes may only be the minimum width needed for operations and should follow natural contours, where practicable, to minimize cut and fill. The minimum width is determined by the type of equipment that will be utilized on the road, which in turn is tied to the particular stage in exploration or mine development. Designed roads are different than ways or "two tracks" used for customary access. These customary routes across public lands are generally usable for early-phase operations such as exploration. These routes may need upgrades to be useful when crossing drainages or relocation to avoid on-the-ground impacts.

The importance of using, upgrading, or constructing all forms of roads on or as close to the contour as possible cannot be overemphasized. Grades that cut across contour at greater than 12 percent are difficult to maintain and protect from erosion without extensive erosion control measures (e.g., water bars, cutouts).

Constructing roads in flatter terrain is generally preferred since the steeper the side-slope, the greater the cut and fill involved and the greater the surface disturbance. Roads constructed across steep slopes (greater than 33 percent) can be extremely difficult to reclaim. Even where the route were somewhat longer, if the terrain is flatter, it may be less expensive to construct and reclaim, and have less environmental impact, than a more direct route.

5.3.1.2 Consultation on Access Routes

When construction of access routes involves slopes that require cuts on the inside edge in excess of 3 feet, the operator may be required to consult with the authorized officer concerning the most appropriate location of the access route prior to commencing operations. Although all Notices and Plans require the inclusion of access routes, this requirement places special emphasis on construction of roads in area where cuts greater than 3 feet are required.

Due to the potential for impacts from road cuts of greater than 3 feet, the BLM may require the operator to use an alternate access route. However, if the road cuts are actually part of the exploration activity (the road serves as an exploration trench as well), then cuts greater than 3 feet are acceptable. Roads with cuts greater than 3 feet are also acceptable if there is no other feasible access route. Reclamation of road cuts will usually require the use of an excavator to pull side cast material back up into the cut slope.

[146] 43 CFR 3809.420(b)(1).

5.3.1.3 Right of Access

Mining claimants (or their authorized designees) are entitled to non-exclusive access to their claims. Access to mining operations must be managed in a way to balance this right and the requirement to prevent UUD. Any access to an operation must be reasonably incident as defined by the Use and Occupancy regulations found at 43 CFR 3715.

Non-exclusive access, while guaranteed to mining claimants or their designee by the Mining Law, is not unfettered. In special status areas, where the operations would present a risk to the resources that support the special status area designation, the BLM can condition access placement, design, and periods of use where needed to limit impacts. After considering the effects on other resources, the BLM may limit access to constructed roadways or decide in some circumstances that access by means other than a motor vehicle (such as via aircraft or pack animal) is sufficient for the operator to complete their desired activity.

5.3.1.4 Access and Support Facilities

The location of access routes, service roads or airstrips, or other forms of access needed for the operation must be included as part of the Notice or Plan of Operations and must be counted a part of the disturbance acreage.

A separate right-of-way authorization is not required for activities conducted under the Mining Law or facilities incident to those activities (e.g., pipelines, power lines, phone lines, conveyors, etc.). Where facilities are installed and maintained by a utility company to serve the operator, the operator remains responsible for their removal and reclamation upon cessation of operations unless the approved reclamation plan allows for their retention.

Operators are generally not allowed to exclude others from the public lands. However, the Notice or Plan may include provisions for restricting public use for safety purposes. On most mine sites, and especially those with large amounts of heavy equipment traffic or use of chemicals, the BLM may require the operator to secure the area from general public access. The operator must also obtain concurrence to exclude public access under the 43 CFR 3715 regulations.

If an access road or utility line serves only mining operations on patented mining claims or non-public lands, a right-of-way under 43 CFR 2800 is the appropriate authorization.

5.3.1.5 Minimize Access Roads

The operator can be required to use existing roads to minimize the amount of disturbance. When reviewing a plan that proposes to construct a new access road, the BLM may require the operator to share access roads with adjacent operators and other public land users where sharing will minimize surface disturbance and not jeopardize public or operator safety.

If new road construction is determined necessary, the operator may be required to follow a transportation or utility corridor designated during the BLM's planning process.

5.3.1.6 Commercial Hauling on Existing Roads

When commercial hauling is involved for exploration or mining purposes and the use of an existing public or BLM road is required, the operator may be required to make appropriate arrangements for the use of the road with the county or state and to enter into a maintenance agreement with BLM. Heavy traffic on roads in the BLM-road network may require the operator to maintain the road in whole or in part depending upon the proportion of maintenance needs caused by the operator's activities.

5.3.1.7 Roads Within or Associated with Operating Mines

During mining, it is not unusual for a haul road to require a 100-foot running width. Roads within operating mines must meet the requirements of the MSHA regulations at 30 CFR 56/57 Subpart H. Additional state-mandated safety provisions may also apply to these roads. Together, these standards will guide any final road design. BLM road standards will not be applied to haul roads.

5.3.2 Mining Wastes

During exploration, mining, or reclamation, the operator must manage all tailings, rock dumps, deleterious material or substances, and other waste produced from the operations to prevent impacts that would violate applicable Federal or state laws.[147] Proper disposal of mining wastes means that all such material must be identified in advance, placed in locations to minimize the potential for environmental impact, and reclaimed in a manner that maximizes the long-term stability while eliminating or minimizing the formation and release of deleterious leachate. Appropriate management practices for these waste materials are discussed under other sections of the performance standards, and at length in the BLM's *Solid Minerals Reclamation Handbook,* H-3042-1. There are a number of technical reference materials available on the management of mine waste.

5.3.3 Performance of Reclamation

All operators are required to reclaim disturbed areas in accordance with the performance standards[148] and their approved reclamation plans. "Reclamation" is defined at 43 CFR 3809.5 as:

> [t]aking measures required by this subpart following disturbance of public lands caused by operations to meet applicable performance standards and achieve conditions required by BLM at the conclusion of operations. For a definition of "reclamation" applicable to operations conducted under the mining laws on Stock Raising Homestead Act lands, see part 3810, subpart 3814 of this title. Components of reclamation include, where applicable:

[147] 43 CFR 3809.420(b)(2).
[148] 43 CFR 3809.420(b)(3).

- Isolation, control, or removal of acid-forming, toxic, or deleterious substances;
- Regrading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage, and minimize erosion;
- Rehabilitation of fisheries or wildlife habitat;
- Placement of growth medium and establishment of self-sustaining revegetation;
- Removal or stabilization of buildings, structures, or other support facilities;
- Plugging of drill holes and closure of underground workings; and
- Providing for post-mining monitoring, maintenance, or treatment.

5.3.3.1 Timing of Reclamation

Reclamation is required at the earliest feasible time and must address impacts to Federal lands that are both directly and indirectly attributable to the project. The "earliest feasible time" provision means that reclamation must be accomplished as soon as feasible without interfering with planned future operations. Plans for such anticipated future operations must either be under actual review or in active development. Areas may not be withheld from reclamation because future development may be possible given some yet-to-occur technical or economic change.

The only exception to the "earliest feasible time" provision is that areas with evidence of mineralization may be left unreclaimed to support the claimant's contention of a "discovery of a valuable mineral deposit" as required under the Mining Law. However, this does not mean such discovery areas are exempt from reclamation. Reclamation of the discovery area must be included in the reclamation plan and covered by the reclamation financial guarantee. Management of disturbance areas left unreclaimed to preserve evidence of mineralization must be addressed by the Interim Management Plans, when applicable (see Section 4.3.2.5 Interim Management Plan).

5.3.3.2 Reclamation Elements

The following are the basic elements of a reclamation plan. The BLM will verify that the reclamation plan contains information about each of these aspects of reclamation, as applicable.

5.3.3.2.1 Saving Topsoil

Topsoil, or growth medium, must be salvaged in advance of construction of mine facilities and placed in a location where it will be preserved for future use. It is often desirable to salvage soil in two lifts, separating the topsoil from the subsoil. A soil survey and salvage plan prepared in advance of construction is recommended to ensure efficient soil salvage and guarantee the needed quantities are obtained for reclamation. Sometimes reclamation plans will call for

hauling salvaged soil from a new construction area and placing it directly on a previously disturbed area, thus avoiding stockpiling and double-handling.

During exploration road construction, the soil is stockpiled as part of the sidecast. Pulling up the sidecast during reclamation recontouring may be sufficient to replace the soil profile and support revegetation. Soil stockpiled in the sidecast may need to be stabilized with interim seeding or other erosion controls.

5.3.3.2.2 Erosion, Landslides, and Runoff

The reclamation plan must also address erosion control through various means including, reshaping the disturbed area, conveyance of runoff water, and establishment of vegetation.

Reshaped or regraded disturbance must achieve a stable configuration. The BLM should ask the operator to provide an engineering evaluation when slope stability is uncertain or a slope failure would result in significant environmental or safety impacts.

Regraded waste rock dumps and heap leach piles must be reduced to a slope considerably less than the angle of repose in order to form a base that will support growth medium without slippage or excessive erosion and to support vegetation. If a barrier-type reclamation cover is to be used that involves placement of a synthetic liner, the operator should determine the allowable steepness of the reclaimed slope through a geotechnical analysis to ensure the slope configuration will be stable.

Post-reclamation runoff or run-on control structures must be incorporated by the operator into the overall reclamation plan and built to accommodate flows from the design storm event. Inadequate consideration of the runoff area(s), control designs, or improper runoff management procedures, can cause cascading downgradient reclamation failures that may seriously affect the overall reclamation success.

Rock faces left in pit highwalls and where road cuts are left for post-reclamation access, cannot have slopes steeper than vertical (overhanging).

5.3.3.2.3 Isolate, Remove, or Control Toxic Materials

The reclamation plan must address how the operator will deal with potentially toxic materials. Such material may be isolated from mobilizing agents such as air and water, removed to an alternate location where isolation or treatment can be achieved, or controlled through a variety of treatment or mitigating measures.

Isolation includes measures such as covering or burying to prevent materials from becoming windborne or to limit contact with precipitation. Isolation also includes prevention of run-on waters from entering the toxic material, mobilizing contaminants, and causing a release to the environment. Diversion of run-on waters is especially important for reclaimed heaps or waste rock in order to avoid creating large additional volumes of contaminated leachate that then require special handling or treatment.

It may also be necessary to have certain materials removed from the site for treatment and disposal. Lab wastes and sludge from process ponds are two examples of materials that may not be suitable for onsite disposal. Certain tests[149] are available to determine if the material requires special handling or disposal.

Sometimes control of toxic materials may be done with onsite treatment. Examples include the treatment of leach pad waters with hydrogen peroxide, the removal of metals from acid rock drainage (ARD) with lime precipitation, or the encapsulation of certain sludges in concrete or synthetic materials. Treatment using active, passive, or semi-passive treatment systems can all be part of reclamation.

5.3.3.2.4 Reshaping, Soil Placement, and Revegetation

Part of reclamation is regrading and reshaping, including pit backfilling, and the closure of surface openings to underground mines. Where the stability of the final proposed design is open to question, the operator will be required to provide an engineering analysis which clearly shows a stable slope design.

Topsoil application must achieve the desired soil thickness. Soil compacts during placement, or is unevenly distributed, and a 12-inch soil lift ends up being 8-10 inches when checked after revegetation. Soil also needs to be checked for fertility and viability. Soil left in stockpiles for only a few years may lose the majority of the necessary microorganisms to support the nutrient cycle and should to be tested and possibly treated prior to use.

Revegetation by itself is a complicated science. It becomes even more complicated when combined with mine waste management goals of limiting infiltration and reconstructing the soil profile. To the extent practical, native plant species should be used to facilitate future multiple use objectives and promote healthy landscapes (Integrated Vegetation Management Handbook, H1740-2).

Several approaches can be used to address the revegetation standard. One option is to establish a reference area on a similar slope and aspect to test the revegetation performance goal. The reference-area approach works well where the vegetation to be planted is the same species or type as present in the reference area.

Another approach is to use a simple plant density or diversity criteria. These criteria can be established during the Plan review and approval process (generally not needed for a Notice).

A third option is to simply use professional judgment when examining the vegetation to make sure it is self-sustaining while looking for signs of plant stress or weed infestations. This approach is probably the most appropriate for Notice-level projects or where the area to be reclaimed has favorable soil and moisture characteristics, making revegetation success likely.

[149] EPA-1312 Leach Method, Synthetic Precipitation Leach Procedure, Toxicity Characteristic Leaching Procedure, and Meteoric Water Mobility Procedure.

Usually at least two to three growing seasons are needed before a final evaluation can be made regarding vegetation reestablishment. Weed control and supplemental infill seeding may be required for even a longer period on difficult sites.

5.3.3.2.5 Mine Pit Backfilling

Backfilling of an open pit may be appropriate in certain circumstances. Any pit backfilling, whether proposed by the operator or required by the BLM, needs to be thoroughly evaluated. While there is no set formula for how to consider the feasibility of pit backfilling, the BLM must weigh the costs, impacts, and difficulties of pit backfilling with the anticipated environmental benefits in order to determine the appropriate amount of pit backfilling to meet the performance standards. Generally speaking, backfilling for only aesthetic benefits is hard to justify. The BLM must be cautious when requiring backfilling to the extent that the backfilling may foreclose the financial viability of the operation.

The following are some factors relative to pit backfilling as a performance standard to consider when assessing operating and reclamation plans:

- Economic - The relatively high cost of backfilling may reduce the proposed mine life or preclude mining the deposit altogether. Even where economically feasible for the operation under review, backfilling may reduce or preclude the viability of any remaining subeconomic mineralization left at the end of mine life. Backfilling could cause future mining of the underlying resource to remain uneconomic even if commodity prices were to later increase.

- Engineering - Certain engineering limitations may affect the technical feasibility of pit backfilling. Due to swell, not all material extracted from a pit can be put back in the pit. This may constitute as much as one-third of the mined rock. Nor can unconsolidated rock necessarily be placed back in the pit in the same configuration as the original consolidated bedrock existed before it was mined. .

- Water Quality - Covering reactive sulfide material in the pit floor or wall by backfilling can help prevent the formation of ARD. Conversely, placement of reactive mine waste near or below the water table may result in less effective source control of acid-forming materials and degrade groundwater or adjacent surface water.

- Runoff Control - Even partial backfilling can be used to create a surface that promotes runoff flow out of the pit area. This limits the accumulation of stagnant water and prevents infiltration of water into underlying mineralized zones where it could impact the groundwater system.

- Pit Lake Control - The amount and placement of backfill relative to the static water level can determine whether, and to what extent, a pit lake forms. The BLM must evaluate whether a pit lake is desirable on a case-by-case basis. In addition, sub-aqueous placement of reactive mine waste is one approach to controlling sulfide oxidation. Pit

lakes can serve as enhancements to wildlife habitat in certain situations where acceptable water quality can be maintained.

- Revegetation - Pit backfill can create a workable surface for placement of cover soil and establishment of vegetation in areas that otherwise would not be vegetated. Disposing of mine waste as pit backfill minimizes the overall mine disturbance area, especially where it can be done concurrently with mining operations.

- Safety - Pit backfilling can eliminate or reduce physical hazards to the public, livestock, and wildlife posed by pit highwalls or pit lakes. Conversely, backfilling operations may increase risks to employees where highwalls are subject to rock falls or slope failure.

- Aesthetics - Backfilling can improve post-mining aesthetics by recreating, in whole or part, the original topography and eliminating the visual effects of highwall benches.

- Potential Environmental Impacts - Backfilling operations will have their own set of potential impacts to air quality, noise levels, wildlife, and aesthetics due to equipment operation. If backfilling does not begin until the end of mine life, such impacts may be similar in duration to that of the mining operation. Reclamation of mine waste units to be used as a backfill sources may need to be delayed until the end of operations, thereby limiting concurrent reclamation.

5.3.3.2.6 Fisheries, Wildlife, and Plant Habitat

The operator is required to rehabilitate or repair damage caused to fisheries or wildlife habitat.[150] This may require reconstruction of certain landforms or planting of specific vegetation types during reclamation.

The requirement to rehabilitate fisheries and wildlife habitat does not always mean the exact same habitat that was present pre-disturbance must be reestablished upon completion of mining activities. The general intent is for this standard to be applied on a broad basis when large-scale landscape alteration is involved; however certain types of mining, such as placer mining, should always include measures to rehabilitate fisheries and wildlife habitat given its potential effect on instream and riparian habitats.

This standard allows for a change in fisheries or wildlife habitat type without requiring a restoration of the *original* habitat provided that the overall effect on fisheries or wildlife is in accordance with BLM policy (e.g., Aquatic Resource Management Policy 6720) and 43 CFR 3809.420. For example, construction of a tailings impoundment that resulted in the development of riparian habitats could be replaced with non-riparian habitats reclamation, but should be consistent with surrounding upland vegetative communities. Conversely, fisheries habitats altered by placer mining operations should be rehabilitated to provide a stable channel form with adequate vegetation to reduce erosion, dissipate stream energy, and promote the recovery of

[150] 43 CFR 3809.420(b)(3)(ii)(e).

instream habitats similar to levels which were present prior to mining and consistent with BLM policy.

5.3.3.2.7 Notification of Reclamation Completion

The operator must notify the BLM when reclamation in part or all of the project area has been completed so that the BLM may inspect the area.[151] After the BLM receives notification from the operator, the BLM will verify reclamation has or is being conducted according to the reclamation schedule in the Notice or Plan of Operations and will take corrective action early if the reclamation work is not adequate.

5.3.4 Air Quality

All operators must comply[152] with applicable Federal and state air quality standards, including the Clean Air Act.[153] The BLM does not make direct determinations that a particular Notice or Plan of Operations will or will not comply with air quality standards, or even whether an air quality permit is required for the operation. Such legal conclusions are the responsibility of the respective permitting authority.

The BLM may require operators to demonstrate they have the required air quality permits for their operations by providing copies of the permits or certifications from the permitting authorities.

Although the BLM does not permit air emissions, the BLM must analyze the potential impacts to air quality in the NEPA document prepared for a Plan of Operations. In addition, the BLM should conduct the Plan review and environmental analysis in conjunction with the state or Federal regulatory authority that is responsible for permitting under the Clean Air Act.

5.3.5 Water Quality

All operators must comply[154] with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended.[155]

Meeting the performance standards for water quality is similar to the process discussed above for air quality. Most states have groundwater protection requirements as well as delegated authority to enforce the Clean Water Act and issue National Pollutant Discharge Elimination System (NPDES) permits. The BLM must analyze potential impacts to water quality in the environmental analysis document prepared for the Plan of Operations. The BLM can independently require mitigation measures affecting water quality under its FLPMA authority and consistent with applicable land use plans. Where state regulations are absent or incomplete,

[151] 43 CFR 3809.420(b)(3)(iii).
[152] 43 CFR 3809.420(b)(4).
[153] 42 U.S.C. 1857 *et seq.*
[154] 43 CFR 3809.420(b)(5).
[155] 30 U.S.C. 1151 *et seq.*

and measures are needed to address potential impacts to groundwater, measures must be developed during the Notice review or Plan approval.

The best approach to ensure that operators meet water quality standards is to include the corresponding state or Federal water quality permitting agency in the review and/or approval process for the Notice or Plan of Operations. This approach allows the BLM to evaluate potential pollution sources and controls in the mine plan simultaneously with treatment options and effluent limits in order to verify that the applicable agency has determined that the operator is meeting the water quality standards. Alternatively, certification from the state or Federal water quality permitting authority can serve as evidence that the proposed operation is expected to comply with applicable water quality standards.

5.3.6 Solid Waste

All operators must comply with applicable Federal and state standards for the disposal and treatment of solid wastes,[156] including regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (RCRA).[157]

Mining waste (waste from the extraction and beneficiation of ore) is exempt from regulation under RCRA[158] as a hazardous waste (Bevill-exempt); although, it is still subject to regulation under the state and Federal mining and reclamation requirements. There are also some wastes that are not exempt from RCRA regulation that do occur at mining operations. These include laboratory wastes, wastes from water treatment plants, or certain smelter wastes. To classify a particular waste stream for purposes of evaluating the Plan or Notice, the BLM requires that the operator follow the testing procedures and legal determinations found in 40 CFR 264.

A variety of garbage or refuse is generated by even a small mining operation. Examples include trash from day-to-day activity, office waste, broken equipment or parts, shipping containers, reagent containers, and used oil or lubricants.

Used or inoperable equipment, parts, or reagent containers must be removed by the operator and not stored or disposed of onsite. It may be acceptable for certain inert wastes such as wood, cardboard, or paper to be disposed of by onsite burial in a pit or waste rock dump. However, such disposal must be included in the Notice or Plan and has to be covered by the appropriate state or county permits.

The operator must periodically remove petroleum waste products, such as used oil, hydraulic fluids, old fuel, etc., from the site and send the waste to the appropriate recycling center or disposal facility. The operator is not to dispose of used petroleum products by applying them on disturbance areas for control of dust. Generally, used tires are not to be disposed of onsite.

[156] 43 CFR 3809.420(b)(6).
[157] 42 U.S.C. 6901 *et seq.*
[158] 42 U.S.C. 6921(b)(3)(A)(ii).

5.3.7 Fisheries, Wildlife and Plant Habitat

The operator must prevent adverse impacts to Federal threatened or endangered species and their habitat that may be affected by operations in the proposed Plan or Notice.[159] This performance standard does not give the BLM authority to create an independent process for determining whether species or habitat will be "adversely impacted" by mining operations; rather, the BLM will rely on the regulatory requirements under the Endangered Species Act (ESA) to determine if the operator is meeting this performance standard.

If the BLM determines that the operation may affect a listed or proposed species or designated or proposed critical habitat, consistent with BLM Manual 6840, the BLM should prepare a Biological Assessment and initiate consultation or conferencing with the U.S. Fish and Wildlife and/or the National Marine Fisheries Service under Section 7 of the ESA. The operator may request "applicant" status, in which case they would be afforded the opportunity to be involved in the ESA conference or consultation process if the action that requires approval or authorization by the BLM may affect federally threatened, endangered, or proposed species. See the BLM Manual 6840 "Special Status Species", Section .1.F.8 for a more complete discussion of applicants pursuant to Section 7(a)(2) of the ESA. The BLM's approval of the Plan must include a requirement that the operator must follow any reasonable and prudent measures and associated terms and conditions that are issued in the incidental take statement that accompanies the Biological Opinion issued by the Services.

Consultation is not required for Notice-level operations. However, if threatened or endangered species or their critical habitat is present in the project area, a Plan of Operations may be required instead of a Notice, unless the BLM allows for other action under the applicable land use plan or recovery plan.[160] Consequently, when processing a Notice, the BLM should inform the operator of threatened or endangered species or habitat in the project area, and inform the operator about the requirements under Section 7 of the ESA.

5.3.8 Cultural and Paleontological Resources

5.3.8.1 Disturbance of Resources

Operators must not disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building, or object on Federal lands.[161] This standard refers to cultural and paleontological resources identified prior to the initiation of surface-disturbing activities. It should not be misinterpreted to mean that cultural and paleontological resources can never be disturbed.

To comply with the standard for cultural resource protection, the operator is not to disturb such resources prior to the BLM completing the required consultation under Section 106 of the NHPA. As a result of consultation under Section 106, the operator may be required to follow certain site-specific mitigating measures.

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[159] 43 CFR 3809.420(b)(7).
[160] 43 CFR 3809.11(c)(6).
[161] 43 CFR 3809.420(b)(8).

Operators are not to disturb any scientifically important paleontological remains until the BLM completes an investigation and recovery of the resource. Scientifically important paleontological remains may be vertebrate or invertebrate, and include any one or more of the following:

- Uniquely well-preserved specimens of educational or research value.
- Specimens that fill in evolutionary gaps in the paleontological record.
- Fossils of previously unknown life forms.
- Fossil remains of all vertebrate species.

5.3.8.2 Pre-Disturbance Inventory

As noted in 43 CFR 3809.401(c)(1), the operator must provide the inventory of cultural and paleontological resources needed to process a Plan of Operations. The BLM is responsible for providing the necessary inventory in advance of activities conducted under a Notice. An on-the-ground inventory is not mandated for all projects. The BLM specialists will provide input as to the level of inventory required in a particular project area prior to surface disturbance.

5.3.8.3 Resources Discovered After Operations Begin

If, after the commencement of surface-disturbing activities, the BLM or the operator discover resources that were not noted in the earlier surveys, the operator must immediately cease surface disturbing activities near the find and notify the BLM District/Field Manager of any potential cultural and/or paleontological resources on Federal lands that might be altered or destroyed by continued operations.

The operator must leave such discovery intact until receiving written notice to proceed from the District/Field Office. The District/Field Manager will evaluate the discoveries brought to his or her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the District/Field Office of such discovery, unless alternative arrangements are negotiated with the operator. If the resources discovered are objects subject to the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), then operations can be suspended for 30 days.[162]

Discoveries of cultural resources eligible for listing on the National Register, remains under NAGPRA, or paleontological resources of significant scientific value, may be cause for the BLM to negotiate with the operator for additional time to conduct protection or recovery activities.

5.3.8.4 Financial Responsibility

The BLM has the responsibility and must bear the cost of investigations and salvage of cultural and paleontological resources discovered after a Plan of Operations has been approved, or where

[162] 43 CFR 10.4(d)(2).

a Plan is not involved.[163] This particular standard does not require the BLM to fund or complete within a certain time limit the cultural resource inventories required in advance of surface disturbance before the Plan of Operations is approved.

5.3.9 Protection of Survey Monuments

The performance standard on protection of survey monuments[164] consists of the following two requirements:

- Operators must not damage survey monuments (including witness corners, reference monuments, bearing trees, and line trees) without receiving prior authorization from the BLM. The BLM may authorize the removal or alteration of survey monuments if removal or alteration is determined necessary to conduct operations. Such authorization will be made to the operator in writing and prescribe the requirements for the restoration or reestablishment of such monuments.

- If in the course of operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged, the operator must immediately report the matter to the District/Field Office. Operators must restore or reestablish any survey monuments or corners that they remove or damage, even accidentally, in accordance with the written directions provided by the District/Field Manager.

5.3.9.1 Restore or Reestablish Survey Monuments

Where the proposed activity may disturb Public Land Survey System (PLSS)/Cadastral Survey corners (or has already done so), the operator is responsible for the cost of restoring or reestablishing the corners as necessary. The State Office Cadastral Survey Section, through in-house personnel, contract personnel, and contributed service agreements, or a registered professional land surveyor, can provide the necessary work.

The following performance standards and guidelines are to be provided, as applicable, to the operator by the District/Field Manager when making a determination requiring the restoration or reestablishment of survey monuments:

- The PLSS/Cadastral corner monument(s) must be the base for locating reference monuments.

- The section corner, quarter corner, or subdivision corner will be referenced prior to any monument disturbance. The BLM Geographic Coordinate Data Base (GCDB) will be utilized to assist in identifying corner monument locations.

- The establishment of "reference monuments" should be in accordance with the Manual of Surveying Instructions 2009. Referencing variations to the Manual are acceptable if

[163] 43 CFR 3809.420(b)(8)(iii).
[164] 43 CFR 3809.420(b)(9).

survey grade Global Positioning System (GPS) technology and standards are utilized, and the utmost regard to the fixed location of the corner monument is observed, as well as taking all steps necessary to provide for an efficient and accurate corner restoration process.

- Once referenced, a copy of the corner monument description(s) as well as a map at an appropriate scale showing and describing the reference monuments and their bearings and distance relationships to the corner monument, is to be submitted to the District/Field Office for acceptance and placed in the case file.

- The corner monument may be disturbed once referenced. If disturbance is simply monument burial, the monument may be left in place. If it is destruction or damage, the corner monument is to be removed and retained until restoration can take place.

- Once operations are complete, the removed corner monument(s) is to be restored back in the original location(s) from the established reference monuments in accordance with the current Manual of Surveying Instructions, its circulars and amendments.

- In the event a corner monument cannot be restored back to its original location or when it is impracticable to occupy its location (e.g., under water, rock cliff, swamp/marsh land, etc.), the restoration of a corner monument is not required and may be waived in writing by the authorized officer. The corner monument (stone/wood post/brass cap) is to be delivered to the District/Field Office for return to the State Office, Cadastral Survey Section.

- Prior to reclamation acceptance, the monument(s) restoration or reestablishment verification will be reviewed and approved in writing by the BLM District/Field Office and State Office, Cadastral Survey Section.

- Restoration or reestablishment of survey monuments is a component of reclamation and is subject to the financial guarantee requirements to ensure its performance. Restoration or reestablishment costs are to be included in the reclamation cost estimate.

5.3.10 Fire Prevention

Operators must comply with all applicable Federal and state fire laws and regulations, and will take all reasonable measures to prevent and suppress fires in the project area.[165] Operators working under a Plan of Operations may be required to incorporate certain fire control measures into their operations. Such measures could include maintaining fire suppression equipment, construction of firebreaks around the operations, and removal of slash piles that constitute a fire hazard. Mining operations that exercise standard care in fire prevention probably do not require special restriction as to operating hours.

Operators working under a Notice may be required to comply with all fire restrictions that apply to other public land users. This includes restrictions on off-road travel, operating hours, open

[165] 43 CFR 3809,420(b)(10).

flames, spark arrester requirements for equipment, and requirements to carry fire suppression equipment.

Operators working under either a Notice or Plan may be held financially responsible for fires caused by their activities.

5.3.11 Acid-Forming, Toxic, or Deleterious Materials Management

The operator must incorporate identification, handling, and placement of potentially acid-forming, toxic, or other deleterious materials into the operation procedures, facility design, reclamation, and environmental monitoring programs to minimize the formation and impacts of acidic, alkaline, metal-bearing, or other deleterious leachate.[166]

The Plan or Notice must state how the operator will identify, handle, treat, and reclaim all acid forming, toxic, or other deleterious material during all phases of the operation. Such measures must be integrated into the mine plan and not left for later consideration. Successful performance of this standard includes taking reasonable measures to identify such materials both in advance of, and concurrent with, mining.

Determining whether rock or overburden materials require special handling is based on a variety of tests (acid-base accounting, humidity cells, leachate extraction tests, whole rock analysis, etc.). While standard protocols are available for most tests, a final determination as to the acid generating character of the material requires evaluating the test results against site-specific environmental and mineralogical conditions under a specific mine plan. There are no established testing criteria to determine whether acid generation will or will not be an issue without also considering the site-specifics of the particular mine plan. For example, rock with a net acid generating potential greater than 20 could present no problem in a dry underground mine, but might require extensive special handling at an open pit mine in a wetter environment. Consult the BLM's Reclamation Handbook for an overview of the ARD issue and a list of references on ARD evaluation.

5.3.11.1 Source Control

The operator must handle, place, or treat potentially acid-forming, toxic, or other deleterious materials in a manner that minimizes the likelihood of acid formation and toxic and other deleterious leachate generation.

As a performance standard the operator must make a good faith effort to use all reasonably applicable technology to keep mine waste from generating leachate that could cause environmental impacts. The primary environmental controls that must be used are methods that will stop or minimize the formation of deleterious leachate.

[166] 43 CFR 3809.420(b)(11).

For potentially acid forming materials this standard could require that such materials be either:

- Mixed with acid-neutralizing materials or additives.
- Treated to stop or slow the acid generating reactions.
- Placed away from potential contact with surface or ground waters.
- Covered to limit or prevent the infiltration of precipitation.
- Some combination of the above.

Operators generating other mine wastes that could generate alkaline or metal-bearing leachate are required to apply similar source control measures to meet this performance standard.

5.3.11.2 Migration of Mine Drainage

To the extent that the operator cannot prevent the formation of acid, toxic, or other deleterious drainage, they must minimize migration of leachate. The standard recognizes that it is not always possible to totally prevent the formation of acid, toxic, or other deleterious drainage. When this occurs, measures must be taken to keep reaction products from migrating out of the mine waste and into the environment. Some environmental control measures that the operator might need to use to meet this performance standard include:

- Diverting run-on water or penetration of meteoric water to keep it from entering and mobilizing reaction products.
- Installation of capillary breaks to prevent upward migration of reaction products.
- Diverting or drawing down groundwater to keep it from migrating through the mine waste.
- Some combination of the above.

5.3.11.3 Capture and Treatment

The operator must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. The performance standard recognizes that when it is not possible to prevent the formation or migration of leachate or effluent, the operator must capture and treat it to meet the applicable water quality standard. While complete capture of seepage is not always possible, the treated discharge, when mixed with the un-captured leachate, must meet the applicable effluent limit at the point of compliance.

Long-term, or post-mining, effluent capture and treatment are not acceptable substitutes for source and migration control; and the operator may rely on them only after all reasonable source and migration control methods have been employed. While capture and treatment can be highly

effective at limiting environmental impacts, in order to meet this performance standard, the operator must first apply source and migration control measures to the mining and reclamation plans in order to minimize treatment needs. Operating plans that propose to "treat water if necessary" must include source control measures to satisfy this performance standard.

Water treatment systems can include active, passive, or semi-passive approaches. In addition to requiring approval during the Plan of Operations review process, water treatment systems must comply with any separate authorizations from the state or Federal permitting authority and require an NPDES permit where discharging to surface water. Water treatment systems must be operated and maintained in compliance with all state or other Federal standards.

All treatment systems generate some waste product, whether it is sludge, liquid concentrate, or solid waste residue. Measures for removal, stabilization, control, and reclamation of waste products from water treatment systems must be integrated in the operating and reclamation plans. Disposal and reclamation of waste product must achieve long-term stability in the post-reclamation environment and in conformance with applicable state and Federal environmental standards.

The operator is responsible for any costs associated with water treatment or facility maintenance after project closure. To make sure the operator meets all responsibilities to cover all costs associated with water treatment or facility maintenance after mining has ceased, the District/Field Office may consider establishing a long-term trust fund under 43 CFR 3809.552(c). See Section 6.3 Types of Financial Guarantees, for further discussion on trust funds.

5.3.12 Leaching Operations and Impoundments

This performance standard applies to process waters in leach pads, vats, ponds, or tanks and the associated solution circuit for all types of solution mining.[167] The standard applies to tailings impoundments, holding ponds, reagent mixing ponds, or other process solution and wastewater containment structures.

5.3.12.1 Design and Operating Requirements

The operator must design, construct, and operate all leach pads, tailings impoundments, ponds, and solutions-holding facilities according to standard engineering practices so as to achieve and maintain stability and facilitate reclamation.

One method to ensure this standard is met is for the operator to have the facility designed by a licensed professional engineer, with construction oversight and verification by an engineering firm using standard quality assurance procedures. A stability analysis should be performed as part of the design evaluation using acceptable engineering standards for structures in that particular seismic region.

[167] 43 CFR 3809.420(b)(12).

In order to facilitate reclamation, ore heaps and tailing impoundments will be designed so that the transition from operation to reclamation can be easily accommodated. For example, an ore heap proposed to be regraded on the leach pad liner at a 3H:1V slope does not facilitate reclamation if it is loaded at a 2H:1V slope up to the margin of the leach pad. The extra material either has to be off-loaded, an expensive and time-consuming process, or the liner has to be extended along the perimeter at closure.

5.3.12.2 Liners and Leak Prevention

The operator must have a low-permeability liner or containment system designed and constructed that will minimize the release of leaching solutions to the environment. The operator must monitor to detect potential releases of contaminants from heaps, process ponds, tailings impoundments, and other structures and remediate environmental impacts if leakage occurs. While a large volume of technical material (see BLM *Solid Minerals Reclamation Handbook*, H-3042-1) has been written on how to design, build, and operate leaching facilities or tailings impoundments, this performance standard emphasizes some basic requirements.

The operator must construct such facilities with a low permeability liner or containment system. The standard is met when the release of leaching solutions to the environment has been minimized using the best available technology.

The operator must monitor for the release of leaching solutions. Such monitoring can be accomplished by placing monitoring devices beneath or between the heap, pond, or tailing impoundment liner system or by adjacent monitoring wells or lysimeters. Environmental impacts caused by the leakage or seepage of process or waste solutions must be remediated in order to satisfy this performance standard.

5.3.12.3 Containment Requirements

The operator must design, construct, and operate cyanide or other leaching facilities and impoundments to contain precipitation from the local 100-year, 24-hour storm event in addition to the maximum process solution inventory. The containment must include allowances for snowmelt events and draindown from heaps during power outages in the design.

The 100-year, 24-hour storm event is a site-specific standard. Obtaining precipitation data for the project area, or extrapolating the design event based on existing data, is a critical step in establishing the design criteria at the project locale in order to meet this performance standard.

The facility layout must route upgradient run-on waters around or under the process or wastewater facility so the precipitation does not enter the containment system during the design storm event. Ideally, the only water entering the system would be from direct precipitation. Modeling of precipitation, evaporation, water loss, and the addition of make-up water should be conducted to determine the amount of storage available throughout the anticipated life of the mine facility.

Once all additions and losses are accounted for, predictions can be made comparing the remaining freeboard[168] with the design storm event and a determination made whether the operation would meet this performance standard. Land application disposal of process solutions will not be relied upon to satisfy the 100-year, 24-hour storm event containment requirements in this performance standard.

Vats, tanks, pipes, or other parts of the process circuit may break or leak. These components can contain high concentrations of leaching solutions or process reagents that if released could create significant impacts. The operator must construct a secondary containment system around vats, tanks, or recovery circuits that can retain the anticipated maximum amount of solution from a leak or failure, thereby preventing the release of toxic solutions to the environment. Secondary containment can be achieved by incorporating berms or lined areas around these facilities. Generally, secondary containment areas are designed to contain 110 percent of the maximum volume of solution that would be released from a leak or failure.

5.3.12.4 Solution Access

The operator must exclude access by the public, wildlife, or livestock to solution containment and transfer structures that contain lethal levels of cyanide, metals, acidity, or other constituents in solution. All fencing and signing to exclude the public must supported by the materials required by 43 CFR 3715.3-2 and be approved under 43 CFR 3715.3-4.

This may be accomplished by fencing, netting, or enclosure to meet this performance standard. It should be noted that hazing methods, such as using loud music to scare aware water fowl, have not proven totally effective at preventing waterfowl from coming in contact with leaching solutions.

What constitutes "lethal levels of cyanide or other solutions" under the regulations is difficult to determine. This performance standard was initially developed in response to migratory bird deaths from open ponds containing cyanide. Few bird deaths have been observed where cyanide solutions contain less than about 20 parts per million of free cyanide. While this should not be considered a definitive standard, it may be useful to identify the issue for further evaluation. Other constituents in solutions may also pose a threat to the public, livestock, or wildlife.

Careful characterization of exposed solutions is needed in order to determine the extent which the operator is required to exclude access.

5.3.12.5 Solution Detoxification

In order for reclamation to be considered complete, operators must have detoxified leaching solutions and spent ore heaps to the applicable regulatory criteria and manage tailings or other process waste to minimize impacts to the environment from contact with toxic materials or leachate. Often there is a state standard that determines the detoxification requirement. The detoxification criterion should be established during the Plan of Operations approval process. If

[168] The distance between normal water level and the top of a structure, such as a dam, that impounds or restrains the water.

no standards have been developed in advance for the project, then detoxification must reduce cyanide content to levels where discharge would be in compliance with the applicable water quality standards.

Acceptable practices to detoxify solutions and materials include natural degradation, freshwater rinsing, chemical treatment, biological degradation, or equally successful alternatives methods. While active treatment of cyanide using reagents such as hydrogen peroxide or hypochlorite are effective, consideration should be given to the potentially deleterious by-products when compared to natural degradation. Upon completion of reclamation, all materials and discharges must meet applicable effluent standards.

5.3.12.6 Temporary or Seasonal Closure

In cases of temporary or seasonal closure, the operator must provide adequate maintenance, monitoring, security, and financial guarantee. The BLM may require the operator to detoxify process solutions, particularly in locations accessible to the public, livestock, or wildlife.

To meet this standard, the operator must maintain a presence onsite as long as toxic solution levels are present. The operator must maintain liners, fences, and netting in good repair, continue monitoring of the leak detection systems, maintain site security to prevent public access, and keep in place the financial guarantee amount needed to complete any remaining reclamation obligations, including detoxification of process solutions.

If the operator does not plan to continue site maintenance, monitoring, and security, then the process solutions must be detoxified before the temporary or seasonal closure (see Section 4.3.2.5 Interim Management Plans and Chapter 7 Cessations and Abandonment).

5.3.13 Maintenance and Public Safety

During all mine operations, the operator is responsible for maintaining the structures, equipment, and other facilities in a safe and orderly manner.[169] Hazardous sites or conditions resulting from operations have to be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations.

The proposed Plan or Notice must contain specific measures that may be needed to maintain public safety, including controlling site access, fencing, and signing of hazardous solutions, and placement of fences, barriers or berms along the top of pit highwalls. Fencing, signing, or placing access restrictions around mine openings may also be needed to protect public safety. The operator must obtain concurrence for these access restrictions under the 43 CFR 3715 regulations in addition to obtaining acceptance or approval of their placement under the 43 CFR 3809 regulations.

All site facilities and visitors must comply with safety requirements of the Mine Safety and Health Administration (MSHA) and the corresponding state safety agency and applicable BLM safety guidance (see BLM Handbook *Safety and Health Management,* H-1112-1, and *Safety and Health for Field Operations,* H1112-2).

[169] 43 CFR 3809.420(b)(12).

Chapter 6 Financial Guarantees

This chapter covers operator and BLM responsibilities for establishment, maintenance, termination, and forfeiture of financial guarantees under 43 CFR 3809.500 through 3809.599. The regulations at 43 CFR 3809 use the term "financial guarantee" in reference to the contracted document and any financial instrument used to guarantee that the operator will perform reclamation required by the regulations.[170] The surface management regulations that were in effect before January 20, 2001, used the term "bond" to describe such legal and financial instruments.

This handbook does not cover the adjudicative responsibilities and procedures for processing, accepting, rejecting, obligating, and maintaining financial guarantees. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for guidance on the adjudication process.

6.1 Financial Guarantee Requirements

The financial guarantee requirements differ depending on the level of activity, type of authorization, and time the authorization occurred. Figure 6.1-1, *Financial Guarantee Process*, flowcharts the main steps in posting a financial guarantee. The financial guarantee requirements also apply to all operations authorized by the Mining Law on public lands where the mineral interest is reserved to the United States.[171]

6.1.1 Pre-January 20, 2001, Notices

For Notices that were filed with the BLM before January 20, 2001, and had not been modified under 43 CFR 3809.330 or 3809.331, or extended under 43 CFR 3809.333, the operator was not required to provide BLM with a financial guarantee for that operation.

6.1.1.1 Extended Notices

Notices that were filed with the BLM before January 20, 2001, may have been extended under 43 CFR 3809.333; as part of that extension request, the operator must have provided an acceptable reclamation cost estimate (RCE) that met the requirements of 43 CFR 3809.552(a) and 3809.554(a). The operator must have provided the BLM with an acceptable financial guarantee for the entire Notice that met the requirements of the current regulations.

6.1.1.2 Expired Notices

If an operator chose not to extend a pre-January 20, 2001, Notice under 43 CFR 3809.333, no financial guarantee was required, but the operation must have been reclaimed. An operator's reclamation obligations continue beyond the expiration or any termination of the Notice until all reclamation requirements are satisfied.

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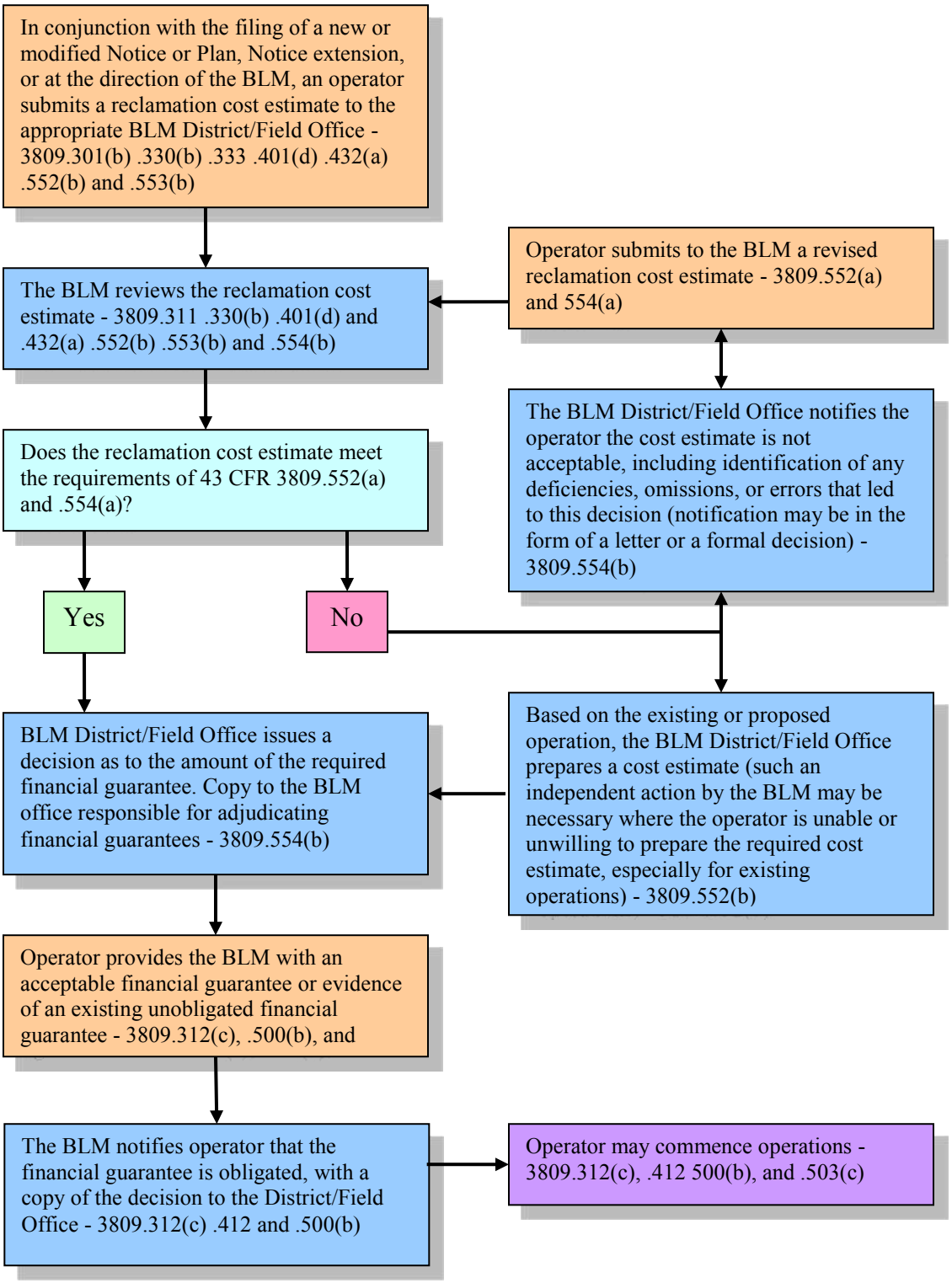
[170] A financial guarantee consists of BLM Form 3809-1, Surface Management Surety Bond, or BLM Form 3809-2, Surface Management Personal Bond and the financial instrument that secures the personal bond.
[171] 43 CFR 3809.2.

Figure 6.1-1 - Financial Guarantee Process



6.1.1.3 Modified Notices

For Notices that were filed with the BLM before January 20, 2001, and have been modified under 43 CFR 3809.330 or 3809.331, the operator must have provided the BLM with an acceptable financial guarantee for the entire operation before continuing operations under the modified Notice. Any proposed modification must be accompanied by an estimate of the cost to fully reclaim the operation as required by 43 CFR 3809.552. The RCE and financial guarantee required for the operation under a modified Notice must have been for the entire Notice, not just the area of change.

6.1.2 Pre-January 20, 2001 Plans of Operations

For Plans of Operations approved prior to January 20, 2001, the operator must have provided the BLM with an acceptable financial guarantee that met the requirements of the regulations by November 20, 2001. A new financial guarantee was not required if a financial guarantee already existed that satisfied the regulations.[172]

6.1.3 Casual Use

Operators of activities that are considered by the BLM to be casual use are not required to provide the BLM with a financial guarantee. Casual use is defined at 43 CFR 3809.5 as activities ordinarily resulting in no or negligible disturbance of the public lands or resources.

6.1.4 New Notices

For Notices filed or modified with the BLM after January 20, 2001, the operator must provide an acceptable RCE that meets the requirements of 43 CFR 3809.552(a) and 3809.554(a). An acceptable RCE must be provided to the BLM for the Notice to be considered complete under 43 CFR 3809.301(b). Prior to commencing operations, the operator must provide the BLM with an acceptable financial guarantee. The financial guarantee must meet the requirements of the regulations as specified by 43 CFR 3809.551 through 3809.573.

6.1.5 New Plans of Operations

For all Plans of Operations filed or modified with the BLM after January 20, 2001, the operator must provide an acceptable RCE that meets the requirements of 43 CFR 3809.552(a) and 3809.554(a). The RCE should be submitted to the BLM at a time specified by the BLM. The operator must provide the BLM an acceptable financial guarantee prior to commencing operations. The financial guarantee must meet the requirements of the regulations as specified by 43 CFR 3809.551 through 3809.573.

[172] 43 CFR 3809.551 through 3809.573.

6.1.6 Compliance and Enforcement

Any decision concerning the need, amount, acceptability, and/or forfeiture of a financial guarantee is part of the BLM's compliance and enforcement program, and not an authorization to conduct operations. All decisions concerning the need, amount, acceptability, and forfeiture of a financial guarantee are subject to appeal under the provisions of 43 CFR 3809.800 through 3809.809.

6.2 Reclamation Cost Estimates

6.2.1 Operator's Estimate

6.2.1.1 New or Modified Operation

When submitting a new Notice or Plan of Operations,[173] the operator must provide the BLM with an RCE that meets the requirements of 43 CFR 3809.552(a) and 3809.554(a), and must be acceptable to the BLM as required by 43 CFR 3809.554(b). Where an existing Notice or Plan of Operations is proposed to be modified, the operator must provide the District/Field Office with an estimate of the reclamation costs for all components of the existing and proposed operation that will be affected by the modification.

The operator should include detailed documentation on how the cost estimates were calculated, including cut and fill volumes, push distances, haul distances, and the source of the equipment costs, as part of the RCE. Although not required, the BLM should encourage the operators to submit the RCE both in hardcopy and in a standardized electronic format that could be easily updated with current costs by the BLM for future reviews.

6.2.1.2 Cost Estimate for Part of an Operation

Where the District/Field Manager authorizes an operator to provide the BLM with a financial guarantee under 43 CFR 3809.553 that covers only the current or proposed phase of the operations ("phased financial guarantee" or "phased bonding"), the operator must prepare an RCE for the phase of the operations to be covered by the financial guarantee. The RCE for a phased financial guarantee must conform to the same standards as the RCE for a financial guarantee for the entire operation. In addition to providing the cost estimate for the proposed phase, the operator must also prepare a separate RCE for all operations proposed in the Plan of Operations on public lands before surface disturbance can occur.

6.2.1.3 Long-Term Funding Mechanism

When a trust fund or other funding mechanism is required under 43 CFR 3809.552(c), the operator must provide the District/Field Office with a cost estimate for the monitoring, construction, operation, maintenance, replacement, and other activities for the required facilities, treatment, or other needs documented in the Plan of Operations. The operator's estimate must

[173] 43 CFR 3809.301(b)(4) and 3809.401(d)

project when the cost obligations will occur. For recurring costs, such as maintenance of a water treatment facility, the frequency, timing, and duration of the obligation should be estimated for each cost component. The operator's cost estimate prepared for long-term obligations to be covered by the long-term financial guarantee under 43 CFR 3809.552(c) should be documented separately from the RCE.

6.2.1.4 Assumptions and Conditions

The RCE must be based on the following assumptions and conditions:[174]

- The estimate must cover all relevant operation, maintenance, and administrative costs for all reclamation required under the filed Notice or approved Plan of Operations.[175] The cost estimate may however provide more reclamation details than is specified in the Notice or Plan.

- Costs must be estimated as if the BLM were hiring a third party contractor to perform all required reclamation.

- Costs must include the use of offsite equipment as if the project area was vacated, and the estimate must include all associated mobilization and demobilization costs.

- The estimate must include, when applicable, all interim maintenance required to keep the area of operation in compliance with applicable safety and environmental requirements while reclamation contracts are developed and executed.

- The estimate must cover costs to construct and maintain any long-term treatment facilities or post-closure structures required by the filed Notice or approved Plan of Operations.

- Labor costs must be based on federally mandated labor rates, as required by the Davis-Bacon Act (40 U.S.C. 3141 *et seq.*) and the Federal Acquisition Regulations (FAR), 48 CFR 22.403-1) for contracts over $2,000. If the reclamation is solely for the dismantling, demolition, or removal of improvements and no other actions, such as ripping or reseeding of the disturbance, are involved, then contracting is under the Service Contract Act (48 CFR 22.1002) and Davis-Bacon wage rates do not apply. If construction, alteration, or repair of the improvements is contemplated, even if such work is under a separate contract, then the Davis-Bacon wages apply.[176]

6.2.1.5 Maximum Reclamation Cost

The RCE must reflect the maximum cost of reclamation for the proposed disturbance to be covered by the financial guarantee. The point of maximum reclamation costs is often when there is the greatest area of disturbance, greatest volume of materials needing special handling, or

[174] 43 CFR 3809.552(a) and 3809.554(a).
[175] 43 CFR 3809.301(b)(4), 3809.401(d), 3809.552(a) and for extended Notices 43 CFR 3809.1-3(d).
[176] www.access.gpo.gov\davisbacon.

some other factor or combination of factors escalating the cost to reclaim. The maximum cost of reclamation is generally not at the end of the project life.

6.2.1.6 Operating and Maintenance Costs

Reclamation operating and maintenance costs reflect the direct current costs of reclamation based on the filed Notice or approved Plan of Operations. Where applicable, reclamation costs should be estimated for the following closure tasks: interim operation and maintenance, hazardous materials treatment, water treatment, demolition, removal and disposal, earthwork, drill hole plugging, revegetation, mitigation, and post-reclamation operation, maintenance, and monitoring requirements.

6.2.1.6.1 Interim Operation and Maintenance

If an operator abruptly ceases and abandons operations, the BLM may contract with a third party to maintain the area of operation in compliance with applicable safety and environmental requirements. The RCE must include the cost of providing immediate site operation and maintenance, where appropriate.

Interim operation and maintenance costs may vary significantly depending on the individual site needs, and may include labor, equipment, and materials for pumping of fluids to prevent overflow of process ponds, costs for support equipment and electricity to operate the pumps, and site security. There is no set time period to use in estimating the costs for the care and maintenance of a site prior to the start of reclamation; much depends on the BLM's ability to obtain access to the financial guarantee, especially in bankruptcy cases. It is a good rule-of-thumb to allow for a minimum of 6 months of interim operation and maintenance by a contractor. Large operations or project areas with limited seasonal access may warrant a longer time period.

6.2.1.6.2 Hazardous Materials

The RCE must include the cost of decontaminating, neutralizing, disposing, treating, or isolating hazardous materials used, produced, or stored on the site. The estimated cost for handling hazardous materials should assume, unless otherwise documented, that the materials are properly stored and labeled.

If upon site inspection, the BLM determines that the operator is using, producing, or storing material onsite that could be hazardous, e.g., unlabeled barrels, and if the BLM is unsuccessful in enforcing the operator's obligation under the Plan or Notice to properly manage those materials (operator has failed to comply with a BLM noncompliance order, see Section 9.2 Enforcement Actions), the BLM must update the RCE to reflect the potentially higher cost of disposing of such material. This distinction is important as the disposal of properly managed hazardous materials may be a fraction of the disposal cost for materials not properly stored and identified.

6.2.1.6.3 Water Treatment

The RCE must identify all necessary construction and maintenance water treatment costs needed to ensure that mine discharge or drainage will meet relevant standards. The cost of long term, post-reclamation operation, maintenance, and replacement requirements may be addressed in a trust fund established under 43 CFR 3809.552(c).

6.2.1.6.4 Mine Facilities

The RCE must include the costs of demolition, removal, and disposal of all mine facilities, equipment, and materials from the project area. No salvage value for structures, equipment, or materials is allowed in the cost estimate.

The RCE must exclude disposal costs for those facilities that have been approved in writing by the BLM for post-reclamation BLM use.

The RCE may also exclude the removal and disposal costs for operable mobile equipment, e.g., trucks, dozers, etc., from the cost estimate. However, if the BLM determines during routine site inspections that the mobile equipment is inoperable and the operator refuses to repair or will not remove the inoperable equipment from the project area (operator has failed to comply with a BLM noncompliance order, see Section 9.2 Enforcement Actions), the BLM must update the RCE to include the cost of removing and disposing of that inoperable equipment. In such circumstances, an updated RCE should not replace vigorous enforcement of the performance standards. Rather the RCE should be updated as part of the overall enforcement process.

6.2.1.6.5 Earthwork

The RCE must include the costs of all required earthwork. The RCE must address the cost of hauling, placement, regrading, and backfilling to reclaim mine features, including roads that have not been specifically identified and approved to remain open.

6.2.1.6.6 Drill Holes

The RCE must include the cost of plugging, capping, and isolation of drill holes, including exploration, production, and monitoring holes, and water monitoring and piezometer wells, where applicable. In determining the plugging costs, it must be considered whether drill holes encounter water, water under artesian pressure, or are dry. Proposed plugging must meet all applicable Federal and state requirements.

Where the operator is proposing drilling, the RCE must include, at a minimum, the estimated cost of plugging the maximum number of drill holes that may be open at one time. In determining the number of drill holes that may be open at any one time, there can never be less than one drill hole for each drill rig that will be working in the project area. Where the submitted Notice or approved Plan of Operations calls for drill holes to be plugged, but does not specifically require the drill holes be plugged before the drill rig has been moved from the drill pad, the RCE must include the plugging cost for all drill holes identified in the Notice or Plan of

Operations, or the plugging cost for all drill holes authorized in a particular phase of an operation where the financial guarantee is being phased under 43 CFR 3809.553(a).

For all drill holes, and water, monitoring, and piezometer wells authorized to be left open for an interim period, the estimated plugging cost must be included in the RCE.

6.2.1.6.7 Revegetation

The RCE must include the cost of obtaining the seed mix specified in the reclamation plan and the cost of soil preparation, such as ripping or harrowing; soil amendments, such as mulching or fertilizer; application of the seed mix; noxious weed control; and placement of tree and shrub seedlings, if required in the Notice or Plan. The RCE must also include the cost for hauling and placement of growth medium, if not addressed under earthwork and the cost of watering seed beds and seedlings, if necessary, to establish growth.

6.2.1.6.8 Mitigation

The RCE should include costs of reclamation work for mitigation, which may include avoiding, minimizing, rectifying and reducing, or eliminating the operation's impacts, or compensating for the impacts, that are required in the Plan of Operations. The RCE should also include the cost of any deferred compensatory mitigation the BLM is requiring the operator to perform. For example, where the approved Plan requires the operator to develop new wetlands to compensate for wetlands lost; until that wetland development is completed the cost estimate must include the cost of that mitigation.

6.2.1.6.9 Post-Reclamation Costs

The RCE must include the costs of meeting any long-term construction, operation, maintenance, or replacement of any treatment facilities and infrastructure that are not ensured by a trust fund established by 43 CFR 3809.552(c).

6.2.1.7 Identified Costs

In calculating the cost to perform these interim operations, reclamation, closure, mitigation, and monitoring tasks discussed above, the operator's estimate must identify the relevant operating and maintenance costs relating to reclamation including:

- Equipment rental or acquisition costs.
- Equipment operation costs.
- Equipment maintenance costs.
- Cost of operating supplies.
- Labor costs for operations, maintenance and supervision.

- Site maintenance including roads, infrastructure, power lines, fences, and monitoring facilities.
- Reclamation materials acquisition costs.
- Mobilization and demobilization costs.

6.2.1.8 Data and References

Data and reference sources that may be useful in preparing and reviewing the RCE are applicable parts of the Office of Surface Mining *Handbook for Calculation of Reclamation Bond Amounts;*[177] BLM's *Solid Minerals Reclamation Handbook* H-3042-1; *Caterpillar Performance Handbook;*[178] products and services by CostMine (use for operator costs only-does not consider third party contract estimates);[179] *R.S. Means Site Work & Landscaping Cost Data* and *R.S. Means Heavy Construction Cost Data;* [180] and Equipment Watch's *Cost Reference Guide* and *Rental Rate Blue Book for Construction Equipment.*[181] The user of these and other reference materials must be cognizant of how to apply the data to the RCE. For example, the RCE must reflect the BLM's cost to have a third-party contractor perform the work; owner/operator cost data does not reflect the BLM's contracting cost.

6.2.1.9 Administrative Costs

The RCE must include all costs as if the BLM were hiring a third-party contractor to perform all required reclamation.[182] These costs include the BLM's direct and indirect contracting costs, which are, in part, based on the FAR (48 CFR parts 1-53), plus standard costs associated with government and industry contracting practices. The responsible BLM specialist will coordinate with the State Office procurement analyst concerning current labor wages, contracting requirements, and advice on various types of contracts, contract language, and administration.

This handbook contains suggested percentages for some of these administrative costs. Unless otherwise noted, these percentages are rules-of-thumb and not specified by regulation or law. Figures or percentages, other than those listed below, should be included in a calculation if they are explicitly addressed in a Federal-State Agreement regarding the financial guarantee and/or are required by Federal or state law.

Administrative costs that the RCE should include, as appropriate, are engineering, design and construction plan, cost contingency, prime contractor's profit, contractor's liability insurance

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[177] Office of Surface Mining, Department of the Interior (http://www.wrcc.osmre.gov/).
[178] Caterpillar Inc., Peoria, IL 61629 (www.cat.com).
[179] MineInfo USA, CostMine, 1120 N. Mullan Rd. Suite 100, Spokane Valley, WA 99206 (http://costs.infomine.com/).
[180] RSMeans, 63 Smiths Lane, Kingston, MA 02364-9988 (http://www.rsmeans.com/index.asp).
[181] Penton Media, Inc., EquipmentWatch, 1735 Technology Drive, Suite 410, San Jose, CA 95110-1333 (http://www.equipmentwatch.com/).
[182] 43 CFR 3809.552(a) and 3809.554(a).

premium, contractor's performance and payment bonds, BLM contract administration, and BLM indirect costs.

6.2.1.9.1 Engineering, Design and Construction Plan

An engineering, design, and construction plan provides the details needed for contracting the reclamation construction work. The RCE should reflect the costs to prepare such plan. Should the operator fail to reclaim, the BLM or its contractor may need to undertake a number of tasks including:

- Prepare maps and plans to show the extent of required reclamation.
- Survey of topsoil and growth medium stockpiles to determine amount of material available.
- Sample and analyze waste rock, tails, heap material, surface and ground water, etc.
- Sample and analyze topsoil and waste piles to determine whether special handling or treatment is necessary.
- Evaluate structures to determine requirements for demolition and removal.
- Evaluate storm water facilities and process solutions or water impoundments to determine if treatment, clean out, or other improvements are necessary.
- Prepare an environmental analysis or site studies before reclamation may commence.

Not all operations will require a line item for an engineering, design, and construction plan in the RCE. Specifically, notice-level and some other small or uncomplicated operations may not require the BLM to develop detailed engineering information.

The actual cost of developing the engineering, design, and construction plan will depend to a great extent on the specifics, including reclamation complexities, of the proposed operation. The amount or percentage to apply should be based on available data within the state. Absent specific local or state data, the BLM should estimate the cost for an engineering, design, and construction plan, where necessary, as 4 to 8 percent of the estimated reclamation operation and maintenance costs, depending on the size of the operation. See Illustration 6.2-1 for specific guidance of what percentage to apply.

6.2.1.9.2 Contingency

A contingency allowance is for cost overruns that regularly occur in reclamation contracting but cannot be ascertained when an operation plan is being reviewed. Contingency costs generally reflect the level of detail and completeness of the cost estimate, as well as the level of uncertainty in the assumptions used for the RCE.

Development of the engineering, design, and construction plan reduces the amount of operational unforeseen circumstances and costs. However, contingency costs are not intended to account for changes in the scope of the operation, or unforeseeable or unanticipated events such as earthquakes, labor strikes, or floods. An operator is not required to provide a financial guarantee to address unanticipated events or worst-case scenarios.

Where the proposed operation involves a relatively small, uncomplicated reclamation effort, and development of an engineering, design, and construction plan is not anticipated, there may not be a need to include a contingency line item in the RCE. Contingency costs would generally not be required for Notice-level operations.

Federal and state agencies that routinely prepare construction cost estimates apply contingencies, ranging from 3 to 45 percent of the operation and maintenance costs. The amount or percentage required should be based on available reclamation or construction contract information within the state. Absent specific local or state data, the BLM should calculate the contingency cost, where applicable, as 4 to 10 percent of the estimated reclamation operation and maintenance costs, depending on the size of the operation.[183] See Illustration 6.2-1 for specific guidance on what percentage to apply.

6.2.1.9.3 Contractor Profit

Government contracts generally include a line item for prime contractor's profit over and above the estimated reclamation operating and maintenance costs. The operator's RCE must account for prime contractor's profit.

The RCE must use state or local contract information to determine the amount or percentage of prime contractor's profit. Where state law specifies an amount or percentage, BLM must use that figure. Absent specific local or state data, the RCE should estimate contractor profit as 10 percent of the estimated reclamation operation and maintenance costs.

The line item for prime contractor's profit should not be added where operating and maintenance costs already include the contractor's profit. In such cases, the operator's reclamation operating and maintenance estimate must document or itemize the inclusion of the prime contractor's profit.

6.2.1.9.4 Liability Insurance

The RCE should include the cost of obtaining contractor's liability insurance. The RCE may contain a separate line item for liability insurance premium, or it can itemize the insurance premium in the reclamation operating and maintenance estimate. The contractor's liability insurance premium should be estimated as 1.5 percent of the estimated labor costs for the project and included in the RCE.

[183] Include a contingency allowance for all operations with estimated reclamation operation and maintenance costs over $100,000.

6.2.1.9.5 Performance and Payment Bonds

Federal construction contracts exceeding $100,000[184] require payment of premiums for both a performance bond and a payment bond, as required by the Miller Act, must be included in the cost estimate. A set amount equal to 3 percent of the estimated contract cost should be used to calculate the payment of premiums for both a performance bond and a payment bond.

6.2.1.9.6 Contract Administration

Contract administration costs include the BLM's labor and operations costs for the District/Field and State Offices to administer the contract. These costs must be included in the RCE. The amount required to cover the BLM's contract administration costs will depend to a great extent on the specifics, including reclamation complexities, of the proposed operation. Absent available state or local data, estimate the BLM's contract administration and inspection cost for reclamation contracts using 6 to 10 percent of the estimated operation and maintenance costs, depending on the size and complexity of the proposed operation. Generally the larger the amount of the financial guarantee, the lower the percentage needed for contract administration.

6.2.1.9.7 Indirect Costs

Certain BLM indirect costs must be included in the amount of the required financial guarantee. The indirect costs to be covered are calculated as a fixed 21 percent of the estimated BLM contract administration cost.[185] If the BLM is required to administer a reclamation contract under a forfeited financial guarantee, the funds made available by this 21 percent will remain within the state where the reclamation work will be done. These funds are available to pay for within-state indirect costs (building rental, telephone, etc.) associated with the project and any project support needed from other offices such as the National Operations Center, contract officers, or inspectors.

6.2.1.9.8 Federal-State Agreements

If a Federal-State Agreement made through 43 CFR 3809.200 provides for joint administration or deferral of the administration of financial guarantees to the state, the RCE may reflect the state's administrative costs for contracting the required reclamation under certain situations. The Federal-State Agreement must specify that the amount of the financial guarantee must be calculated based on the completion of both Federal and state reclamation requirements as required by 43 CFR 3809.203(d), must be redeemable by the Secretary, and the BLM must concur in the approval, release, or forfeiture of a financial guarantee for public lands. See Section 6.6 Joint Federal-State Financial Guarantees and Section 12.2 New Agreements for further discussion on joint or deferred bonding.

6.2.1.10 Reclamation Cost Estimating Tools

Summary sheets, checklists, and cost models are available to assist the operator in developing and District/Field Office in reviewing the cost estimate. Individual BLM State Offices or

[184] 40 U.S.C. 3131 to 3134.
[185] 21% of 6-10% equals 1.26-2.1% of the estimated operation and maintenance costs.

District/Field Offices may develop their own tools to support the reclamation cost estimating process. When practicable, BLM personnel will use a cost model such as "Sherpa for Reclamation Bonds" to check the reclamation cost estimate and a cost service such as InfoMine USA's CostMine, Mining Cost Service will be used as the source of cost information. The results of the calculations and engineering analysis for an RCE will become a part of the administrative record for that RCE.

Figure 6.2-1, Reclamation Cost Estimate Summary Sheet, is provided as an additional aid to the District/Field Office and operator to assist in documenting the RCE. The user should enter those values in the cost estimate that are appropriate for the operations. Complete details of the reclamation costs should be included in worksheets that support the Reclamation Cost Estimation Summary Sheet.

Figure 6.2-2, Operator Reclamation Cost Estimate Checklist, is a listing of common operational components. The checklist, in addition to the Reclamation Cost Estimate Summary Sheet, should be used by the District/Field Office and operator as a guide to ensure all operational components are addressed in the RCE.

Standardized reclamation cost estimating processes, that include standardized unit costs, schedules, spreadsheets, and models, are useful tools that provide a simplified, efficient, defensible, and consistent means of estimating reclamation costs for both Notices and Plans of Operations. Where appropriate, BLM State and District/Field Offices are encouraged to develop processes based on standardized unit costs to facilitate the review and approval of the operator's RCE.

A process that uses standardized costs may be developed, based on local and/or regional costs, to reclaim typical activities (roads, drill pads, drill-hole abandonment, trenches, pits, structure removal, site stabilization, re-vegetation etc.) for specific kinds of terrain (topography). Figure 6.2-3, Reclamation Cost Model for Notice-Level Exploration, presents an example of a spreadsheet used to calculate the reclamation costs for Notice operations. Note, this sample spreadsheet and the description of the inputs and parameters are provided as an example of the kind of standardized costing tool that a State or District/Field Office may develop. It is not recommended a District/Field Office use this spreadsheet without first evaluating the cost inputs and calculations used in the model.

Where a standardized reclamation cost estimating process is used, the amount of a financial guarantee must be sufficient to meet the requirements of 43 CFR 3809.552(a) and 3809.554(a). The assumptions used in developing the cost inputs must be consistent with both state and Federal regulations and laws. Determining consistency with state and Federal regulations and laws goes beyond the applicable environmental requirements. The assumptions used must also be consistent with applicable contracting requirements, such as Federal Acquisition Regulations (FAR) (48 CFR parts 1-53). For example, under Federal contracting (48 CFR 22.103-2, 48 CFR 52.222-2 and 48 CFR 52.222-4) contractors must perform all contract work, so far as practicable, without using overtime. As such, the RCE must not be based on the assumption that the reclamation contractor will conduct the work using the same employees over a double shift.

Figure 6.2-1 - Reclamation Cost Estimate Summary Sheet
(1 of 2)

Earthwork/Recontouring	Labor	Equipment	Material	Total
Roads				
Drill Site(s)				
Drill Hole Abandonment				
Pits/Adits/Trenches				
Process Ponds				
Heaps				
Dumps (Waste & Landfill)				
Tailings				
Structure & Building Areas				
Storage & Equipment Areas				
Drainage Control				
Mobilization/Demobilization				
Miscellaneous				
Revegetation/Stabilization	Labor	Equipment	Material	Total
Roads				
Drill Site(s)				
Pits/Adits/Trenches				
Process Ponds				
Heaps				
Dumps (Waste & Landfill)				
Tailings				
Structure & Building Areas				
Storage & Equipment Areas				
Drainage Control				
Monitoring				
Miscellaneous				
Detoxification/Water Treatment/Waste Disposal	Labor	Equipment	Material	Total
Process Ponds/Sludge				
Heaps				
Dumps (Waste & Landfill)				
Tailings				
Surplus Water Disposal				
Fluid Management				
Monitoring				
Miscellaneous				
Structure, Equipment & Facility Removal				
Hazardous Materials				
Mitigation				
Operation & Maintenance TOTAL				
Administrative Costs				Total
ED&C Plan				
Contingency				
Contractor Profit				
Liability Insurance				
Performance & Payment Bond				
BLM Contract Administration				
BLM Indirect Cost				
Administrative TOTAL				
GRAND TOTAL				

Figure 6.2-1 - Reclamation Cost Estimate Summary Sheet
(2 of 2)

This summary sheet was developed to aid the operator in developing and the BLM review of the reclamation cost estimation.

1. Wage rate estimates may include base pay, payroll loading, overhead and profit. To avoid double counting of any of the identified administrative costs, the operator must itemize the components of the labor cost estimates or provide the BLM with a signed statement, under penalty of perjury as provided in 18 U.S.C. 1001, that identifies what specific administrative costs are included in the quoted hourly rate.

2. Where costs are included in one of the summary sheet's *Miscellaneous* categories, each item should be documented on accompanying worksheets.

3. *Fluid Management* may only be used when mineral processing activities are involved. Costs provided under this category represent the costs of maintaining proper fluid management to prevent overflow of solution ponds during premature cessation or abandonment of the operations. These are direct costs, including power, supplies, equipment, labor, and maintenance, to manage the fluids while third-party contracts are developed and executed.

4. Handling of hazardous materials includes the cost of decontaminating, neutralizing, disposing, treating, and/or isolating all hazardous materials used, produced, or stored on the site.

5. The cost of any deferred compensatory mitigation the BLM is requiring the operator to perform must be included in the RCE. Mitigation may include measures to avoid, minimize, rectify and reduce or eliminate the impact, or compensate for the impact.

6. Engineering, design and construction (ED&C) plans provide details on the reclamation needed to contract for the required work. To estimate the cost to develop an ED&C plan, use 4-8 percent of the operation and maintenance (O&M) cost. Calculate the ED&C cost as a percentage of the O&M cost as follows: up to and including $1 million, use 8 percent; over $1 million to $25 million, use 6 percent; and over $25 million, use 4 percent. Inclusion of a line item for the development of an ED&C plan may not be necessary for small operations, such as notice-level exploration. With small, uncomplicated reclamation efforts contracting may be able to proceed without developing an ED&C plan.

7. A contingency cost is included in the reclamation cost estimation to cover unforeseen cost elements. Calculate the contingency cost as a percentage of the O&M cost as follows: up to and including $500,000, use 10 percent; over $500,000 to $5 million, use 8 percent; over $5 million to $50 million, use 6 percent; and greater than $50 million, use 4 percent. Inclusion of a contingency cost may not be necessary for small, uncomplicated reclamation.

8. For construction contracts, use 10 percent of estimated O&M cost for the contractor's profit; exclude those O&M costs from the calculation where contractor profit is already covered in the itemized unit costs.

9. Insurance premiums are calculated at 1.5 percent of the total labor costs. Enter the premium amount if liability insurance is not included in the itemized unit costs.

10. Federal construction contracts exceeding $100,000 require both a performance and a payment bond (Miller Act, 40 USC 270 et *seq.*). Each bond premium is figured at 1.5 percent of the estimated contract cost.

11. To estimate the contract administration cost, use 6 to 10 percent of the O&M cost. Calculate the contract administration cost as a percentage of the O&M cost as follows: up to and including $1 million, use 10 percent; over $1 million to $25 million, use 8 percent; and greater than $25 million use 6 percent.

12. The BLM's indirect cost rate is a fixed 21 percent of the BLM's contract administration costs (this calculates out be 1.26 to 2.1 of the O&M cost).

Figure 6.2-2 - Operator Reclamation Cost Estimate Checklist (1 of 2)

The categories included in this checklist should be used to aid the operator in developing the Reclamation Cost Estimate (RCE) and the BLM's review of the RCE. Documentation supporting the calculations should be included. Resources that may be helpful for calculating the reclamation liability include contractors estimates, quotes from equipment rental agencies, rental rate bluebooks for heavy equipment, heavy equipment cost data manuals, and heavy equipment performance handbooks.

1 Access roads and drill pads
   a. Mobilization and demobilization.
   b. Recontouring or regrading to approximate the original topography as closely as possible.
   c. Removing culverts.
   d. Ripping or scarifying the surface.
   e. Water diversion construction.
   f. Restoring or stabilizing drainage areas or streambeds.
   g. Revegetation.

2 Drill hole and well abandonment
   a. Mobilization and demobilization.
   b. The cost of plugging, capping, and segregation of the hole from the ground water system is to be considered. Specifically, care needs to be taken in determining plugging costs based upon whether the hole encounters water, water under artesian pressure, or is dry.
   c. The plugging cost for all holes that will be drilled before an inspection can verify proper plugging, in addition to any drill holes that are to be left open, must be covered.
   d. Plugging costs must be based on the cost as if the site were abandoned.
   e. Drill holes that will be "mined through" within 6 months of drilling completion by the proposed operation do not have to be covered by a financial guarantee, if the location is already covered by a financial assurance for reclamation of the mining activity.
   f. Water wells, monitoring wells, and piezometers are abandoned in accordance with state regulations and are part of the RCE and financial guarantee process

3 Trenches, pits, and adits
   a. Mobilization and demobilization.
   b. Recontouring or regrading to approximate the original topography as closely as possible.
   c. Revegetation.
   d. Securing portals from public entry.

4 Waste rock dumps, overburden, and interburden storage areas
   a. Encapsulating, mixing, or other engineered placement method in controlling acid rock drainage migration.
   b. Recontouring and regrading to approximate the surrounding topography as closely as possible to enhance stability, reduce susceptibility to erosion, and facilitate efforts to establish vegetation.
   c. Diverting run-on.
   d. Covering with rock, clay, topsoil, other growth medium or other cover material.
   e. Revegetation.

5 Dams for tailings ponds
   a. Covering with rock, clay, topsoil, other growth medium or other cover material.
   b. Revegetation.
   c. Rendering the dam incapable of storing any mobile fluid in a quantity that could pose a threat to the stability of the dam, or to the public safety.
   d. Containment basins and water treatment facilities for leakage or outflow of effluent.

6 Impoundment for tailings
   a. Regrading to promote run-off and reduce infiltration.
   b. Covering with waste rock, clay, topsoil, other growth medium or other cover material.

Figure 6.2-2 - Operator Reclamation Cost Estimate Checklist (2 of 2)

c. Revegetation.
d. Diverting run-off.
e. Containment basins and water treatment facilities for leakage or outflow of effluent.

7 Heaps from leaching
a. Cost of maintaining proper fluid management to prevent overflow of solution ponds through premature cessation or abandonment of the operation, including the cost of a Process Fluid Inventory.
b. Rinsing, detoxification, and neutralization procedures as approved in the plan of operations.
c. Containment and treatment of outflows of residual chemicals or fluids from the heaps, including any disposal of surplus or drain down water. Include all engineering, development, and reclamation costs.
d. Diverting run-off.
e. Regrading to enhance structural stability, promote run-off, reduce infiltration, and control erosion.
f. Covering with waste rock, clay, topsoil, other growth medium or other cover material.
g. Stabilization and revegetation.

8 Solution ponds, settling ponds, and other non-tailings impoundments
a. Backfilling and grading as approved in the plan of operations.
b. Restoring the pre-disturbance surface water regime, if appropriate.
c. Properly dispose of process pond sludge.

9 Building foundations, facilities, structures and other equipment
a. Demolishing costs to the level of the foundation and burying costs of the demolished items on site, in conformance with applicable solid waste and HazMat disposal requirements. Concrete foundations for most structures will need to be broken up before on site burial.
b. Salvaging and sale costs. No provision for salvage value or credit is permitted.
c. Offsite disposal costs of No. 1 above, in conformance with applicable solid waste disposal and HazMat requirements.
d. Costs of continued use in a manner that is consistent with the proposed post mining land use.

10 Open pit mines
a. Providing for the public safety.
b. Stabilizing pit walls or rock faces where required for public safety.
c. Constructing and maintaining berms, fences, or other means of restricting public access.
d. Backfilling, if required or being considered as a requirement.
e. Costs of creating and maintaining a lake for recreational, wildlife enhancement, or other beneficial use.
f. Revegetation.
g. Treatment or mitigation of discharge waters.

11 Underground mines
a. Sealing shafts, adits, portals, and tunnels to prevent access.
b. Constructing and maintaining berms, fences, or other means of restricting access.
c. Treatment or mitigation of discharge waters.

12 Revegetation
a. Application of topsoil or other growth medium.
b. Seed bed preparation.
c. Selection of appropriate species of seeds or plants (consult BLM staff specialist).
d. Soil amendments such as fertilizers, mulches, or other compounds to assist in plant growth.
e. Planting or seeding (equipment, personnel, and cost of seeds/plants).
f. Watering as necessary to establish seedling and planting growth.

13 Site Maintenance and Site Monitoring
a. Any site monitoring costs as required by the BLM.
b. Monitoring well costs for acid rock drainage, heaps, leach fields, bioreactors, and tailings pond.

Figure 6.2-3 - Reclamation Cost Model for Notice-Level Exploration
-Example-
(1 of 2)

Linear Feet of Road at a Side Slope of:			**Cost/Linear Foot**	**Road Reclamation**
<30%	10000	Recontouring Cost <30%	$1.50	$15,000
>30%	5000	Recontouring Cost >30%	$2.40	$12,000
		Revegetation Cost	$0.20	$2,930
Acres of Non-Road Disturbance including, Pads, Sumps & Trenches	Acres		Cost/Acre	Pad, Sump & Trench Reclamation
	1.1	Recontouring Cost	$2,600.00	$2,860
		Revegetation Cost	$600.00	$660
		Mobilization Cost	$750.00	$750
Drill Holes Open:	#/Feet		Cost/Foot	Drill Hole Plugging
Feet of Open Holes - Wet	1400	Plugging Cost - Wet	$12.00	$16,800
Feet of Open Holes - Dry	600	Plugging Cost - Dry	$4.70	$2,820
		Mobilization Cost - Wet	$1,350.00	$1,350
		Mobilization Cost - Dry	$600.00	$0
				Total Reclamation Cost
				$55,170
				Total Labor
				$16,787
		Insurance	1.5% of Labor Cost	$252
		Bond	3% of Contract Cost	$0
		Contractor Profit	10% of Rec. Cost	$5,517
		Contract Admin.	10% of Rec. Cost	$5,517
		Indirect Cost Rate	21% of Contract Admin.	$1,159
				Total Administration Cost
				$12,444
				Financial Guarantee Amount
				$67,615

Figure 6.2-3 - Reclamation Cost Model for Notice-Level Exploration
-Example-
(2 of 2)

Operation Inputs - Where applicable to the proposed operation, linear feet of road (with side slope greater than 30 percent and less than 30 percent) and acres of non-road disturbance that will need to be reclaimed, and number of feet of open drill hole to be plugged (anticipated to intercept groundwater and not expected to intercept groundwater) need to be entered into the spreadsheet. In this sample spreadsheet, these five data fields concerning the Notice-level operation are shaded dark gray.

Cost Inputs and Assumptions - The cost inputs include mobilization and demobilization costs, labor, equipment, and material costs for earthwork, revegetation, and hole plugging, and administrative costs. This spreadsheet (Excel) was developed in 2001 and the cost inputs were last updated to reflect 2002 costs. The operating and maintenance costs are shaded light gray in the spreadsheet.

For road reclamation with a side slope greater than 30 percent, the cost figures used in the model are based on the use of an excavator as the primary equipment involved in recontouring. Where the side slope is less than 30 percent, it is assumed a dozer will be the primary equipment used to recontour. The cost information for road reclamation assumes an average road running width of 14 feet. Pad, sump, trench, and other non-road disturbances assume the use of a dozer as the primary heavy equipment for recontouring those features.

The revegetation cost for disturbed areas assumes use of a seed mix that will result in a diverse plant community that includes grasses, forbs, shrubs and/or trees. Such a seed mix may exceed state or local revegetation standards, and/or may not be appropriate for all sites. The application of the seed mix assumes two passes over the disturbed area. The first pass is to rip the surface and spread the seed, and a second pass is to drag the area.

Since drill holes are often plugged immediately after testing, the model is set up to cover the maximum number of feet of drill hole that will be open between inspections. For drill hole plugging, a critical variable is whether the drill hole intercepts groundwater. Plugging a wet drill hole, one that intercepts groundwater, it is assumed drilling equipment will be required to properly plug the hole. The cost estimates for plugging wet holes assumes filling the wet horizon with concrete grout, filling the dry horizon with bentonite, and capping the hole with a 10-foot concrete plug. For plugging dry holes, those that do not intercept groundwater, it is assumed no specialized equipment will be necessary. The assumption used in estimating the cost for plugging dry holes is each hole will be filled with bentonite. The user should verify that these plugging parameters are consistent with the state requirements.

All mobilization/demobilization costs are based on the site being 150 miles from the equipment vendor. The user of the model should be aware that these mobilization costs might vary significantly depending on the actual distance from the site to the source of the required equipment. The model uses an average mobilization/demobilization cost of $750 for reclaiming surface disturbances, including roads, pads, sumps and trenches. It should be noted that the model provides for the mobilization of one piece of earthmoving equipment. If the reclamation effort will necessitate multiple pieces of earthmoving equipment, e.g., backhoe and bulldozer, the user of the model should include the average mobilization/demobilization cost for each additional piece of equipment. Keep in mind this type of model is set up for fairly simple, straightforward operations. The need for multiple pieces of equipment may indicate a more complex operation, and the user may want to consider using an alternative calculation method.

The model calculates the mobilization/demobilization cost for plugging separately. Mobilization cost for plugging open drill holes, that are anticipated to intercept groundwater, is estimated to be $1,350. Average mobilization cost for plugging open dry drill holes, those that are not expected to intercept groundwater, is $600. The model is set to only use the wet hole mobilization cost should the user add values to both wet and dry drill holes entries.

Note the Total Administrative Cost is calculated using percentages of various costs. See Section 6.2.1.9 for a discussion on how these administrative costs are determined. For this example the administrative costs represents 22.6 percent of the Total Reclamation Cost.

A standardized reclamation cost estimating process should only be used where the operation is similar to the types of activity and terrain profile used in establishing the standard cost inputs. The BLM may not require the operator to use standardized inputs, schedules, spreadsheets, and models in developing the reclamation cost estimates. A detailed engineering cost analysis is an acceptable alternative.

Where a BLM State or District/Field Office develops a standardized reclamation cost process for estimating the amount of the required financial guarantee for Notices or Plans, the standardized inputs, schedules, spreadsheets, and models must be reviewed annually to ensure the cost inputs remain current.

6.2.2 Review of Reclamation Cost Estimates

The BLM District/Field Office must review the operator's estimate of the cost to reclaim the operations to determine whether the estimate meets the requirements of 43 CFR 3809.552(a), 3809.552(c), and 3809.554(a).

The RCE for all Notices and Plans of Operations will be reviewed and evaluated based on the reclamation plan prepared in accordance with the reclamation standards according to 43 CFR 3809.420. The amount of the financial guarantee must be adequate to cover the cost of all reclamation performance standards and all reclamation and closure requirements identified in the filed Notice or approved Plan of Operations. See Section 5.4 Performance Standards for Notices and Plans of Operations for guidance on performance standards.

For Notice or Plan modifications, the District/Field Office's review of the RCE should focus on how the modification affects the existing cost estimate on file for the entire operation.

It is not BLM's responsibility to calculate the reclamation cost for the operator. The BLM, at the District/Field Manager's discretion, may assist the operator in identifying costs to be included in the estimate, and in developing the cost estimate. At the District/Field Manager's discretion, the BLM may independently estimate the reclamation costs for an operation. Should the operator fail to include all costs to administer a reclamation contract, the BLM will provide this administrative cost information.

If the BLM determines the operation, as proposed, will cause UUD, the District/Field Manager will <u>not</u> make a determination as to the amount of the required financial guarantee because the operation, as proposed, may not be authorized.

It is the BLM's responsibility to conduct a periodic review of the RCE for ongoing operations. As required by 43 CFR 3809.552(b) and 3809.553(b), the BLM must ensure the amount of the required financial guarantee, including trust funds required under 43 CFR 3809.552(c), for ongoing operations continues to meet the requirements of the regulations and all reclamation requirements in the accepted Notice or approved Plan of Operations. Unless the operator is proposing a modification to the Notice or Plan, the existing RCE does not reflect authorized operations, or additional information is needed, the BLM's review will consist of an evaluation and update of the operator's RCE on file. Where additional information is necessary to complete

the review or a revised RCE is required, the District/Field Manager will direct the operator to provide that information. BLM may find it helpful to request an updated RCE from the operator to facilitate its review if the RCE on file is not in a readily update-able format such as an electronic, standardized spreadsheet to which current unit costs may be readily applied. The BLM periodic review does not necessarily require new data from the operator. Using the latest RCE on file, the BLM is to determine if it is adequate given current labor rates, uncontrollable costs such as fuel, etc.

If the BLM determines that the financial guarantee should be increased, the District/Field Office must issue a decision requiring the operator to submit the required adjustment amount. If the RCE does not require an adjustment and a decision is not issued, the authorized officer will add a statement to the case file certifying that the review has been completed and the cost estimate(s) and financial guarantee(s) are adequate to meet the requirements of the regulations. The decision or certification to the case file is the supporting documentation that is required in order to enter AC 022 - *Recl Cost Det* in the Legacy Rehost 2000 (LR2000) System (see Chapter 13 Records Management).

6.2.3 Acceptance of Reclamation Cost Estimates

The District/Field Manager must notify the operator as to the acceptability of the operator's RCE.[186]

6.2.3.1 Unacceptable Review Results

If the District/Field Manager finds that the operator has incorrectly calculated reclamation operating and maintenance costs, did not include the required administrative costs, or that the estimate is based on out-of-date cost data that does not reflect the actual cost of reclamation, the District/Field Office will request, in writing, the additional cost information needed from the operator.

Where the responsible BLM District/Field Office has not been successful in having the operator correct deficiencies in the cost estimate, the District/Field Manager will issue a written decision to the operator as described below.

Where the RCE for a new Notice is not acceptable to the Field Office, the Notice will not be considered complete as required under 43 CFR 3809.301.

6.2.3.1.1 Proposed Notice or Plan

When an estimate for a proposed Notice or Plan of Operations is not acceptable, the District/Field Manager must notify the operator that the operator's RCE is not acceptable, identify the deficiencies or errors that led to that conclusion, and request that an acceptable RCE be prepared. Appendix A, Template 6.2-1 Unacceptable Reclamation Cost Estimate, presents an example of such a notification.

[186] 43 CFR 3809.554(b).

6.2.3.1.2 Existing Notice or Plan

For ongoing operations, where the District/Field Office lacks the information necessary to determine the adequacy of the existing cost estimate, the District/Field Manager must notify the operator of the deficiencies or errors and include a due date when the information or revised RCE must be submitted. The notification is similar to the example template for proposed operations, (Appendix A, Template 6.2-1 Unacceptable Reclamation Cost Estimate) except there must be a due date. Failure to provide the required information within the specified timeframe will result in an enforcement action against the operator for failure to maintain an acceptable financial guarantee (see Appendix A, Template 9.2-1 Noncompliance Order).

For Notices to be extended under 43 CFR 3809.333, where the District/Field Office lacks the information necessary to determine the adequacy of the existing RCE, the District/Field Manager must notify the operator that within 30 days from receipt of the notification all requested information must be provided to the BLM office. The Notice will be conditionally extended pending District/Field Office receipt of the required information. Failure to provide the required information within the 30-day period will result in the Notice expiring.

6.2.3.2 Acceptable Review Results

When the District/Field Office receives an acceptable RCE or the District/Field Office independently estimates the amount of the reclamation costs, the District/Field Manager must provide the operator with a written decision (see Appendix A, Template 3.2-3 Determination of Required Financial Guarantee Amount), as to the amount of the required financial guarantee. The decision must state the amount of the financial guarantee to be provided ($0.50 or more rounded up to the nearest whole dollar and less than $0.50 rounded down to the nearest whole dollar), the types of financial instruments that are acceptable to the BLM, and that any adversely affected party may appeal the decision on the amount of the required financial guarantee under 43 CFR 3809.800 through 3809.809. A copy of this decision must be provided to the BLM office responsible for adjudication of the financial guarantee.

6.2.3.2.1 Existing Notice or Plan

Following the periodic review for an ongoing operation, the District/Field Manager will make a determination as to the amount of the required financial guarantee. If there is a change in the required amount of the financial guarantee or the review was conducted at the request of the operator, the District/Field Manager must issue a decision as to the amount of the required financial guarantee. For ongoing operations under an existing Notice and Plan, the decision must state (1) the amount of the required financial guarantee, (2) any change (increase or decrease) in the amount of the required financial guarantee, (3) that the operator has 60 days from receipt of the decision to submit an acceptable financial guarantee if the amount has increased, and (4) that failure to provide an acceptable financial guarantee within the specified timeframe will result in an enforcement action against the operator for failure to maintain an acceptable financial guarantee (see Appendix A, Template 6.2-2 Financial Guarantee Increase – Ongoing Operations). The requirement to ensure the financial guarantee is adequate to cover all operator obligations applies to financial guarantees under 43 CFR 3809552(a), 43 CFR 3809.552(c), and 43 CFR 3809.553.

6.2.3.2.2 Extended Notice

For a Notice extension under 43 CFR 3809.333, where the amount of the required financial guarantee has increased, the decision must also state that (1) the Notice is conditionally extended subject to meeting the financial guarantee requirements, (2) failure to provide an acceptable financial guarantee within 60 days will result in the Notice expiring immediately upon conclusion of the timeframe, and (3) upon expiration of the Notice, all activities, other than reclamation, are unauthorized and must cease. The Notice will expire should the operator fail to provide the required financial guarantee within the timeframe (see Section 3.5 Expired Notice).

6.2.3.2.3 New or Modified Notice or Plan

For a new or modified Notice or Plan, the District/Field Manager's decision must also state that an operator may not begin operations in any areas not covered by the existing financial guarantee without first providing the BLM with an acceptable financial guarantee that meets the requirements of 43 CFR 3809.551 thru 3809.572. No activity greater than casual use on lands not covered by the existing financial guarantee is authorized until the BLM has accepted and obligated the operator's financial guarantee. Appendix A, Template 3.2-3, Determination of Required Financial Guarantee Amount, presents an example of such a decision.

6.2.3.2.4 Expenditure Limits

Specific line items contained in an approved RCE are not to be considered as limits of expenditures in that respective category or task should financial guarantee forfeiture be necessary. The line items listed are solely for the purpose of arriving at a total financial guarantee amount. The total amount of the financial guarantee may be used if the BLM deems it necessary to implement the approved reclamation plan, and does not represent a reclamation cost constraint. Care should be taken to ensure that the decision on the amount of the required financial guarantee and the financial guarantee instrument correctly reflects this policy.

6.2.3.3 Decrease in Required Financial Guarantee Amount

Where the existing amount of the financial guarantee exceeds the District/Field Manager's determination as to the amount of the required financial guarantee, the operator may request the BLM to decrease the amount required to cover all reclamation costs. Any request by the

operator for a reduction in the amount of the financial guarantee must be made in writing to the BLM office responsible for adjudicating the financial guarantee.

6.2.4 Periodic Reviews

The BLM must provide a periodic review of reclamation cost estimates for all ongoing operations.[187] The periodic review by the District/Field Office ensures that the current RCE and the amount of the required financial guarantee continue to meet the requirements of 43 CFR

[187] 43 CFR 3809.552(b).

3809.552(a), 3809.552(c), and 3809.554(a). The periodic review is subject to the same requirements as the original review of the RCE. See Section 6.2.2 Review of Reclamation Cost Estimates for the District/Field Office's review requirements. Where a financial guarantee is deemed to be inadequate, the authorized officer must take action to rectify the situation.

6.2.4.1 Review Periods

Inflation can, over time, become a significant factor in the amount of the required financial guarantee. To minimize the potential impact inflation can have on the amount of the financial guarantee needed to cover the current reclamation cost, the District/Field Office must review, on a periodic basis, the cost estimates for all ongoing operations. The maximum time period the BLM may allow to elapse between reviews is specified below.

6.2.4.1.1 Notices

Reclamation cost estimates for Notice operations must be reviewed at time of extension under 43 CFR 3809.333, i.e. every 2 years.

6.2.4.1.2 Plans of Operations

Reclamation cost estimates for Plans of Operations, including any funding mechanism established under 43 CFR 3809.552(c), must be reviewed at least every 3 years.

6.2.4.1.3 State Requirements

Where the BLM has an agreement under 43 CFR 3809.200 with the state that requires a review more frequently than every 2 years for Notices and/or every 3 years for Plans of Operations, reviews must be conducted in conformance with that agreement.

6.2.4.1.4 Modifications

Where the Notice or Plan of Operations is modified, a review must be conducted at the time of modification. The RCE review will focus on how the modification affects the existing cost estimate on file. The review need not be for all aspects of the operation. However, unless the cost estimate for the entire operation is reviewed, the review for the Notice or Plan modification

does not substitute for the required 2-year review for a Notice or 3-year review for a Plan of Operations.

6.2.4.1.5 Phased, Partial or Incremental Coverage

Where the financial guarantee is for a part of the operations, as provided under 43 CFR 3809.553, the BLM must review the RCE at least annually. The District/Field Office review must cover the RCE for each increment of the operations.

6.2.4.1.6 Trust Funds

At least every 3 years, or according to the schedule set forth in the documents establishing the trust fund if more frequent, the District/Field Office must conduct a thorough review of the cost estimates and other assumptions used in determining the amount of funds needed in the long-term funding mechanism. As part of the review, the District/Field Office must adjust, as necessary, the cost estimates and other assumptions used in determining the amount of funds needed in the long-term funding mechanism (see Section 6.3.4.3 Cost Estimate and Section 6.3.4.7 Monitoring the Fund).

The District/Field Office must also monitor the growth of all trust funds. At least once a year, the responsible District/Field Office must review the financial statements to ensure growth of the fund is keeping pace with the assumptions used to determine the amount needed in the fund. Based on this annual review, the funding level in the trust fund must be increased when the growth of the available funds is not keeping pace with the amount needed to address all anticipated post-reclamation obligations.

6.2.4.2 Monitoring

The BLM has the authority under 43 CFR 3809.552(b) and 3809.553(b) to review the RCE more frequently than the above schedule at the discretion of the District/Field Manager. The manager should perform these reviews whenever becoming aware of significant changes to the site conditions and should monitor the adequacy of the RCE through the inspection program.

6.2.4.3 Review Results

If there is a change in the required amount of the financial guarantee or the review was conducted at the request of the operator, the District/Field Manager must issue a decision as to the amount of the required financial guarantee, with a copy to the BLM office responsible for adjudicating financial guarantees, as to the amount of the change in the required financial guarantee. A written decision (see Appendix A, Template 3.2-3 Determination of Required Financial Guarantee Amount) will be issued any time there is a change in the amount of the required financial guarantee as a result of the review or the review was conducted at the request of the operator. This requirement applies to financial guarantees under 43 CFR 3809.552(a), 3809.552(c), and 3809.554(a).

6.2.4.3.1 Increasing the Financial Guarantee

Where necessary, the amount of the required financial guarantee, including any long-term funding mechanism that may have been established, must be adjusted to cover all estimated reclamation costs, including adjustments necessary to account for the effect of inflation on the operation, maintenance, and administration costs. The District/Field Manager must provide the operator with a written decision as to the amount that the required financial guarantee will be increased (see Appendix A, Template 6.2-2 Financial Guarantee Increase – Ongoing Operations). The decision must state that the operator has 60 days from receipt of the decision to increase the financial guarantee amount and that failure to provide an acceptable financial

guarantee in the new amount within the specified timeframe will result in enforcement action(s) under 43 CFR 3809.601. See Section 6.2.3.2 Acceptable Review Results for specific guidance on what must be included in that decision. A copy of the decision must be transmitted to the BLM office responsible for adjudicating financial guarantees.[188]

6.2.4.3.2 Decreasing the Financial Guarantee

Where it is determined the amount of the existing financial guarantee exceeds the amount required to cover all reclamation costs, the operator may request the BLM reduce the amount of the required financial guarantee. Any request by the operator for a reduction in the amount of the existing financial guarantee must be made to the BLM office responsible for adjudicating the financial guarantee. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for further guidance pertaining to the reduction and release of financial guarantees.

6.2.4.3.3 No Change in the Financial Guarantee

If the RCE does not require an adjustment in the required financial guarantee amount, i.e., a decision is not issued, the authorized officer will add a statement to the case file certifying that the cost estimate(s) and financial guarantee(s) have been reviewed in conformance with review periods described below, and the estimate(s) and guarantee(s) continue to meet the requirements of the regulations.

6.3 Types of Financial Guarantees

The regulations allow for individual, blanket, and state-approved financial guarantees.[189]

6.3.1 Individual Financial Guarantees

The operator may provide an individual financial guarantee that covers the reclamation costs for a single Notice or Plan of Operations. The specific requirements of an individual financial guarantee are provided under 43 CFR 3809.552 through 3809.556.

6.3.1.1 Single Notice or Plan of Operations

An operator must post a financial guarantee in the amount sufficient to allow the BLM to contract with a third party to reclaim the operations, including all BLM costs to administer the reclamation contract, according to the reclamation plan for that operation.[190] In addition, the amount of the financial guarantee must cover any interim stabilization and infrastructure maintenance costs needed to maintain the area of operations in compliance with applicable environmental requirements while contracts are developed and executed. The individual financial guarantee must be obligated by the BLM before operations may commence (see BLM Handbook H-3809-2, *Surface Management Bond Processing*).

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[188] Note: The adjudication office will automatically obligate bond monies for a required increase, if an uncommitted balance exists under the bond(s) already providing for reclamation coverage of the operation(s).
[189] 43 CFR 3809.551.
[190] 43 CFR 3809.552(a).

6.3.1.2 Phased Partial or Incremental Financial Guarantees

Under the provisions at 43 CFR 3809.553, the District/Field Manager may allow an operator to provide a financial guarantee that covers a part of the operations if the operations do not go beyond what is specifically covered by the phased financial guarantee and the phased financial guarantee covers all reclamation and operational costs for the proposed operations within the incremental area of operations as required by 43 CFR 3809.552(a) and 3809.554(a). However, in addition to the RCE for a particular phase of an operation, the RCE for the entire proposed operations must still be established by the District/Field Office.

6.3.1.3 Acceptable Financial Instruments

The operator may use any of the instruments listed under 43 CFR 3809.555 for an individual financial guarantee, provided that the BLM determines that the instrument is acceptable and meets the laws and regulations within the state where the operations are proposed. Financial instruments that an operator may submit for adjudication include:

- Surety bonds that meet the requirements of Treasury Department Circular 570.[191]
- Cash, or other guaranteed remittance, in an amount equal to the required dollar amount of the financial guarantee, to be deposited and maintained in a Federal depository account of the United States Treasury by the BLM.
- Irrevocable letters of credit from a bank or financial institution organized or authorized to transact business in the United States.
- Certificates of deposit or savings accounts (fixed accounts only) not in excess of the maximum insurable amount as set by the Federal Deposit Insurance Corporation.
- Any of the following securities having a market value of not less than the required dollar amount of the financial guarantee and maintained in a Securities Investors Protection Corporation insured trust account by a licensed securities brokerage firm for the benefit of the Secretary of the Interior, acting by and through the BLM:

  • Negotiable United States Government securities or bonds.

  • State and Municipal securities or bonds having a Standard and Poor's rating of AAA or AA or an equivalent rating from a nationally recognized securities rating service.

  • Investment-grade rated debt securities having a Standard and Poor's rating of AAA or AA or an equivalent rating from a nationally recognized securities rating service.

[191] http://www.fms.treas.gov/c570/c570.html.

- Insurance, if its form and function is such that the funding or enforceable pledges of funding are used to guarantee performance of regulatory obligations in the event of default on such obligations by the operator. Insurance must have an A.M. Best rating of "superior" or an equivalent rating from a nationally recognized insurance rating service. Before accepting any insurance policy as a financial guarantee for a mining operation under 43 CFR 3809, you must consult with the Solicitor's Office.

6.3.1.3.1 Securities

If the operator chooses to use debt securities listed above in satisfaction of financial guarantee requirements, the operator must provide the BLM office responsible for adjudicating financial guarantees, before beginning operations and by the end of each calendar year thereafter, a certified statement describing the nature and market value of the instruments maintained in that account including any current statements or reports furnished by the brokerage firm to the operator or mining claimant concerning the asset value of the account. Specific requirements concerning the use of securities are found at 43 CFR 3809.556, also see BLM Handbook H-3809-2, *Surface Management Bond Processing*.

6.3.1.4 Acceptance of Individual Financial Guarantees

The BLM office responsible for adjudicating financial guarantees must provide the operator/bond principal with a written decision as to the acceptance and obligation of the financial guarantee. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for further guidance pertaining to the acceptance and obligation of financial guarantees.

6.3.2 Blanket Financial Guarantees

The operator may provide a blanket financial guarantee to cover the reclamation costs for more than one Notice and/or Plan of Operations. A blanket financial guarantee must cover the total cost of reclamation for all operations covered by the blanket financial guarantee. Coverage from a blanket financial guarantee may be statewide or nationwide.

6.3.2.1 Reclamation Costs for Multiple Operations

The operator must prepare separate reclamation cost estimates for each of the Notices and Plans of Operations to be covered by the blanket financial guarantee. The reclamation cost estimates must cover all reclamation and operational costs as required by 43 CFR 3809.552(a) and 3809.554(a) for each operation, and, as required by 43 CFR 3809.554(b), the reclamation cost estimates must be acceptable to the District/Field Manager.

6.3.2.2 Acceptance of Blanket Financial Guarantees

When Notices and/or Plans of Operations are to be covered by a statewide or nationwide financial guarantee, an operator must submit the financial guarantee to the BLM office responsible for adjudicating statewide or nationwide financial guarantees. The amount of the blanket financial guarantee submitted by the operator may be in excess of the total reclamation

cost for all Notices and/or Plans of Operations to be covered by the blanket financial guarantee to allow for future operations or increased reclamation cost estimates on existing operations. The BLM office responsible for adjudicating financial guarantees will, however, only obligate an amount from the bond equal to the required financial guarantee amount for a particular operation. The amount of financial guarantee must cover, at a minimum, the total reclamation cost for all Notices and/or Plans of Operations to be covered by the blanket financial guarantee.

The BLM will accept a blanket financial guarantee, if it is determined that its terms and conditions satisfy the regulations using the same analysis described above. Any decision by the BLM concerning the acceptability of a blanket financial guarantee must be provided to the operator in writing. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for further guidance pertaining to the acceptance and obligation of blanket financial guarantees.

6.3.3 State Approved Financial Guarantees

The operator may provide evidence of an existing state-approved financial guarantee that meets the requirements of the regulations and covers the reclamation costs for the Notice or Plan of Operations. The specific regulatory requirements for using a state-approved financial guarantee are provided under 43 CFR 3809.570 through 3809.573.

6.3.3.1 Acceptable State Approved Financial Guarantees

To be acceptable to the BLM, the state-approved financial guarantee must be redeemable by the Secretary, acting by and through the BLM. The financial guarantee must be held or approved by a state agency for the same operations covered by the Notice(s) and/or Plan(s) of Operations, and the amount of the state-approved financial guarantee must be sufficient to meet the requirements of 43 CFR 3809.552(a) and 3809.554(a).

Subject to certain requirements,[192] to be acceptable to the BLM, the state-approved financial guarantee may only include the following forms:

- The financial instruments listed under 43 CFR 3809.555.
- Participation in a state bond pool.
- Existing corporate guarantees applied by the BLM to an approved Plan of Operations on public lands as of January 20, 2001, and under certain restrictions.

6.3.3.1.1 State Bond Pool

Participation in a state bond pool is acceptable if the state agrees that, upon the BLM's request, the state will use part of the pool to meet reclamation obligations on public lands, and the BLM State Director determines that the state bond pool provides the equivalent level of protection as

[192] 43 CFR 3809.570 and 3809.574.

that required by the regulations.[193] In determining if a state bond pool provides the equivalent level of protection required by regulation, the State Director must consider available financial assets in the pool, in addition to any financial obligation the state has should the bond pool become insolvent. A determination by the State Director that the bond pool provides the equivalent level of protection does not necessarily require the pool have sufficient funds available to cover all operations participating in the state bond pool.

The State Director's determination that the state bond pool will provide sufficient financial assurance should be coordinated with the appropriate Federal and state agencies, and any decision must be documented and made available to the public. The form of public disclosure will be at the discretion of the State Director and suitable to the situation considering the public interest.

6.3.3.1.2 Corporate Guarantee

Only a corporate guarantee that was accepted by the BLM and applied to an approved Plan of Operations on public lands under an approved BLM and state agreement on January 20, 2001, subject to the restrictions on corporate guarantees in 43 CFR 3809.574, may continue in effect. The financial guarantee coverage provided by the corporate guarantee:

- Only continues for that portion of the operation that it applied to as of January 20, 2001.
- May not be applied to new operations, or modified or expanded portions of existing operations after January 20, 2001.
- May not be transferred to another portion of the same operation, another operation within the corporate organization, or another operator.
- May not increase existing corporate guarantees after January 20, 2001, or apply any new corporate guarantees after January 20, 2001.

The State Director has a responsibility to ensure the viability of financial guarantee coverage provided by the corporate guarantee and to reduce the risk associated with corporate guarantees. If the state revises existing corporate guarantee criteria or requirements that apply to a corporate guarantee existing on January 20, 2001, the BLM State Director will review the revisions to ensure that adequate financial coverage continues.

The State Director is also directed to conduct periodic reviews of financial guarantees, including any corporate guarantees, under 43 CFR 3809.552(b) to ensure adequate financial coverage. This review is to include the adequacy of the guarantee. If the BLM State Director determines it is in the public interest to do so, the State Director may terminate a corporate guarantee and require an acceptable replacement financial guarantee after due notice and a reasonable time to obtain a replacement is given the operator. A State Director decision to terminate the use of corporate guarantees is subject to appeal under the provisions of 43 CFR 3809.800 through 3809.809.

[193] 43 CFR 3809.571(b).

6.3.3.2 Unacceptable State Approved Financial Guarantees

If the BLM determines that the existing state-approved financial guarantee does not meet the requirements of the regulations, the BLM will issue a decision notifying the operator to provide the BLM with an acceptable financial instrument.[194]

The State Director will issue the decision to the operator and the state within 30 calendar days of the BLM's receipt of the evidence of state-approved financial guarantee. The decision will contain a complete explanation of the reasons for the rejection and require an acceptable financial guarantee at least equal to the amount of the rejected financial instrument before commencing or continuing operations. The BLM office responsible for adjudicating financial guarantees will send the decision by certified mail, return receipt requested, or delivery process, including registered mail or courier service. Decisions as to the unacceptability of a state-approved financial guarantee are subject to appeal under the provisions of 43 CFR 3809.800 through 3809.809.

6.3.3.3 State Demand against the Financial Guarantee

When the state makes a demand against an operator's state-approved financial guarantee, thereby reducing the available balance, the operator must notify the BLM office responsible for adjudicating financial guarantees, and replace or augment the financial guarantee if the available balance is insufficient to cover the remaining reclamation and operational costs required by 43 CFR 3809.552(a) and 3809.554(a).[195] Where the BLM has an agreement under 43 CFR 3809.200 with the state that addresses state-approved financial guarantees, the BLM should also receive notice from the state when the state makes a demand against a state-approved financial guarantee that applies to public lands.
As required by regulation, the operator notification must be in writing to the BLM office responsible for adjudicating financial guarantees within 15 calendar days of the state's action. The notification must provide the BLM with information concerning the demand, the resulting reclamation, and a revised RCE. Within 30 calendar days, the operator must provide the BLM office responsible for adjudicating financial guarantees with an acceptable financial guarantee to ensure all reclamation and operational liabilities are covered.

See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for further guidance pertaining to the BLM's responsibilities when state-approved financial guarantees are accepted.

6.3.4 Trust Funds or Other Funding Mechanisms

The regulations at 43 CFR 3809.552(c) allow the BLM to require an operator to establish a trust fund or other funding mechanism available to the BLM to ensure the continuation of any long-term, post-mining treatment or maintenance requirements. The BLM District/Field Manager responsibilities include determining the need for a long-term funding mechanism, identifying the specific long-term corrective actions, verifying the operator's cost estimate to carry out those corrective actions, establishing the amount of funds needed in the long-term funding mechanism,

[194] 43 CFR 3809.572.
[195] 43 CFR 3809.573.

and, once established, monitoring the terms, conditions, and performance of the long-term funding mechanism. The District/Field Manager is the BLM official who establishes the agreement with the operator covering the funding mechanism.

When the District/Field Manager identifies a need through the process outlined below, the operator must establish an acceptable trust fund or other funding mechanism that meets the requirements of the regulations.[196] The fund must be adequate to provide for construction, long-term operation, maintenance, or replacement of any treatment facilities and infrastructure, for as long as the treatment and facilities are needed after mine closure.

6.3.4.1 Requiring a Trust Fund

The purpose of a trust fund or other long-term funding mechanism is to guarantee the continuation of post-mining treatment to achieve water quality objectives and for other long-term, post-mining maintenance requirements. The District/Field Manager decides whether a trust fund is needed on a case-by-case basis. In determining whether a trust fund or other funding mechanism will be required, the manager should consider the following factors:

- The anticipated post-reclamation obligations as identified in an environmental document and/or plan approval for the operation.
- The reasonable degree of certainty that the obligations will occur based on accepted scientific evidence and/or models.
- The operator's financial responsibility for those obligations.
- The feasibility, practicality, and/or desirability of requiring a financial guarantee for those anticipated long-term post-reclamation obligations using an individual financial guarantee,[197] blanket financial guarantee[198] or state-approved financial guarantee.[199]

The determination that a trust fund is needed and/or the amount needed in the fund may occur during review of the proposed operation or later. Identification of the need for such a fund after the operation has been approved does not necessarily require the District/Field Manager to revisit the original decision authorizing the operation. As part of ongoing monitoring and inspection activities, the manager may identify the need for such a funding mechanism after the operation has been reviewed and approved. For example, as part of a requested release of a financial guarantee under 43 CFR 3809.590, the District/Field Manager may condition final release of the individual, blanket or state-approved financial guarantee for a portion of the project area on the operator establishing a trust fund to pay for ongoing treatment of effluent discharged from that area.[200]

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[196] 43 CFR 3809.552(c).
[197] 43 CFR 3809.552(a).
[198] 43 CFR 3809.560(a).
[199] 43 CFR 3809.570.
[200] 43 CFR 3809.591(c)(2).

Any decision concerning the need, amount, acceptability, and/or forfeiture of a financial guarantee, including a trust fund or other funding mechanism, is part of the BLM's compliance and enforcement program, and not an authorization to conduct operations. All decisions concerning the need, amount, acceptability, and forfeiture of a trust fund are subject to appeal under the provisions of 43 CFR 3809.800 through 3809.809.

6.3.4.1.1 Water Quality Issues

If the environmental document and/or plan approval for an operation identifies potential discharge of acid rock drainage, a pit lake that may not meet water quality standards or similar issues that would require long-term water treatment, the District/Field Manager must require a financial guarantee to address those obligations. The establishment of a trust fund or other funding mechanism may be the most practical means to guarantee the future long-term costs of those obligations.

6.3.4.1.2 Other Post-Reclamation Obligations

The BLM's use of the provisions at 43 CFR 3809.552(c) is not limited to long-term water treatment. If BLM has identified other post-reclamation obligations and the District/Field Manager determines that the financial responsibility for those obligations rests with the operator, the use of a trust fund or other funding mechanism may also be appropriate. For example, if the Plan approval requires the construction and maintenance of a permanent safety fence to limit public access to a highwall after mine closure, the most practical way to guarantee the funding of the maintenance and replacement costs for that fence may be through a trust fund or similar funding mechanism.

6.3.4.1.3 Unanticipated Events

District/Field Managers should not use 43 CFR 3809.552(c) to require an operator to establish a fund to address unanticipated events before or after reclamation, such as accidents, failures, or spills, or for worst-case scenarios. If an event occurs that creates a new reclamation obligation, the BLM will require the operator to adjust the financial guarantee upward accordingly to cover the new obligation. Moreover, these events have a low probability of occurrence and are best addressed by a thorough review of the Plan of Operations, the development of mitigation measures, and an active inspection program.

6.3.4.2 Reclamation Plan

Any post-reclamation obligations covered by the long-term funding mechanism must be described in the approved Plan of Operations. If the District/Field Manager determines the operator is responsible for post-reclamation obligations not described in the original reclamation plan, the manager will direct the operator to submit a modification to the Plan of Operations covering those obligations. The manager must review and approve the Plan of Operations to ensure all reclamation and closure obligations and corrective actions are adequately addressed.

6.3.4.3 Cost Estimate

When a trust fund or other funding mechanism is required to guarantee post-reclamation obligations, the operator must provide the District/Field Office with a cost estimate for the monitoring, construction, operation, maintenance, replacement, or other activities for those required facilities, treatment, or other post-reclamation needs documented in the Plan of Operations. The operator's estimate must also project when the cost obligations will occur and for reoccurring costs, such as maintenance of a water treatment facility, the frequency, timing, and duration of the obligation must be estimated for each cost component.

6.3.4.3.1 Coverage

The operator's cost estimate must cover all anticipated costs, including the BLM's administration costs, as if the BLM were hiring a contractor to perform the work if the operator has vacated the project area and fails to comply with these obligations (see Section 6.2 Reclamation Cost Estimates). In addition to the operational, maintenance, and administrative costs, the operator must estimate any other costs associated with maintaining the long-term funding mechanism, including trust management or administration fees and any taxes that may come due. The amount of the estimated trust management fees must reflect the BLM's cost to obtain those services. The long-term funding mechanism must be sufficiently funded to cover all trust management fees, any applicable taxes, and any other costs that may be identified or become applicable should the operator not be available to pay these costs.

6.3.4.3.2 Review

The BLM will review cost estimates for the post-reclamation obligations in the same manner and detail that is used in estimating financial guarantees for reclamation obligations. The cost estimates for the post-reclamation obligations must be acceptable to the District/Field Manager.

6.3.4.3.3 Present Value Determination

To establish the amount of funds that need to be invested, the future operational, maintenance, and administrative costs need to be stated as a present value for the year the account will be established and start growing in value. A standard present value analysis needs to be performed. Appendix B - Present Value Determination provides guidance to aid in estimating the amount of funds that need to be deposited to meet the estimated future costs.

6.3.4.4 Trust Fund Agreement

Once the District/Field Manager determines that a trust fund is necessary and has reviewed the cost estimate, the District/Field Manager directs the operator to prepare the documents needed to establish the trust fund or other funding mechanism to ensure the funds are available to the BLM to meet all identified post-reclamation obligations should the operator fail to perform the required monitoring, construction, operation, maintenance, replacement, or other activities. The agreement establishing the fund must provide that its purpose is to assure that post-reclamation obligations identified in the Plan of Operations are satisfied; that the funding mechanism is under

BLM's control, including approval of any disbursement of funds from the trust fund, approval of the types of investments used, and the fund management entity; and that the fund is isolated from the effects of any potential operator bankruptcy. Any such agreement must be enforceable by the BLM as a regulatory obligation under 43 CFR 3809.

Within the limits of the allowable financial instruments established by the BLM for the trust fund, the agreement will specify that the operator/grantor is responsible for advising the trustee on any required investment decisions. As it is the operator's responsibility to ensure the trust fund is performing as established, the operator has a vested interest in identifying the appropriate financial instruments.

6.3.4.4.1 Release of Funds

In setting up the funding mechanism, the agreement must address the BLM's authority to release funds to reduce the operator's bond liability when the operator performs the post-reclamation obligations identified in the reclamation plan. Where the operator performs the construction, long-term operation, maintenance, or replacement of any treatment facilities and infrastructure required in the reclamation plan for the approved Plan of Operations, funds held in the funding mechanism for those specific tasks may be released to the operator. Any release of funds to the operator based on work performed must be supported by written documentation of costs being presented to the BLM, and the District/Field Manager's approval of such costs as reasonable.

However, no such release will be allowed if the remaining funds would be insufficient to fully cover unsatisfied post-reclamation obligations.

The agreement must also define how the District/Field Manager would decide when the fund is no longer needed or that the amount in the fund may be reduced, and include provisions allowing for the return of funds to the operator.

6.3.4.4.2 Release of Liability

Creation of a trust fund or other funding mechanism to guarantee certain long-term post-mining responsibilities are performed does not relieve or release the operator from his or her responsibilities to perform those treatment or maintenance obligations identified in the BLM decision document approving the operation. As required by 43 CFR 3809.424(b), the operator's reclamation and closure obligations continue until satisfied.

In addition, any release or termination of the trust fund does not release or waive any claim the BLM, or other persons, may have against any person under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended,[201] or under any other applicable statutes or regulations.[202]

[201] 42 U.S.C. 9601 *et seq*.
[202] 43 CFR 3809.592(b).

6.3.4.4.3 Solicitor Review

The responsible District/Field Manager or State Director should submit the draft trust fund agreement to the Field or Regional Solicitor's office for a legal review to ensure the government's and public's interests are protected before any decision accepting the agreement is made.

6.3.4.4.4 Establish the Agreement

The District/Field Manager must be the official signing the trust fund agreement for the BLM.

6.3.4.5 Acceptable Financial Instruments for Trust Funds

The regulations at 43 CFR 3809.555 define what are acceptable financial instruments for individual financial guarantees under 43 CFR 3809.552(a), but does not govern funding mechanisms under 43 CFR 3809.552(c). The State Director may limit the allowable financial instrument for a trust fund or other financial mechanism established under 43 CFR 3809.552(c) to those listed under 43 CFR 3809.555, or may choose to allow other financial instruments to be used.

If the State Director allows the use of other financial instruments not listed under 43 CFR 3809.555, he or she must document and make available to the public the decision and criteria used for accepting financial instruments not listed under 43 CFR 3809.555. Examples of financial instruments that may be deemed appropriate by the State Director for a long-term funding mechanism are stocks (equities) and fix income instruments (debt securities or bonds). Allowable equity market instruments might include stock funds or stock index funds, but not individual stocks. Individual corporate and government bonds are provided for under 43 CFR 38009.555(e); however, a bond fund or bond index funds may also be an appropriate instrument for a trust fund. Under no circumstance may the long-term funding mechanism include direct investment in the operator's or the parent company's stocks or bonds, or assets of the operator, parent company, or affiliates. In addition, the asset mix of the funding mechanism may not include real property, equipment, or other assets not easily convertible into cash.

In establishing the agreement, the District/Field Manager must determine the extent, if any, the financial instruments not listed under 43 CFR 3809.555 will be allowed for each trust fund being established. However, the use of stock market instruments may not exceed 70 percent of the trust fund's asset mix.

A critical consideration in how much stock market exposure is acceptable is the anticipated or projected time period before funds will be needed to address post-closure obligations. For example, with a relatively short time horizon before the funds are expected to be needed, the market fluctuations associated with the stock market may be a concern and the District/Field Manager may choose to limit the use of stock market instruments to less than that 70 percent threshold.[203]

[203] The logic is similar to the advice given for retirement planning. Generally financial advisors suggest a high percentage of fix income instruments in a retirement fund the closer an individual gets to retirement.

6.3.4.6 Funding the Trust

The District/Field Manager may require the trust fund or other funding mechanism be fully funded to meet all future obligations when the operation is authorized. If so required, the amount needed in the fund must equal the present value of all future costs to be covered by the fund. The manager may also allow the fund to be established with the operator depositing, over a period of time, the funds needed to address the post-reclamation obligations. Where the activity that creates the long-term liability is allowed to proceed before the long-term funding mechanism is fully funded, the agreement must specify the funds or securities that must be deposited on an annual basis to ensure the fund will be fully funded within the timeframe established in the agreement. In addition, the operator will be required to guarantee the funding of these phased payments through establishment of a surety bond or other financial instrument. The long-term funding mechanism must, however, be fully funded by the time the post-mining effects of the mining activity are expected to occur.

6.3.4.7 Monitoring the Fund

Although the establishment of a trust fund or other funding mechanism under 43 CFR 3809 may only be required to ensure the continuation of post-mining treatment, maintenance, and other requirements that are anticipated, those obligations are in the future and may change significantly over the course of developing and reclaiming the operation. Any decision concerning the need for the fund and/or the amount of money in the fund must reflect the best available information and management practices at that time. When conditions change, the District/Field Manager has a responsibility to promptly take corrective actions, including reviewing the decision to establish the fund, adjusting the amount of money required in the fund, and revising the assumptions concerning growth of the fund.

6.3.4.7.1 Periodic Reviews

As part of the periodic review of the RCE required by 43 CFR 3809.552(b) (see Section 6.2.4 Periodic Reviews), the District/Field Manager must ensure the adequacy of any funding mechanism established under 43 CFR 3809.552(c). Monitoring the operation, specifically the extent, nature, and cost to address anticipated post-reclamation obligations, is a critical aspect of any long-term funding mechanism. The District/Field Office must conduct, at least every 3 years, a thorough review of the cost estimates and other assumptions used in determining the amount of funds needed in the long-term funding mechanism.

Mine inspections, performed by the District/Field Office, should identify any deviations from the mine plan, which formed the basis of the trust amount. When identified, the trust fund cost estimate must be updated.

The District/Field Office must also monitor the growth of the fund. At least once a year the responsible District/Field Office must review the financial statements to ensure growth of the fund is keeping pace with the assumptions used to determine the amount needed in the fund. Based on this annual review, the funding level in the trust fund must be increased when the growth of the available funds is not keeping pace with the amount needed to address all anticipated post-reclamation obligations.

6.3.4.7.2 Insufficient Funds

Where a deficiency is identified in the adequacy of the fund to meet future obligations, the District/Field Manager must take the necessary actions, including issuing a decision revising the amount required in the fund (see Appendix A, Template 6.2-2 Financial Guarantee Increase – Ongoing Operations). Should the operator fail or refuse to make additional payments to cover the deficiency, the District/Field Manager will take enforcement actions under 43 CFR 3809.601 and 3809.602 to ensure adequate funds are available to guarantee those future obligations will be performed.

6.3.4.7.3 Unneeded Funds

If the review of the cost estimate and fund performance demonstrates that all or a part of the fund may be released and the operator requests such a release, the District/Field Manager, following the procedures set forth in the trust fund agreement, must take the necessary steps to have all funds in excess of those needed to address all post-reclamation obligations released to the operator.

6.3.4.8 Non-Public Lands

Where the trust fund is to cover post-reclamation obligations on non-public lands, the state agency with jurisdiction over mine reclamation and monitoring may be a party to the Trust Fund Agreement.

6.4 Financial Guarantee Replacement or Reduction

6.4.1 Duration of Coverage

The operator must maintain an acceptable financial guarantee until the operator, or a new operator, replaces it with another financial guarantee that the BLM has determined to be acceptable, or until District/Field Manager releases the requirement to maintain the financial guarantee after the operator has completed reclamation of the operation, according to the requirements of the reclamation plan and the requirements of 43 CFR 3809.320 for a Notice or 43 CFR 3809.420 for a Plan of Operations.[204]

6.4.2 Replacement Financial Guarantee

The operator or a new operator may request the BLM to accept a replacement financial instrument at any time after the approval of an initial instrument. The BLM office responsible for adjudicating financial guarantees has 30 calendar days to review the offered replacement instrument for adequacy. The criteria and requirements for determining the adequacy of the replacement financial guarantee are the same as for a new financial guarantee (see BLM Handbook H-3809-2, *Surface Management Bond Processing*).

[204] 43 CFR 3809.582.

Within 30 calendar days, the BLM must notify the operator of its decision regarding the replacement financial instrument by certified mail, return receipt requested, registered mail, or courier. Any decision to reject a request for a replacement financial guarantee must contain a complete explanation of the reasons for the rejection as well as language regarding appeals.[205]

If for some reason a surety bond is no longer in effect, the surety or other responsible third party, such as a state bond pool, is not released from an obligation that accrued while the surety bond or other coverage was in effect unless the operator submits, and the BLM accepts, an adequate replacement guarantee that covers the obligations under the previous surety bond.[206] A surety cannot unilaterally terminate liability for obligations that accrued while the bond was in effect. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for further guidance pertaining to coverage of financial guarantees.

6.4.3 Reduction of Financial Guarantee

When the operator has completed all or any portion of the reclamation of the operations in accordance with the Notice or approved Plan of Operations, the operator may notify the District/Field Office that the reclamation has occurred and request a reduction in the amount of the required financial guarantee and/or BLM approval of the adequacy of the reclamation.[207] Based on the operator request, the BLM District/Field Office will promptly inspect the reclaimed portion of the operation.[208] The District/Field Manager will notify the operator, in writing, as to the date and time of the inspection and encourage the operator to accompany the BLM inspector.

Based on the inspector's findings and the provisions of 43 CFR 3809.591, the District/Field Manager will provide the operator with a written determination as to the adequacy of the reclamation, and a restatement of the RCE and amount of the required financial guarantee (see Appendix A, Template 6.4-1 Required Financial Guarantee Amount - Reduction).

Where the amount of the existing financial guarantee exceeds the amount of the cost estimate to reclaim the operation, the operator may request the BLM release or reduce the amount of the obligated financial guarantee. Any request by the operator for a reduction in the amount of the existing financial guarantee must be made in writing to the BLM office responsible for adjudicating the financial guarantee. See BLM Handbook H-3809-2, *Surface Management Bond Processing,* for guidance pertaining to the reduction/release of financial guarantees. The District/Field Manager will not authorize a reduction in the RCE in situations where the BLM has not conducted a periodic review as required under 43 CFR 3809.552(b) or 3809.553(b). See review requirements in Section 6.2.4 Periodic Reviews. Any request by the operator for a reduction in the amount of the financial guarantee must be made to the BLM office responsible for adjudicating the financial guarantee.

[205] 43 CFR 3809.581(a).
[206] 43 CFR 3809.581(b).
[207] 43 CFR 3809.590(a).
[208] 43 CFR 3809.590(b).

6.4.3.1 Reduction Limits

The regulations at 43 CFR 3809.591 prescribe specific limits to the amount of the financial guarantee that may be reduced when an operator has completed a portion of its reclamation obligations and requests a release or reduction in the required financial guarantee. The release process is illustrated in Figure 4.2-6 Plan of Operations—Closure and Required Financial Guarantee Release Process.

The BLM may release up to 60 percent of the required financial guarantee for a portion of the project area when the District/Field Manager determines that the operator has successfully completed backfilling, regrading, establishment of drainage control, and stabilization and detoxification of leaching solutions, heaps, tailings, and similar facilities on that portion of the project area.[209] However, in no case may the amount of the required financial guarantee that is retained be less than 100 percent of the remaining reclamation costs required by 43 CFR 3809.552(a) and 3809.554(a).

The BLM may release the remainder of the required financial guarantee amount for the same portion of the project area when:[210]

- The District/Field Manager determines that the operator has successfully completed reclamation, including revegetating the area disturbed by operations, and

- Any effluent discharged from the area has met applicable Federal and state effluent and water quality standards for 1 year without needing additional treatment, or the operator has established a funding mechanism under 43 CFR 3809.552(c) to pay for long-term treatment, and any effluent discharged from the area has met applicable effluent limitations and water quality standards for 1 year with or without treatment. See Section 6.3.4 Trust Funds or Other Funding Mechanisms for discussion of funding mechanisms under 43 CFR 3809.552(c).

Final release of the requirement for a financial guarantee for a portion of the operation does not need to comply with the public notification requirements of 43 CFR 3809.590(c), as long as a financial guarantee exists for a portion of the operation. The BLM inspection of the reclamation and subsequent District/Field Manager's decision concerning reclamation adequacy and reduction of the required financial guarantee amount will follow the procedures specified under 43 CFR 3809.590(b). The operator will be notified, in writing, of any decision concerning reclamation adequacy and reduction of the amount of the required financial guarantee.

6.4.3.2 Corporate Guarantees

When an operator requests a reduction in his or her financial guarantee according to 43 CFR 3809.590(a) and the financial guarantee includes the use of a corporate guarantee, the reduction in the financial guarantee will be made proportionally from the accepted financial guarantee instrument(s) and the proportion of the financial guarantee that was covered by a corporate

[209] 43 CFR 3809.591(b).
[210] 43 CFR 3809.951(c).

guarantee on January 20, 2001. For example, if the financial guarantee coverage is to be reduced by $100,000 and the financial guarantee coverage, on January 20, 2001, was 65 percent corporate guarantee and 35 percent acceptable financial instrument(s), then the corporate guarantee would be reduced by $65,000 and the financial instrument(s) would be reduced by $35,000.

To ensure corporate guarantee coverage is not being transferred to a modified or expanded portion of an existing operation, any District/Field Manager decision, (see Determination of Required Financial Guarantee Amount, Appendix A, Template 3.2-3), that revises the amount of the required financial guarantee, whether it is a net increase or net reduction, must document the gross reduction, if any, due to completion of reclamation obligations. Where practical, the District/Field Manager should issue separate decisions for operations covered by corporate guarantees when both a reduction and an increase is occurring in the reclamation obligations.

6.4.3.3 Final Reduction

The final reduction or release of the requirement to maintain a financial guarantee for a Plan of Operations requires public notification and comment period.[211] For Plans of Operations, the BLM will post in the local BLM office and/or publish notice of final financial guarantee release in a local newspaper of general circulation, and accept comments for 30 calendar days. The notification will identify the operation, describe the requested action, and indicate where comments may be submitted.

The District/Field Manager may not make a decision that would result in the final release of the financial guarantee for 30 calendar days following notification of the public of the proposed final release. Following the 30-day period, the District/Field Manager must issue a written decision concerning the adequacy of the reclamation and reduction or final release of the financial guarantee requirement. The District/Field Manager is not required to respond to public comments on the reclamation or reduction of the financial guarantee requirement; however, substantive concerns should be addressed in the decision. This decision must be provided, in writing, to the operator and to any commenting parties, with a copy to the BLM office responsible for adjudicating financial guarantees.

This public notification provision does not apply to an interim financial guarantee reduction or final financial guarantee requirement release on a portion of the Plan of Operations, unless that financial guarantee requirement is for the last portion of an operation to be released. Also this notification provision does not apply to reduction of financial guarantee requirements for Notice-level operations.

6.4.3.4 Enforcement Actions

Any existing enforcement actions, including noncompliance orders, for an operation must be resolved before any release or reduction of the financial guarantee requirements may be authorized for that operation.

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[211] 43 CFR 3809.590(c).

6.4.3.5 Trust Funds

This section, Section 6.4.3 Reduction of Financial Guarantee, applies to the operator's individual, blanket, and/or state-approved reclamation financial guarantee, but not to any funding mechanism established under 43 CFR 3809.552(c) to pay for long-term treatment of effluent or site maintenance. Calculation of the reclamation financial guarantee percentages discussed does not include any funds held in a trust fund or other post-mining funding mechanism.

6.4.4 Release of Responsibility

6.4.4.1 Claimant and Operator Responsibility

Termination of the period of liability under the financial guarantee does not release the mining claimant or operator from responsibility for reclamation of the operations should reclamation fail to meet the standards of the regulations or the reclamation responsibilities as specified in the filed Notice or approved Plan of Operations.[212]

6.4.4.2 Financial Guarantee Period of Liability

The time between the BLM's acceptance of a satisfactory financial guarantee for a specified obligation until the BLM's release of the bond is called the financial guarantee's period of liability. Only the period of liability or obligation under the financial guarantee is terminated or released; the bond itself is not terminated or canceled. Additionally, under 43 CFR 3809.116(a), the operator and claimant retain reclamation responsibility for any obligations that accrue while they hold their interests. The United States, acting through the BLM, cannot terminate the period of liability of a bond until all obligations of the terms of a Plan of Operations or a Notice-level disturbance have been fulfilled, payment of the bond proceeds (penal sum) is received by the BLM, or until a satisfactory replacement bond has been accepted by the BLM.

When the BLM Surface Management Specialists determine to the extent they are able, that all obligations under the bond (the terms and conditions of <u>all</u> operations) have been met, the period of liability may be terminated by adjudication. That means an exact date is set after which no <u>new</u> liability may accrue under the bond. This does not mean that the bond principal may deny liability for a cause of action accruing before the termination of the period of liability.

Before January 20, 2001, the BLM did not unconditionally release a surety from past liability. However, under 43 CFR 3809.581(b), the BLM will release a surety from an obligation that accrued while the surety bond was in effect when the BLM has accepted a replacement bond that covers all obligations under the previous surety bond.

6.4.4.3 Third Party Responsibility

Unless otherwise legally obligated, once all reclamation responsibilities, as specified in the filed Notice or approved Plan of Operations, and required by regulation, have been completed to the

[212] 43 CFR 3809.592(a).

District/Field Manager's satisfaction, third party institutions, such as banks, sureties, insurance companies, or state bond pools, are released from any future financial obligation. However, if the bank, surety, insurance company, or other entity assumes or directs operational control of the reclamation, or any other aspect of the operation, release of the financial guarantee requirement does not release the third party institution from responsibility for reclamation of the operations should reclamation fail to meet the standards of the 43 CFR 3809 regulations or the reclamation responsibilities as specified in the filed Notice or approved Plan.

6.4.4.4 CERCLA Liability

Any release of the financial guarantee does not release or waive any claim the BLM, or other persons, may have against any person under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended,[213] or under any other applicable statutes or regulations.[214]

6.4.5 Change of Operator

The operator remains responsible for obligations or conditions created while the operator conducted operations unless a transferee accepts responsibility under 43 CFR 3809.116 and the BLM accepts an adequate replacement financial guarantee.[215] The original operator's financial guarantee must remain in effect until the District/Field Manager determines that the operator is no longer responsible for all or part of the operation.

In the event the original operator wants to have his or her financial guarantee released, the new operator must provide documentation[216] to the District/Field Office that he or she accepts responsibility for all obligations and conditions created by the original operator. In addition, the new operator must provide the BLM office responsible for adjudicating financial guarantees with an acceptable replacement financial guarantee for all obligations and conditions created by the original operator. The BLM may release the original financial guarantee on an incremental basis. Any change of operator must be reported to the appropriate BLM District/Field Office within 30 days as required by 43 CFR 3809.301(d) and 3809.401(b)(1).

If the new operator intends to conduct operations under the existing Notice or Plan of Operations, the new operator must provide the BLM District/Field Office with a written statement to this effect, including an acceptable RCE. If the new operator intends to modify the existing Notice or Plan of Operations, he or she must process the request under the requirements of 43 CFR 3809.330 or 3809.430. A new operator must provide the BLM with an acceptable financial guarantee covering proposed operations before the District/Field Manager may allow the new operator to conduct operations.

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[213] 42 U.S.C. 9601 *et seq.*
[214] 43 CFR 3809.592(b).
[215] 43 CFR 3809.593.
[216] BLM Form 3809-5, Notification of Change of Operator and Assumption of Past Liability.

6.4.6 Change in Land Ownership

When there is a change in the land status out of public ownership, the District/Field Manager must determine if retention of all or part of the financial guarantee is still warranted.

6.4.6.1 Patented Lands

Unless the BLM has an agreement with the state to hold the financial guarantee for both public and private lands, when a mining claim or mill site is patented under the Mining Law, or the

entire property is transferred out of public ownership, the BLM will release the portion of the financial guarantee that applies to operations within the boundaries of the patented land.[217]

When a patent is issued that covers a portion of an operation, the BLM District/Field Office should request the operator submit a revised RCE for the operation that remains on public lands. The District/Field Manager must issue a written decision concerning the new amount of the required financial guarantee. The BLM office responsible for adjudicating financial guarantees will release a portion of the required financial guarantee based on the District/Field Manager's decision.[218] The remainder of the required financial guarantee will be released based on successful reclamation of the unpatented lands as required by 43 CFR 3809.590 and 3809.591.

6.4.6.2 California Desert Conservation Area (CDCA)

When the BLM patents mining claims within the boundaries of the CDCA that contain the patenting restriction in 43 U.S.C. 1781(f), the California State Office must not release the financial guarantee as a result of the patenting of the mining claim.[219] Under that patent restriction, mining operations on CDCA lands remain subject to financial guarantee requirements.

6.4.6.3 Joint Financial Guarantee

Where the BLM and state have an agreement under 43 CFR 3809.201 that provides for financial guarantees to be held jointly by either the BLM or state, the financial guarantee release provision for lands that have been transferred out of public ownership does not apply.

6.4.6.4 Split Estate

Where the transfer of ownership of the surface estate creates a split estate, the District/Field Manager must determine if the surface management regulations still apply as provided for under 43 CFR 3809.31(e). If the regulations do not apply, the BLM office responsible for adjudicating financial guarantees will release the portion of the financial guarantee that applies to operations within the boundaries of the patented land.

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[217] 43 CFR 3809.594(a).
[218] 43 CFR 3809.594(b).
[219] 43 CFR 3809.594(a).

6.5 Forfeiture of Financial Guarantee

6.5.1 Initiating Forfeiture

The District/Field Manager may initiate forfeiture of all or part of an operator's financial guarantee for any project area or portion of a project area if any of the following applies:[220]

- The operator or mining claimant is unable or unwilling to conduct reclamation as provided for and as scheduled in the reclamation plan included in the Notice or approved Plan of Operations; or in accordance with the 3809 regulations.
- The operator fails to meet the terms of the Notice or approved Plan of Operations.
- The operator defaults on any of the conditions under which the operator obtained the financial guarantee.

If necessary, the BLM will initiate forfeiture procedures of the financial guarantee according to 43 CFR 3809.595 through 3809.599. When the District/Field Manager decides to require the forfeiture of all or part of the financial guarantee,[221] the District/Field Office notify the Regional Solicitors and will serve the notice of default and forfeiture upon the operator or mining claimant by certified mail-return receipt requested, and the surety on the financial guarantee, if any. The state agency holding the financial guarantee, if any, will inform all parties including the operator of the following (see Appendix A, Template 6.5-1, Forfeiture of Financial Guarantee):

- The District/Field Manager's decision to require the forfeiture of all or part of the financial guarantee.
- The reasons for the forfeiture.
- The amount that the operator will forfeit based on the estimated total cost of implementing the reclamation plan requirements for the project area or portion of the project area affected, including BLM's administrative costs.
- How the operator may avoid forfeiture[222] including:
    - Providing a written agreement under which the operator or another person will perform reclamation operations in accordance with a compliance schedule which meets the conditions of the Notice or approved Plan of Operations and the reclamation plan, and a demonstration that such other person has the ability to satisfy the conditions, and
    - Obtaining written permission from the District/Field Manager for a surety to complete the reclamation, or the portion of the reclamation applicable to the bonded

[220] 43 CFR 3809.595.
[221] 43 CFR 3809.596.
[222] 43 CFR 3809.596(d).

phase or increment, if the surety can demonstrate an ability to complete the reclamation in accordance with the reclamation measures incorporated in the Notice or approved Plan of Operations.

- That the District/Field Manager's decision to initiate forfeiture of financial guarantee is subject to appeal under 43 CFR 3809.800 but remains in full force and effect pending the outcome of the appeal unless the State Director or Interior Board of Land Appeals (IBLA) grants a stay.

6.5.2 Collecting the Forfeited Guarantee

If the operator fails to meet the requirements of the District/Field Manager's forfeiture decision provided under 43 CFR 3809.596, or the IBLA does not grant a stay under 43 CFR 4.21, the BLM will take the following actions.[223]

The BLM office responsible for adjudicating financial guarantees will immediately collect the forfeited amount as provided by applicable laws for the collection of defaulted financial guarantees, other debts, or state bond pools. The BLM office responsible for adjudicating financial guarantees will expeditiously secure all funds intended as financial guarantees to ensure proper reclamation. The BLM office responsible for adjudicating financial guarantees should consult the appropriate Solicitor's Office who will work with the Department of Justice to ensure the Government's interests are protected.

Financial guarantees that are forfeited will be deposited into a 5320 account "Repair of Damaged Lands - Public Lands" by the BLM office responsible for adjudicating financial guarantees. Before using funds from this account, the District/Field Manager must contact the State Budget Lead to obtain an individual project code for tracking purposes.

The District/Field Office will use funds collected from financial guarantee forfeiture to implement the reclamation plan, or portion thereof. All costs, including contracting costs and BLM employee salaries, associated with the reclamation of the operation will be covered by the deposited funds. Where the BLM has obtained funds to meet certain reclamation obligations, the District/Field Office must promptly complete reclamation as required by the filed Notice or approved Plan and 3809 regulations. The District/Field Office's ability to promptly complete all required reclamation may be affected by factors outside the BLM's control, such as weather, road and ground conditions, or litigation. The BLM will return any unused funds as required by 43 CFR 3809.599.

Through purchase, bankruptcy sale, relocating of mining claims, or paying the maintenance fee on existing mining claims, new parties may enter into the process. Their activities on the site may complicate the orderly progression of acquiring the financial guarantee and implementing reclamation measures. The District/Field Manager should consider temporarily segregating the site from activities under the mining laws to allow for unencumbered site reclamation. See BLM Handbook 1601-1, *Land Use Planning Handbook,* for the procedures and requirements in segregating lands from mineral entry.

[223] 43 CFR 3809.597.

6.5.3 Insufficient Forfeited Funds

If the amount forfeited is insufficient to pay for the full cost of reclamation, the operator(s) and mining claimant(s) are liable for the remaining costs as set forth in 43 CFR 3715 and 43 CFR 3809.116.[224] In such situations, the BLM may complete or authorize completion of reclamation of the area covered by the financial guarantee. If agency funds are used to reclaim the disturbance, the BLM must promptly initiate legal procedures to recover from all responsible parties all costs of reclamation in excess of the amount forfeited.

Recovery should be sought through legal action for any reclamation costs not covered by the financial guarantee (see BLM Manual 1370, *Receipts and Disbursements*, BLM Manual 1371, *Billings*, and BLM Manual 1372, *Collections*). In addition to conferring with the State or District/Field Office Collections Specialist, the BLM should consult with the appropriate Solicitor's Office who can work with Department of Justice (DOJ) to recover BLM funds used to complete reclamation. See Section 13.6.2 Debt Collection on proper documentation of any collection effort. Before the case file may be closed, the site must be successfully reclaimed and funds recovered from the responsible party or the collection action terminated (see BLM Manual 1375, *Delinquent Accounts*).

Reclamation actions taken by the BLM, for operations authorized under the surface management regulations, requiring the expenditure of funds over the financial guarantee amount should use Mining Law Administration funds (1990). If no 1990 funds are available, and the unreclaimed disturbance is a threat to public health, safety, or the environment, then it may be appropriate for the BLM to invoke its CERCLA authority and use abandoned mine land or hazardous materials program funding to complete the work (see BLM Handbook H-1703-1, *BLM CERCLA Response Handbook*).

6.5.4 Excess Forfeited Funds

If the amount of financial guarantee forfeited is more than the amount necessary to complete reclamation, the BLM must return the unused funds within a reasonable amount of time to the party from whom the funds were collected.[225]

6.5.5 Bankruptcy

Bankruptcies create unique issues when dealing with financial guarantee forfeitures. Bankruptcy proceedings are bound by strict filing time limits. If the BLM misses the deadline for filing a claim, the BLM is left without further legal recourse. The BLM must advise the Solicitor's Office immediately of any bankruptcy filing so that the Solicitor and the U. S. Attorney's Office may file the necessary documents to establish the BLM's claim in the Bankruptcy Court.

When faced with a bankruptcy, the BLM office responsible for adjudicating financial guarantees should refer to BLM Handbook H-3809-2, *Surface Management Bond Processing*, Chapter XIV,

[224] 43 CFR 3809.598.
[225] 43 CFR 3809.599.

Bankruptcy, for further guidance on steps necessary to protect the public's interest. See also, Section 7.3 Forfeiture of Financial Guarantee upon Abandonment.

6.6 Joint Federal-State Financial Guarantees

6.6.1 Joint Program and Deferral Agreements

States may enter into agreements with the BLM under 43 CFR 3809.200(a) to allow for joint Federal and state administration and enforcement of mining operations, including financial guarantees. Alternatively, the Federal-State Agreement may provide for deferral of the BLM's surface management responsibilities to the state, rather than administering the operation jointly. See Section 12.2 New Agreements, for the requirements of a Federal-State Agreement.

If the Federal-State Agreement covers financial guarantees, an operator may use a single financial instrument to meet both Federal and state financial guarantee requirements. Either the BLM or the state may hold the financial guarantee under such an agreement; however, if the Federal-State Agreement specifically provides that the BLM will defer to state regulation as to financial guarantees, the instrument must specify both that the Secretary has the authority to redeem the bond, and that the state is required to obtain BLM concurrence before approving, releasing, or initiating forfeiture of a financial guarantee.[226]

Where there is to be a single financial guarantee and the operation involves both public and non-public lands, the financial guarantee must cover all operations whether they are on public or non-public lands. Where the financial guarantee covers both public and non-public lands, the BLM and state should concur on the approved amount, release, and forfeiture of the financial guarantee. This concurrence may be addressed programmatically through the Federal-State Agreement or on a case-by-case basis.

The BLM and state must concur on the amount of the financial guarantee that must be calculated based on completion of all applicable Federal and state reclamation requirements for the entire operation. To be held as a single financial guarantee, any financial instrument(s) used for the financial guarantee must be acceptable to the BLM under 43 CFR 3809.555 or 3809.571.

Under either a joint or deferral agreement, where the state holds a financial guarantee, the amount of the financial guarantee may reflect the state's administrative costs instead of the BLM's for contracting the required reclamation. In such cases, the state must also agree to administer all reclamation contracts under the state cost structure should financial guarantee forfeiture be necessary.

6.6.2 Long-Term Funding Mechanisms

The BLM may enter into a Federal-State Agreement under 43 CFR 3809.200(b) that provides for post-reclamation obligations under 43 CFR 3809.552(c). See Section 6.3.4 Trust Funds or Other Funding Mechanisms for guidance on establishing a long-term funding mechanism.

[226] 43 CFR 3809.203(d).

Where the post-mining treatment or maintenance requirements involve both public and non-public lands, the trust fund must be for all required long-term, post-mining construction, operation, maintenance, or replacement of any treatment facilities and infrastructure for the entire operation. In addition, the state may be a party to the Trust Fund Agreement where the post-mining treatment or maintenance requirements involve both public and non-public lands.

Where the agreement provides that administration of a trust fund is to be handled by the state, the amount in the fund may reflect the state's administrative costs for contracting the required post-mining construction, operation, maintenance, or replacement of any treatment facilities and infrastructure if the operator defaults. In such cases, the state must also agree to administer all contracts under the state cost structure should the operator fail to perform the post-mining tasks as required in the approved Plan of Operations.

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Chapter 7 Cessations and Abandonment

This chapter describes operator and BLM responsibilities when an operator suspends activities under a Notice or Plan, and the criteria the BLM uses to determine when the operation is abandoned. This chapter also discusses special considerations for dealing with operators who have declared bankruptcy.

7.1 Cessation and Abandonment of Activity Conducted under a Notice

Notices expire after 2 years unless extended under 43 CFR 3809.333 or nullified due to noncompliance. Once a Notice expires, the only surface-disturbing activity that the operator may engage in is reclamation.[227] Unlike Plans of Operations, operators are not required to submit an interim management plan with their Notices.

7.1.1 Requirements for Periods of Non-Operation

If the operator stops conducting operations under a Notice for any period of time, the operator must:[228]

- Maintain the public lands within the project area, including structures, in a safe and clean condition. If the cessation of operations is not addressed in the Notice, then the operator must promptly notify the BLM about the stoppage of operations or the BLM may determine the operations to be abandoned under 43 CFR 3809.336 (see Section 7.1.2).

- Prevent UUD during the period of non-operation. Under 43 CFR 3809.334(b), the BLM will notify the operator, in writing, if it determines the period of non-operation is likely to cause UUD and will tell the operator what steps must be taken to prevent UUD. If the BLM determines that the period of non-operation is likely to cause UUD and there has been an extended period of non-operation, the written notice from the BLM may require the operator to remove structures, equipment, and other facilities and reclaim the site.

- Maintain an adequate financial guarantee for surface disturbance under the Notice until the required reclamation is complete. If surface disturbance under the Notice has not begun, or only partially occurred and then stopped, the BLM will not release any portion of the financial guarantee until the operator modifies the Notice, including a revised RCE, to reflect the lower level of surface disturbance.

While the regulations do not define an "extended period of non-operation," the BLM may make such a determination after considering the sensitivity of the resource values in the project area and any other relevant factors. As general guidance, if there is no or minimal activity on-the-ground during the 2-year Notice lifespan, it would then be reasonable for the BLM to issue an order under 43 CFR 3809.334(b)(2) requiring the operator to remove all structures and

[227] 43 CFR 3809.332.
[228] 43 CFR 3809.334.

equipment and to reclaim the area. It may also be appropriate to take action under 43 CFR 3715.5-1 and 3715.5-2.

7.1.2 Determination of Abandonment

At any time the BLM may inspect the operation and determine that it has been abandoned.[229] In reaching such a determination, the BLM will apply the criteria listed under 43 CFR 3809.336(a).

The BLM may determine the operation has been abandoned where any of the following conditions apply:

- Inoperable or non-mining related equipment is left in the project area.
- The operator has removed mining equipment from the area.
- The project area has not been maintained.
- Workers have been discharged.
- The financial guarantee has not been maintained.
- There is no sign of activity in the project area over time (e.g., 1 year).

Liquidation or removal of project assets during the bankruptcy process would also constitute evidence of abandonment. In order to support a determination that an operation has been abandoned, the applicable conditions must be documented in inspection reports.

7.1.2.1 Issuing an Abandoned Decision

Once the BLM determines the operation are abandoned, the authorized officer will issue a decision stating that the operation has been determined to be abandoned, nullifying the Notice, identifying any remaining reclamation obligations, and advising the operator that the BLM will initiate forfeiture of the financial guarantee as provided for under 43 CFR 3809.595 through 3809.597 unless reclamation is completed by a set date. See Appendix A, Template 3.5-1, Reclamation Required for an example of what should be covered in the decision to the operator. Such a decision may be appealed as specified under 43 CFR 3809.800 through 3809.809.

When preparing to take action under this provision,[230] the BLM office should consult with the Solicitor's Office to determine whether to also, or in lieu of, take action under 43 CFR 3715.5-1 and 3715.5-2. Action under the 3715 regulations is particularly appropriate where there is only occupancy and no ongoing surface disturbance.

[229] 43 CFR 3809.336.
[230] 43 CFR 3809.336(b).

7.2 Activity Conducted under a Plan of Operations

The Plan of Operations must contain an interim management plan to manage the project area when the operator stops conducting operations (i.e., activities associated with exploration and development of a locatable mineral deposit) for a period of temporary and/or seasonal closure. Plans of Operations do not automatically expire when an operator is not engaged in active exploration, development, or reclamation. Unless the BLM initiates an enforcement action and suspends or revokes a Plan of Operations, the Plan remains in effect until the operator has completed mining operations and final reclamation.[231]

However, the Plan operator is expected to follow the schedule of operations contained in the approved Plan, or request a modification if the schedule needs to be adjusted (a change in the schedule of operations would likely be a minor modification under 43 CFR 3809.432(b)).

7.2.1 Requirements if Activity Stops

Section 3809.424 describes what the operator must do during planned periods of temporary closure as described in the approved Plan of Operations.

- Follow the approved interim management plan submitted under 43 CFR 3809.401(b)(5). If the operator needs or wants to do something different than provided by the approved interim management plan, the interim management plan must be modified.

- Modify the Plan, if necessary. If the interim management plan does not cover the circumstances or procedures that the operator will follow during the period temporary closure, under 43 CFR 3809.431(a) the operator must submit a Plan modification specifically detailing the changes in the interim management plan to the BLM within 30 calendar days of the non-conforming closure date. The BLM will process the Plan modification in either the same manner as the initial Plan approval, or as a minor modification, whichever is appropriate under 43 CFR 3809.432. Examples where an interim management plan may need to be modified could include:

    - The period of non-operation is longer than anticipated or seasonally different than anticipated.

    - Equipment to be stored onsite is not listed in initial interim management plan.

    - There is a change in monitoring frequency.

    - There are adverse effects to the environment or public safety under the existing interim management plan that requires it be modified to correct the situation.

- Take all necessary actions to prevent UUD during the period of non-operations. The operator is responsible for preventing UUD during the period of non-operation.

[231] See 43 CFR 3809.423.

- Maintain an adequate financial guarantee for the Plan of Operations during the period of non-operation. The financial guarantee must be adequate to complete any remaining reclamation work.

If the period of non-operation is likely to cause UUD, then the BLM must require the operator to take corrective actions to prevent UUD, including requiring the operator to remove all structures, equipment, and other facilities and reclaim the project area.[232]

7.2.2 Determination of Abandonment

At any time the BLM may inspect the operation and determine whether it has been abandoned by applying the criteria listed under 43 CFR 3809.336(a).[233] See Section 7.1.2 above.

The BLM may determine that the operation has been abandoned where any of the following conditions apply:

- Inoperable or non-mining related equipment is left in the project area.
- The operator has removed mining equipment from the area.
- The project area has not been maintained.
- Workers have been discharged.
- The financial guarantee has not been maintained.
- There is no sign of activity over an extended timeframe (e.g., 5 years).

Disposal of project assets through bankruptcy proceedings would also indicate that the operation has been abandoned. In order to support a determination that an operation has been abandoned, the BLM must document the applicable conditions in inspection reports before issuing the decision of abandonment (see Section 9.1.5 Documentation of Inspections).

If an operator has been operating under the interim management plan in its approved Plan of Operations for 5 consecutive years, then the BLM will review the operation and document in the case file whether or not to initiate enforcement actions under 43 CFR 3809.600 to declare the Plan of Operations abandoned, terminate the Plan of Operations, and direct final reclamation and closure.

7.2.2.1 Issuing an Abandoned Decision

Once the BLM finds that the operation meets the criteria for abandonment, the authorized officer will issue a decision to the operator stating that the operation has been determined to be

[232] 43 CFR 3809.424(a)(2).
[233] 43 CFR 3809.424(a)(4).

abandoned, that the Plan of Operations is terminated, and that the operator must complete reclamation according to the approved reclamation plan. The decision must also advise the operator that the BLM will initiate forfeiture of the financial guarantee as provided for under 43 CFR 3809.595 through 3809.597 unless reclamation is completed by a set date. See Appendix A, Template 3.5-1 Reclamation Required for an example of what should be covered in the decision to the operator. Such a decision may be appealed as specified under 43 CFR 3809.800 through 3809.809.

When preparing to take action under this provision, the BLM office should consult with the Solicitor's Office to determine whether to also take action under 43 CFR 3715.5-1 and 3715.5-2.

7.3 Forfeiture of Financial Guarantee upon Abandonment

If the BLM determines that the operator has abandoned the operation and the operator fails to complete reclamation by the date specified in the abandoned operations decision, the District/Field Manager will initiate forfeiture of the financial guarantee as provided under 43 CFR 3809.595. Under 43 CFR 3809.596, the BLM will notify the operator and/or mining claimant that the BLM intends to collect and use a specified amount of the forfeited financial guarantee unless the operator or mining claimant provides the written agreements specified in 43 CFR 3809.596(d). (See Section 6.5 Forfeiture of Financial Guarantee and also BLM Handbook H-3809-2, *Surface Management Bond Processing*).

7.4 Operator Responsibilities

Abandonment of an operation does not relieve the operator of its reclamation and closure responsibilities.[234] Nor is the amount of the financial assurance the limit of the operator's reclamation liability.[235]

The operator's reclamation obligations are satisfied when (1) reclamation has been completed in accordance with the filed Notice or approved Plan of Operations and the performance standards or (2) the BLM receives documentation that a transferee accepts responsibility for previously accrued reclamation obligations and BLM accepts a replacement financial guarantee adequate to cover those obligations. Under CERCLA or any other applicable statutes or regulations, the responsibilities and liabilities of the responsible party may continue even after reclamation is complete.[236]

7.5 Bankrupt Operations

Bankruptcy is the legal process where individuals or corporations seek protection from creditors for debts owed. Under Federal bankruptcy procedures, an operator may restructure its debt and continue to do business ("Chapter 11"), or be required to liquidate assets ("Chapter 7").

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[234] 43 CFR 3809.116.
[235] 43 CFR 3809.598.
[236] 43 CFR 3809.592.(b).

If the BLM District/Field Office suspects an operator may have filed for bankruptcy, it should check with the BLM Bankruptcy Coordinator in the State Office to determine if the operator has filed for bankruptcy protection. The bankruptcy coordinator will then notify other states and work with the Office of the Solicitor.

Once the BLM becomes aware that an operator has filed for bankruptcy protection, the BLM District/Field Office will immediately review the financial guarantee amount to determine if the on-the-ground reclamation liability will be covered by the financial guarantees in place. If a shortfall in the financial guarantee is identified, the BLM must request assistance from the Office of the Solicitor and the DOJ to submit claims to the bankruptcy court to protect any financial guarantees held by the BLM and for any unfunded or underfunded reclamation liability.

During the bankruptcy proceedings, the BLM must be involved in discussions with the operator and the surety company, if applicable, to determine how the reclamation obligations will be satisfied if the operations become abandoned or are forced to dissolve. In these situations, the surety company, if applicable, would have the option of performing the required work in lieu of the operator, or the BLM may oversee performance of the reclamation using the forfeited financial guarantee.

Therefore, operations in bankruptcy need to be closely monitored. See BLM Handbook 3809-2, *Surface Management Bond Processing*, Chapter XIV.

7.5.1 Maintaining Compliance during Bankruptcy

An operator does not violate any provision of the 43 CFR 3809 regulations and is not in noncompliance simply by filing for bankruptcy protection. However, an operator in bankruptcy may be forced to cut back expenditures which may make it difficult to meet the operating and reclamation commitments in their Notice or Plan. Therefore, the BLM can and will exercise its authority to inspect the operations and take enforcement actions to ensure compliance with environmental regulations as appropriate, including issuing a noncompliance order for failure to reclaim. If the BLM determines that operations are in noncompliance and the operator is unwilling or unable to perform the reclamation specified in the Notice or Plan, the BLM should work with the Solicitor's Office to initiate forfeiture of the financial assurance or seek payment from the surety company.

In addition, if the operator files for bankruptcy under Chapter 7 or is otherwise forced to dissolve as part of the bankruptcy proceeding, the BLM should immediately initiate procedures for determining whether the project is abandoned and issue a decision so that reclamation may begin as soon as possible.

The BLM guidance requires financial assurances to be isolated from liquidation of the bankruptcy estate so that the financial assurance amount should be available in full to fund the reclamation plan.

7.5.2 Use of Onsite Equipment to Reclaim Bankrupt Operations

If the operator files for bankruptcy under Chapter 7 or the Court otherwise orders liquidation of the operator's assets, the Court may appoint a trustee to sell the operator's assets. Often this may

involve selling equipment or structures that are needed to perform reclamation, in particular disposal of equipment or structures that were previously presumed available when the RCE was calculated. Examples of equipment disposed of during bankruptcy that may impede reclamation work include pumps for circulating leach pad solutions, liners, fences around process ponds, culverts in roads, water treatment plants, powerlines, generators, and pumps or casing from monitoring wells.

The BLM will work with the Solicitor's Office and the DOJ to attempt to work with the Trustee or the Court to delay disposal of items required for reclamation until after the reclamation work is completed. In general, this will require filing a petition with the Bankruptcy Court in order to retain equipment onsite that is required for environmental compliance until reclamation is complete.

Prior to bankruptcy, several approaches may be taken to prevent such a situation from occurring. The RCE may be increased to cover the replacement cost of equipment required for reclamation, the personal property could be titled to the BLM or the state so that it is available, or the real property could be transferred with use and access rights reserved to the BLM or state.

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Chapter 8 Special Situations and Land Use Planning

This chapter provides guidance on authorizing surface-disturbing activities under certain special situations, including lands that have been withdrawn or segregated from mineral entry, minerals that may be common variety minerals, split estate lands, cumulative effects of casual use activities, and suction dredging. This chapter also provides guidance on land use planning decisions and how those decisions may affect proposed operations and post-mining land uses.

8.1 Withdrawn and Segregated Lands

8.1.1 Validity Determination

The regulations at 43 CFR 3809.100 have special provisions that apply to proposed operations on segregated or withdrawn lands.

8.1.1.1 Withdrawn Lands

For mining claims located on lands that are withdrawn from appropriation under the mining laws subject to valid existing rights, the BLM must conduct a validity examination and determine the mining claim(s) subject to the Notice or Plan were valid as of the date of the withdrawal, and as of the date of the exam, before approving a Plan or determining a Notice to be complete.[237] A Notice or Plan submitted before the withdrawal is not exempt from the validity determination requirement if the BLM has not accepted or approved it at the time of the withdrawal.

The BLM will issue its findings with regard to valid existing rights in a mineral report (see BLM Handbook H-3890-3, *Validity Mineral Report*). The BLM may recover costs from the operator associated with the validity examination and mineral report.[238]

8.1.1.2 Segregated Lands

BLM managers have discretion to determine the validity of mining claims within a segregated area before approving a Plan of Operations or acknowledging an exploration Notice. This also means that BLM managers have discretion to approve a proposed Plan of Operations or acknowledge an exploration Notice on segregated lands without first determining the validity of the underlying mining claims.

8.1.1.2.1 New Plans and Notices

Before making a decision to require a validity determination under 43 CFR 3809.100(a), the BLM manager may consider certain factors including but are not limited to the purpose of the segregation. When considering new or pending exploration Notices or proposed Plans of Operations on segregated lands, BLM managers should ask the operator who is proposing the exploration or mining activities for data or other evidence showing that a physical exposure of a

[237] 43 CFR 3809.100(a).
[238] 43 CFR 3800.5(b).

locatable mineral deposit existed as of the segregation date. For purposes of deciding whether to conduct a validity determination on segregated lands, BLM managers need not determine whether the exposure evidences a valuable mineral deposit. That is a question left for a mineral examination.

In assessing whether the operator has exposed a locatable mineral deposit, BLM managers will accept the use of a variety of industry standard methods, including, but not limited to, assays, physical tests, chemical analysis, on-site concentration and processing, x-ray fluorescence, neutron activation, or gamma ray logging methods. BLM managers should consult with a Certified Mineral Examiner or a Certified Review Mineral Examiner who is experienced with the type of deposit at issue and applicable analysis methods.

If the operator cannot show an exposure of a locatable mineral deposit that was disclosed before the segregation date, the BLM manager should not accept the Notice or approve the Plan without conducting a discretionary validity determination under 43 CFR 3809.100(a) regardless of the purpose of the segregation. If the operator can show an exposure of a locatable mineral deposit that was disclosed before the segregation date, the BLM manager may exercise discretion under 43 CFR 3809.100(a) on a case-by-case basis before deciding whether to acknowledge a Notice for exploration activities or approve a Plan of Operations without first conducting a mineral examination if the purpose of the segregation supports such a decision.

8.1.1.2.2 Notice or Plan Modifications

BLM processes modifications to a Notice or Plan in the same manner as a new Notice or Plan. Consequently, BLM may apply the same considerations discussed above before acknowledging the modified Notice or approving a Plan modification on segregated lands. If, at the time of the modification, the lands on which the proposed operations or exploration have been withdrawn from the operation of the 1872 Mining Law, BLM is required to conduct a validity examination before accepting the Notice or approving the Plan of Operations.

8.1.1.3 Determination of Invalidity

If the validity determination and mineral report conclude that the mining claim was invalid at the time of the withdrawal or at the time of the validity examination, the District/Field Manager may not approve the Plan of Operations or accept the Notice, or allow any other activities on the mining claim, except as necessary for reclamation and for the operator to defend any pending contest proceeding (see Section 8.1.2 Allowable Operations). The State Office will also promptly initiate contest proceedings (see BLM Handbook H-3870-1, *Adverse Claims, Protest, Contest, and Appeals*).

8.1.2 Allowable Operations

If the BLM has not completed the validity report, if the BLM has determined that the claim is not valid, or if there is a pending contest proceeding for the mining claim, certain activities may still

be allowable.[239] The District/Field Manager may approve a Plan of Operations or allow notice-level operations for the disputed mining claim if the operations are limited to taking samples to confirm or corroborate mineral exposures that were physically accessible on the mining claim before the segregation or withdrawal date, whichever is earlier.[240] The District/Field Manager may also approve a Plan of Operations or allow notice-level operations for the operator to perform the minimum necessary annual assessment work if required by 43 CFR 3836.

8.1.3 Time Limits Suspended

While the BLM conducts the mineral examination and prepares the validity report, the BLM may suspend the time limits, specified under 43 CFR 3809.111 and 3809.411, for responding to a Notice or acting on a Plan of Operations.[241]

8.1.4 Cease Operations

If a final Departmental decision declares a mining claim on withdrawn lands to be null and void, the operator must cease all operations, except required reclamation.[242]

8.1.5 Prior Authorizations

Accepted Notices or approved Plans of Operations that were in place prior to the withdrawal or segregation date are not subject to the mandatory valid existing rights determination procedures at 43 CFR 3809.100(a). These operations may continue as accepted or approved and do not require a validity examination unless or until there is a material change in the activity. A Notice may be extended under 3809.333 without a material change, and thereby not trigger the validity examination procedures that a Notice modification filed under 3809.330 would require.

The BLM still retains the discretion to assess the validity of any mining claim on any lands that the BLM administers when it would be in the public interest and may choose to do so when there are ongoing operations in withdrawn or segregated lands.[243] In that case, the BLM would be responsible for the cost of the validity examination and report.

8.2 Common Variety Minerals

8.2.1 Proposed Operations

The Common Varieties Act of 1955, 30 U.S.C. 611, removed "common varieties of sand, stone, gravel, pumice, pumicite, or cinders" from location under the Mining Law, and made these materials subject to sale under the Materials Act of 1947.[244] Consequently, when a Plan of Operations or Notice is submitted to the BLM to remove suspected common variety minerals, as

[239] 43 CFR 3809.100(b).
[240] 43 CFR. 3809.100(b)(1)(i), (2).
[241] 43 CFR 3809.100(c).
[242] 43 CFR 3809.100(d).
[243] 43 CFR 4.451-1.
[244] 30 U.S.C. 601.

defined in 43 CFR 3830.12, from a mining claim located on or after July 23, 1955, the BLM must prepare a mineral examination report to verify that the minerals are not common variety before authorizing the proposed operations or accepting the Notice. [245] The common variety determination process is described in BLM Manual 3891, *Validity Examinations*. The operator is responsible for the costs associated with the validity examination and report.[246]

First, after receiving the Notice or proposed Plan, the District/Field Manager will send a written notification to the mining claimant or operator stating that the BLM will conduct a common variety determination on the claims. The notification advises the operator that the BLM may authorize operations to remove suspected common variety minerals under the 3809 regulations as provided for under 43 CFR 3809.101(b) until the common variety report has been prepared (see Section 8.3.2 Interim Authorization below). The notification must also explain the procedures for establishing an escrow account and purchasing the material from the BLM under the Materials Act of 1947 and 43 CFR 3600 regulations if the operator wishes to mine while the mineral examination is being prepared. The District/Field Manager may authorize operations under the Mineral Materials Disposal Regulations (see BLM Handbook H-3600-1, *Mineral Material Disposal*).

The District/Field Office must promptly initiate the examination of the subject mineral deposit to determine if the mineral is locatable or salable. The examination and report for the common variety determination is to follow the guidance provided under Manual 3891, *Validity Examinations*, Handbook 3890-1, *Validity Mineral Reports,* and must be prepared by a certified mineral examiner.

8.2.2 Interim Authorization

If, after receiving the written notice from the BLM, the operator wishes to remove suspected common variety minerals while the examination is being conducted, the BLM may provide interim authorization under 43 CFR 3809.101(b) in three circumstances.

First, the District/Field Manager may approve a Plan of Operations or allow Notice-level operations that are limited to taking samples necessary to confirm or corroborate mineral exposures that are physically disclosed and existing on the mining claim.[247] The manager may also approve a Plan of Operations or allow Notice operations for the operator to perform the minimum necessary annual assessment work if required under 43 CFR 3836. Third, the District/Field Manager may authorize the operator to remove the possible common variety minerals if the operator establishes an escrow account in a form acceptable to the BLM (see Section 8.2.3 for the requirements for operating with an escrow account). The District/Field Manager has the discretion as to which of these options to afford the operator. The BLM is not obligated to provide the operator with the option of producing possible common variety minerals with an escrow account established.

[245] 43 CFR 3809.101(a).
[246] 43 CFR 3800.5.
[247] 43 CFR 3809.100(b)(1)(i), (b)(2).

8.2.3 Operating with an Escrow Account

Where the BLM and the operator agree that operations to remove potential common variety minerals will occur and that the operator will establish an escrow account, the BLM must still approve the Plan of Operations, and the operator must provide the State Office with an acceptable financial guarantee that covers all required reclamation. The BLM District/Field Office should work with the Solicitor's Office to establish an acceptable escrow account before operations begin.[248] The escrow account may be set up as a suspense account with the BLM (see BLM Manual 1370, *Receipts and Disbursements*) or the operator may establish an escrow account though a financial institution with the BLM as the beneficiary (see BLM Handbook 9235-1, *Mineral Material Trespass Prevention and Abatement*, Chapter V, Section Mineral Material Trespass Categories and Illustration 1, Illustration of an Escrow Agreement). Any escrow account must be accompanied by an escrow agreement. This agreement must be reviewed by the Regional Solicitor's Office.

8.2.3.1 Appraised Value

Under 43 CFR 3809.101(b)(3), the operator must make regular payments to the escrow account for the appraised value of possible common variety minerals removed under a payment schedule approved by District/Field Manager (see BLM Handbook H-3630-1, *Mineral Material Appraisal Handbook*).

8.2.3.2 Disbursement

The funds in the escrow account must not be disbursed to the operator or to the U.S. Treasury until a final determination of whether the mineral is a common variety and therefore salable under 43 CFR 3600.

8.2.4 Determination of Uncommon Variety

If the mineral report concludes that the material is an uncommon variety and thus locatable under the Mining Law, [249] the report must include the analysis under McClarty v. Secretary of Interior[250] (see BLM Manual 3891, *Validity Examinations*). There must be a comparison of the mineral deposit in question with other deposits of such minerals generally, including:

- The mineral deposit in question must have a unique property.
- The unique property must give the deposit a distinct and special value.
- If the special value is for uses to which ordinary varieties of the mineral are used, the deposit must have some distinct and special value for such use.

[248] 43 CFR 3809.101(b)(3).
[249] 43 CFR 3809.101(c).
[250] 408 F. 2d. 907, 908 (9th Cir. 1969).

- The distinct and special value must be reflected by the higher price which the material commands in the marketplace or by reduced cost or overhead so that the profit to the claimant would be substantially more.

8.2.5 Determination of Common Variety

If the material is determined to be a common variety mineral not subject to the Mining Law or the 43 CFR 3809 regulations, the operator may either relinquish the mining claims or the BLM will initiate contest proceedings. Upon relinquishment or final Departmental determination that the mining claim(s) is null and void, the BLM will terminate the Plan of Operations or Notice, and the operator will be required to promptly close and reclaim the operations unless the District/Field Office offers the material for sale under 43 CFR 3600 and 3610.

If the BLM determines that the materials are common variety minerals, the BLM may sell them under 43 CFR 3601.14.[251] Prior to initiating such an action, the BLM must independently evaluate whether the mineral materials operation would endanger or materially interfere with the right of the claimant to develop valuable mineral on the claim(s) and attempt to obtain a written waiver from the mining claimant. Offices should consult with the Solicitor's Office where such a waiver is not obtained. See BLM Handbook 3600-1, *Mineral Materials Disposal Handbook*, Chapter X - *Special Situations,* for guidance on the disposal of mineral materials from lands encumbered with unpatented mining claims.

8.3 Split Estate Lands

In certain cases, the BLM's surface management regulations at 43 CFR 3809 apply to operations authorized under the Mining Law on split estate lands, i.e., public lands where the surface estate has transferred out of Federal ownership with the mineral interest reserved to the United States.[252] This section addresses under what situations the surface management regulations apply to these split estate lands.

8.3.1 Stock Raising Homestead Act (SRHA) Lands

If the proposed operation is to be located on lands patented under the Stock Raising Homestead Act (SRHA) and the operator has surface-owner consent, the operator does not need to obtain BLM authorization under the surface management regulations, but must still provide the BLM with a copy of the agreement. [253]

Where the operator does not have the written consent of the surface owner, or if the surface owner initially consents and later terminates or nullifies the consent, the operator must submit a Plan of Operations to the BLM (see Section 4.3 Plan of Operations - Filing and Content). Consistent with statute, the regulations at 43 CFR 3809.31(d) do not authorize any activity on SRHA lands without surface owner consent or an approved Plan of Operation.[254] Any activity

[251] 43 CFR 3809.101(d).
[252] 43 CFR 3809.2 and 3809.31.
[253] 43 CFR 3809.31(d).
[254] 43 U.S.C. 299(f).

conducted on SRHA lands prior to a discovery must be in conformance with the regulations at 43 CFR 3814.

If the surface-owner consent is nullified in Federal or state court or the consent is terminated or revoked as provided for in the agreement the operator has with the surface owner, the BLM will require the operator to submit a Plan of Operations. Whether ongoing operation will be allowed to continue while the Plan is being processed will depend on the conditions of the surface-owner consent being nullified or terminated.

If a Plan is submitted during the 90-day period that begins once a Notice of Intent to Locate (NOITL) is filed,[255] the effects of that period extends automatically until the Plan is approved or denied. Plans not diligently prosecuted by the operator may lead to unnecessary extended periods of segregation. To avoid this occurrence, the BLM may disapprove a Plan if the operator refuses to provide the required information within the specified timeframe or when there is no expectation of a meaningful response from the operator to the BLM's information requests (see Section 4.4.3.3 Plan of Operations Disapproved or Approval Withheld).

8.3.2 Other Split Estate Lands

For split estate lands other than SRHA lands, if the proposed operations are located on lands conveyed by the United States that contain minerals reserved to the United States and those minerals are locatable under the Mining Law, then the operator must file a Plan of Operations or Notice for all proposed operations.[256] The 3809 regulations[257] apply to those activities within lands being explored, mined, or used for placement of facilities that are reasonably incident to exploration, development, or mining. The regulations also apply to the access roads and facilities across split estate lands to and from the project area.

8.3.3 Non-Federal Minerals

Where the mineral estate is private and the surface is managed by the BLM, the 3809 regulations do not apply because the non-Federal minerals are not subject to the Mining Law.[258] Because the BLM still has an obligation under 43 U.S.C. 1732(b) to prevent UUD, the owner or operator must obtain a special use lease, permit, or easement under 43 CFR 2920 before using the public lands to develop the private mineral estate, and may be required to provide a financial guarantee before commencing surface-disturbing activities. As with the 3809 authorization, the BLM will review each proposed authorization under the 2920 regulations to ensure compliance with the UUD requirement as required by Section 302 of FLPMA.[259] The proponent is required to submit certain information concerning the proposed action.[260] This information requirement is similar to those required under 43 CFR 3809.301 and 3809.401. Appropriate NEPA analysis must be conducted on any special use lease, permit, or easement before it is granted. Consultation with the Solicitor's Office is recommended.

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[255] 43 CFR 3838.14(c).
[256] 43 CFR 3809.31(e).
[257] 43 CFR 3809.31(c) does not apply, per scope 43 CFR 3715.0-1(b).
[258] 43 CFR 3809.2-Scope of the regulations.
[259] 43 U.S.C. 1701.
[260] 43 CFR 2920.2-4.

8.3.4 Mining Claims under a Notice or Plan of Operations

The BLM will exercise its regulatory jurisdiction on split estate lands for the area of operations within the boundaries of the mining claim(s) directly involved in exploration and mining activities and for the necessary access, including roads, pipelines, and power and phone lines, to those mining claim(s) and exploration activities outside claim boundaries and associated access. The operator filing and District/Field Office review and approval requirements must conform to the requirements found under 43 CFR 3809.401 through 3809.412 for proposed Plans of Operations and 43 CFR 3809.301 through 3809.313 for Notices.

On split estate lands, any NEPA analysis must cover the entire mining operation and associated facilities regardless of land ownership. The BLM remains responsible for compliance with NEPA. However, mitigation may only be required to prevent UUD of public lands (not private surface estate).

The BLM must comply with ESA requirements when reviewing a Notice or a Plan of Operations for mining claims on split estate lands. Approval of a Plan of Operations is a Federal action; therefore, it is subject to the applicable consultation requirements of Section 7 of the ESA and Section 106 NHPA, and any other consultation requirements.

The required reclamation financial guarantee must meet the requirements of 43 CFR 3809.551 and, where appropriate, must cover any special reclamation requirements found in the agreement between the operator and the surface owner. The required financial guarantee must cover the approved area of operations and all access roads and facilities across split estate and public lands that are necessary for the operation. In addition, for SRHA lands the financial guarantee must also cover the loss of tangible surface owner improvements.

For operations on split estate lands authorized under the surface management regulations, the BLM District/Field Office will carry out its inspection and enforcement responsibilities as required by 43 CFR 3809.600 through 3809.605

8.3.5 Surface Owner Agreement

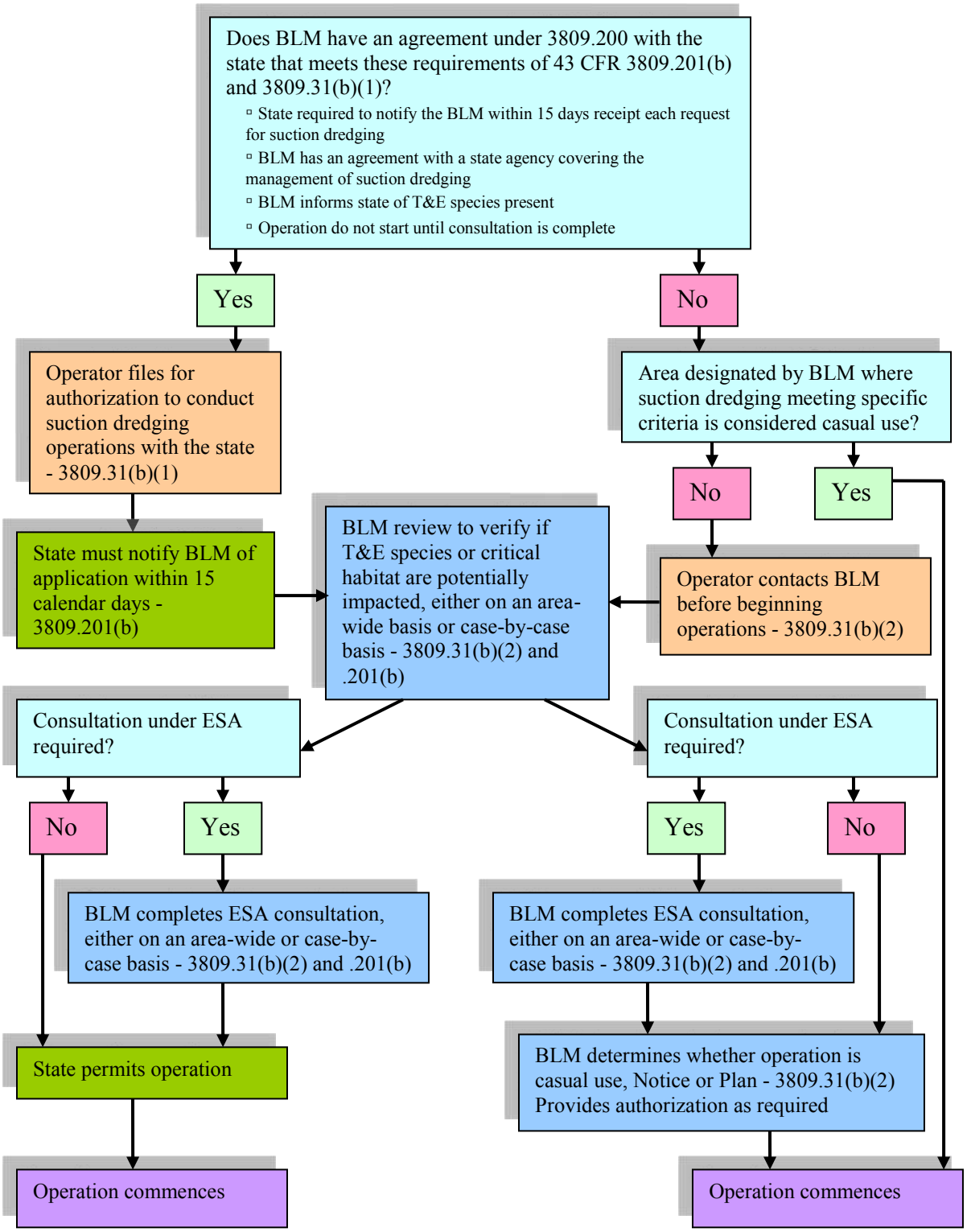
In reviewing the proposed Plan of Operations for operations proposed on SRHA and non-SRHA lands, the District/Field Office should attempt to accommodate the provisions of any agreement that may exist between the operator and the surface owner, as long as the agreement does not cause UUD of public lands resources and is not likely to jeopardize proposed or listed threatened or endangered species or their designated critical habitat.

8.4 Suction Dredging

The use of a suction dredge may be allowed or authorized under the surface management regulations or may be authorized under state regulation if the BLM and the state enter into an agreement under 43 CFR 3809.200.[261] See Figure 8.4-1 Suction Dredging for a visual description of the various ways suction dredging activity on public land may be regulated.

[261] 43 CFR 3809.31(b), 3809.200 and 3809.201.

Figure 8.4-1 - Suction Dredging



8.4.1 State Authorization

The BLM will not require a Notice or Plan of Operations if the following two criteria are met:

- The state requires a permit for suction dredging activities, and
- The BLM State Office has a Memorandum of Understanding (MOU) with the appropriate state agency under 43 CFR 3809.200 addressing the permitting of suction dredging mining activity.[262]

If these two criteria are met, the operator does not need to contact the BLM District/Field Office to undertake suction dredging activities unless otherwise provided in the MOU between BLM and the state.

Rather, the MOU between BLM and the state will require the state to notify the BLM of each application to conduct suction dredging activities within 15 calendar days of receipt of the application. How the state will inform the District/Field Office of these pending applications varies depending on the specific MOU with the state.

Under the MOU, the state must withhold authorization until ESA consultation is completed. If the BLM identifies a conflict with threatened or endangered species or proposed or critical habitat then the District/Field Office must notify the state in writing of the conflict. See Section 12.2.4 Suction Dredging for an explanation of how equipment and location limitations may be addressed in an agreement with the state.

Even if the operator does not need approval under the BLM's surface management regulations because there is an MOU with the state, if the operator proposes to occupy or use a site for activities "reasonably incident" to mining, as defined in 43 CFR 3715.0-5, the operator must seek separate authorization from the BLM for its occupancy.[263]

8.4.2 BLM Authorization

For all uses of a suction dredge not covered by authorization under state regulations, the operator must contact the BLM before beginning such use to determine whether the operator must submit a Notice or a Plan of Operations to the BLM, or whether the activities constitute casual use.[264]

8.4.2.1 Casual Use

The determination of whether the proposed suction dredging activity is casual use is dependent upon the environmental impact of the proposed activity and not the mechanized equipment being used. If the impact of the proposed suction dredging activity is greater than negligible disturbance then a Notice or Plan of Operations is required.

[262] 43 CFR 3809.31(b)(1).
[263] 43 CFR 3809.31(c).
[264] 43 CFR 3809.31(b)(2).

8.4.2.1.1 Designated Areas

The BLM may establish, through the land use planning process, that certain types of suction dredging activity in designated areas constitute casual use. Where the BLM has made such a designation and the proposed activity meets the established criteria, the operator does not need to contact the District/Field Office before commencing activities. For example, where the BLM determines that the use of suction dredges with an intake up to a certain diameter (e.g., up to 4 inches) in a designated section of a river is considered casual use; the operator does not need to notify the District/Field Office prior to beginning his or her activity. The BLM will notify the public via publication in the *Federal Register* of the boundaries of such specific areas and any operating limitations, as well as through posting in each local BLM office having jurisdiction over those lands.

8.4.2.2 Notice or Plan of Operations

Where the District/Field Manager determines that the operator must file a Notice or Plan of Operations, the filing and review procedures must comply with 43 CFR 3809.301 through 3809.313 for a Notice or 43 CFR 3809.401 through 3809.412 for a Plan of Operations.

8.4.3 Threatened or Endangered Species

If the proposed suction dredging is located within any lands or waters known to contain federally proposed or listed threatened or endangered species or their proposed or designated critical habitat, regardless of the level of disturbance, the operator must not begin operations until the BLM meets the requirements of the ESA consultation. These requirements apply whether the operations are conducted under the BLM's surface management regulations or under state authority pursuant to an MOU. The BLM may meet these consultation requirements on a case-by-case basis for each proposed operation or may complete a programmatic consultation to meet ESA requirements for specific types of activities within a designated area. If proposed activities are not consistent with type of activity or location covered in the programmatic, then additional consultation will be required.

8.5 Powersite Withdrawals

This section describes how the 3809 regulations apply to mining operations within powersite withdrawals.[265]

The Mining Claims Rights Restoration Act of 1955[266] (MCRRA), reopened all public lands belonging to the United States that had previously been withdrawn or reserved under the Federal Power Act for power development or powersites to mineral entry.

[265] P. L. 84-359, 30 USC 621-625, 43 CFR part 3730.
[266] Act of August 11, 1955, P. L. 84-359; 30 U.S.C. 621 *et seq*.

However, the MCRRA did not reopen lands that were:

- Included in any project operating or being constructed under a license or permit issued under the Federal Power Act or other Act of Congress.

- Under examination and survey by a prospective licensee of the Federal Energy and Regulatory Commission provided the prospective licensee holds preliminary permit that has not been cancelled or renewed more than once.[267]

Under Section 2(b) of the Mining Claims Rights Restoration Act, the locator of a placer mining claim on reopened powersite lands must not conduct mining operations for a period of 60 days after filing a notice of location with the proper BLM State Office. Note that there are no restrictions on operators of lode claims.

During that time, the State Office will request a report regarding the need for a hearing from the appropriate land management agency (i.e., Forest Service Regional Office or proper BLM District/Field Office). This analysis and report must be submitted to the State Office within 50 days of the date of recording with the BLM so that the BLM may take the appropriate course of action under the statute.

If the former powersite lands are managed by the BLM, the District/Field Office will examine the proposed operations, using the surface management regulations as a guideline and applying reasonable mitigation measures to the claim(s) or mill site(s) and prepare a report documenting whether there are conflicts. If the application of the surface management regulations will not resolve all apparent conflicts, the District/Field Office may request a public hearing under the provisions of the Act. No referral for a hearing will be permitted until the above surface management analysis has been completed and written up as a supporting report to the BLM Deputy State Director in charge of mining claim or mining law adjudication. Based upon the recommendations of the District/Field Office report, the BLM State Office will either:

- Notify the mining claimant that no public hearing is required, or

- Notify the mining claimant that the surface management agency has requested the Secretary to hold a public hearing and that no activities greater than casual use is permitted until after the public hearing is held by an Administrative Law Judge (ALJ) and a final decision is issued by the Office of Hearings and Appeals.

The decision issued by the Administrative Law Judge is restricted to an order that provides for one of the three options below:

- An Order prohibiting placer operations is recorded by the Government in the County or Borough's Recording Office. This recording is not mandatory to make the Order valid, but is done to protect the Government's interest in the lands adjudicated and ruled upon.

[267] 43 CFR 3730.0-1.

- Permission to engage in placer mining on the condition that the mining claimant must follow an approved Plan of Operations and restore the surface to the condition it was in immediately prior to placer operations.

- Non-conditional permission generally allowing the operator to engage in placer mining, subject to all applicable laws and regulations.

When placer mining is permitted, the Administrative Law Judge will furnish the mining claimant a certified copy of the Order for recording in the proper BLM State Office and the County or Borough's Recording Office. The Order is not valid until a certified copy is recorded. The recording is at the expense of the mining claimant. The BLM applies its surface management regulations to activities on the placer claim(s).

Each decision by an Administrative Law Judge is subject to the right of appeal to the Interior IBLA under 43 CFR part 4, and no Order may issue until the Administrative Law Judge's decision, or a decision from IBLA upon appeal, is final.

Mining operations conducted on placer mining claims in violation of the requirements of the Mining Claims Rights Restoration Act are in noncompliance and may be cited under 43 CFR 3809. The District/Field Manager must take appropriate actions to suspend the operation until the procedures concerning the use and occupation of placer mining claims are in compliance.

8.6 Timber Resources

Mining claimants have limited rights to cut and use the timber on their mining claims. The Surface Resources Act of 1955, 30 U.S.C. 612(c), permits mining claimants to clear the land in the ordinary working of a mining claim and use the timber on a mining claim or site for construction and improvements. Other than these limited, authorized uses, the timber on public lands is the property of the United States and must be protected from unauthorized cutting or damage.

The BLM may manage any timber not used for mining purposes and may direct the stockpiling of timber for sale. No cutting of merchantable timber is permitted by the mining claimant or operator without the written permission of the District/Field Manager. The term "timber" is defined as standing trees, downed trees, or logs which are capable of being measured in board feet (43 CFR 5400.0-5). This permission, or refusal to permit cutting, is to be addressed in the BLM's response to the Notice or Plan of Operations.

The cutting of timber is not a causal use activity. Timber resources cut, damaged, or destroyed in violation of an accepted notice or an approved Plan of Operations or without proper authorization is by definition UUD under 43 CFR 3809.605 and subject to the penalties described in 43 CFR 3809.700.

8.7 Land Use Plans

8.7.1 Performance Standard

Consistent with the Mining Laws, operations and post-mining land use must comply with the applicable BLM land use, activity, and coastal zone management plans, as appropriate.[268] See Section 5.2.3 Complying with Land Use Plans.

The land use plan can be used to establish the objectives for post-mining land uses. The future land uses will help define performance standards, including reclamation and mitigation requirements for a particular operation (see BLM Handbook H-1601-1, *Land Use Planning Handbook*). Preparation of a land use plan is not a prerequisite to processing a Notice or approving a Plan of Operations. Notices and Plans are to be processed according to the timeframes in the regulations, and are not to be delayed pending completion of a land use plan. The Plan of Operations or Notice must comply with the land use plan in effect when the DR or ROD is signed or the Notice is accepted.

In addition, land use plans must recognize the rights granted by the Mining Law to enter, explore, and develop mineral resources on the public lands. A land use plan cannot change the law's authorization to use public lands that are open to location under the Mining Law. Areas may only be removed from operation of the Mining Law by congressional withdrawal or in accordance with the withdrawal provisions of Section 204 of FLPMA. Restrictions in a particular land use plan have no force and effect on the right of entry until one of the two procedures stated above has occurred. Further, in areas open to mineral entry, or closed subject to valid existing rights, the land use plan cannot be used to preclude mining or restrict certain types of mining activities. For example, land use plans cannot be used to "zone" areas where open pit mining is not allowed, ban cyanide use, prohibit placer mining, or generally place limits on the type or size of an operation.

8.7.2 Opening Lands to Mineral Entry

For public lands that are sold or exchanged under 43 U.S.C. 682(b) (Small Tracts Act), 43 U.S.C. 869 (Recreation and Public Purpose Act), or 43 U.S.C. 1713 (FLPMA sales), the minerals reserved to the United States are segregated from operation of the mining laws unless a land use planning decision explicitly restores the lands to mineral entry.[269] The provisions of the surface management regulations, including 43 CFR 3809.31, do not automatically make these lands open to mineral entry under the mining laws. Thus, as land use plans are updated, the District/Field Manager should review the occurrence of such lands in the planning area and consider whether or not to open the lands to mineral entry. In addition, the BLM must use the land use planning process to consider opening any split estate lands in the planning area that were closed as the result of a sale.[270] Therefore, the opening of these lands to mineral entry is part of the planning process.

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[268] 43 CFR 3809.420(a)(3).
[269] 43 CFR 3809.2.
[270] As of January 20, 2001, the regulatory barrier keeping the minerals beneath lands conveyed in exchange for sale closed to mineral entry until the Secretary promulgates regulations, has been removed. This did not automatically

8.7.3 Post-Mining Uses

In developing or amending a land use plan, the BLM should consider alternative uses of public lands after mining has ceased (see BLM Handbook H-1601-1, *Land Use Planning Handbook*). In the past, the assumption has been that disturbed lands will be returned to pre-mining uses after mine closure. Reclamation requirements found in filed Notices and approved Plans generally reflect this assumption. Reclamation plans generally require regrading and reshaping to conform to adjacent landforms, and removing buildings, structures, facilities, and other infrastructures, such as roads and power lines.

Pre-mining uses, however, may not always be the most beneficial uses of the public lands after mining has ceased. The BLM land use decisions should consider post-mining uses of the public lands that help sustain the economic and social wellbeing of the communities directly impacted by mineral development. The BLM decisions concerning reclamation, post-mining uses, and even land disposal should also consider sustainable development of the communities after mine closure.

For example, community economic growth may be sustained after mine closure by using the existing infrastructure (roads, power lines, water supply, etc.) to bring in a new industrial use to replace the mining activity. However, such opportunities can only occur where the land use plan has considered and allowed for such alternative post-mining uses. Post-mining land uses must avoid disturbing engineered containment cells where subsequent infiltration of groundwater, surface water, or effluent leakage can contaminate the environment. Such areas must be properly located on BLM maps and geodatabases and marked for protection. In particular excavation or even erosion must be avoided.

8.7.4 Casual Use Areas of Concern

Where the cumulative effects of activities that ordinarily would be considered casual use have resulted in, or are reasonably expected to result in, more than negligible disturbance, the activity is not considered casual use. The State Director may designate specific areas, through the land use planning process, where the individual or group must contact the BLM District/Field Office before beginning such activities. See Section 2.2 Cumulative Effects for a discussion on making such a designation.

8.7.5 Suction Dredging Use Areas

The BLM may establish, through the land use planning process, that certain types of suction dredging activity in designated areas constitute casual use. Where the BLM has made such a

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restore such lands to mineral entry--but created the ability to open them after addressing the issue in the respective land use plan. The intent of 43 CFR 3809.2(a) is further explained in the preamble at *Federal Register* page 70006 (11/21/2000); and states: *"...although these rules remove the regulatory bars in the former land resource management rules which prevented public lands with reserved minerals from being restored to mineral entry under the mining laws, they allow such restoration to occur on an area-specific basis only after subsequent land-use planning decisions occur, and BLM notifies the public."*

designation and the proposed activity meets the established criteria, then the operator does not need to contact the BLM District/Field Office before commencing activities. See Section 8.4.2.1 Casual Use for a discussion on making such a designation.

8.8 Pre-Existing Disturbances and Facilities

Pre-existing disturbance includes any surface disturbance resulting from mining-related activities that has been abandoned and left unreclaimed by the operator who caused the surface disturbance. Pre-existing facilities includes any structure or material that qualifies as an "occupancy" as defined in 43 CFR 3715 that has been abandoned and left unreclaimed by the operator who placed the structure or materials on public lands.

Operators wishing to conduct mining operations under the Mining Law are not authorized to use or occupy pre-existing facilities or to affect pre-existing disturbances without BLM authorization. The BLM is not obligated to and will not authorize an operator to use or occupy pre-existing facilities or to affect pre-existing disturbances unless the operator agrees to comply with reclamation requirements of both 43 CFR 3715 and 43 CFR 3809 with regard to those facilities and disturbances as follows:

- Pre-existing disturbances - Under 43 CFR 3809, an operator is responsible for reclaiming all portions of pre-existing disturbances that his or her operation will affect.
- Pre-existing facilities - The decision on which reclamation provisions apply to pre-existing facilities that will be used or occupied will be made on a case-by-case basis by the District/Field Office.

The authorization (Notice or Plan of Operations) must clearly describe the operator's obligations for pre-existing disturbances and pre-existing facilities.[271]

8.8.1 Proposed Operations

As part of the BLM's review and acceptance of a complete Notice or approval of a Plan of Operations, the BLM must ensure the Notice or Plan of Operations identifies the operator's reclamation obligations for any pre-existing disturbances that will be affected and pre-existing facilities that will be used or occupied. Notices or Plans of Operations that do not adequately address, to the BLM's satisfaction, the operator's reclamation obligations for pre-existing disturbances and pre-existing facilities will not be considered complete under 43 CFR 3809.301 and 3809.401, respectively. The required financial guarantee must reflect all operator obligations as called for in the accepted Notice or approved Plan of Operations, including the cost of completing reclamation obligations associated with the use or occupation of pre-existing facilities and affecting pre-existing disturbances.

8.8.2 Existing Operations

If the mining claimant or operator has an existing Notice or Plan of Operations that does not expressly address the operator's reclamation obligations for pre-existing disturbances that the

[271] James R. McColl Decision, 159 IBLA 167 (May 29, 2003).

current operator has affected or will affect or for pre-existing facilities that are or will be used or occupied, then the BLM must clarify such obligations as it becomes aware of the operator's violation of these regulations. For Notices, this clarification is included as a modification of the Notice under 43 CFR 3809.331 or Notice extension under 43 CFR 3809.333, whichever occurs first. For Plans of Operations, this clarification is added as a modification of the Plan of Operations under 43 CFR 3809.431 or included as part of the review of the reclamation cost estimate and financial guarantee as required under 43 CFR 3809.552(b), whichever occurs first. Regardless of the BLM's actions to require modifications of the Notice or Plan, the operator and the claimant remain liable.

8.8.3 Operator Liability

The extent of reclamation required under 43 CFR 3715 and/or 43 CFR 3809 does not in any way limit liabilities under any other environmental laws. For example, an operator who conducts operations involving pre-existing disturbances and pre-existing facilities may be liable for remedial action or other response under the CERCLA in the event of a release of a hazardous substance (as defined by CERCLA) into the environment, and may also be subject to the requirements of other environmental laws.

8.8.4 Previous Operator

In situations where the BLM has located the previous operator and that operator has agreed to complete the reclamation of pre-existing disturbances and pre-existing facilities for which he or she is responsible, including any response and remedial action necessary to address the release of hazardous substances, the current operator has no right to deny access to a previous operator who wishes to complete his or her reclamation obligations. Should the current operator's operations interfere with activities necessary to fulfill the previous operator's reclamation obligations, the current operator must either (1) allow the previous operator to complete his or her obligations or (2) modify his or her Notice, Plan, or occupancy concurrence to assume full responsibility for the reclamation of those portions of the pre-existing disturbances and pre-existing facilities.

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Chapter 9 Inspection and Enforcement

This chapter covers inspection requirements under 43 CFR 3809.600, enforcement requirements under 43 CFR 3809.601 through 3809.604, prohibited acts under 43 CFR 3809.605, and penalties under 43 CFR 3809.700 through 3809.701.

9.1 Conducting Inspections

9.1.1 Authority

The responsibilities for the inspection of operations are specifically addressed at 43 CFR 3809.600. However, BLM inspections are not necessarily limited to the specific requirements of the surface management regulations, but are conducted relative to all applicable regulations and laws governing mineral operations conducted under the authority of the Mining Law. Inspections should address both 43 CFR 3715 and 43 CFR 3809 requirements, when applicable.

9.1.1.1 Facilities and Permits

An inspection may include any physical aspects of the operation, including all structures, equipment, and workings located on the public lands. An inspection may also include an examination of any pertinent files the operator may have pertaining to the permitting of the operation and the storage of chemicals and supplies. Permits, approvals, and authorizations subject to verification include any such documents issued or required by local, state, or Federal authorities that are, or may be, required for lawful operation.

9.1.1.2 Access

The operator must allow the BLM to inspect all aspects of operations on public lands and, as a condition of operating on public lands, must allow the BLM inspector reasonable access through their private lands in the project area in order to inspect public lands. Any attempt by an operator to restrict or impede an inspection is prohibited and subject to enforcement actions by the BLM under 43 CFR 3715 and/or 43 CFR 3809.

As noted in 43 CFR 3809.600(a), the regulations at 43 CFR 3715.7 contain a special provision governing the inspection of the inside of structures used solely for residential purposes. The provision[272] states:

- The BLM will not inspect the inside of structures used solely for residential purposes, unless an occupant or a court of competent jurisdiction gives permission.

- This limitation applies only to structures used solely as a residence. If a structure is used also as an assay lab or other such component of an operation, that area may be inspected by the BLM. However, if an operator or claimant objects to an inspection of his/her private residence, consult BLM Law Enforcement before continuing.

[272] 43 CFR 3715.5-7 (b).

The BLM has the right and responsibility to inspect all mining operations on public lands; however, an inspector should not insist on obtaining entry to a site or structure when the claimant or operator objects to the inspections. In these cases, the inspector must contact his/her supervisor. The supervisor will work with BLM Law Enforcement and, if necessary, the Solicitor's Office to gain entry to those sites or facilities.

9.1.2 Frequency and Timing

At least four times each year, the responsible District/Field Office will inspect an operation if the operator uses cyanide or other leachates or where there is significant potential for acidic or deleterious drainage.[273] Active Plans that do not involve leachates will be inspected at least two times per year. Active Notices will be inspected at least once a year. These inspection frequencies are minimums; District/Field Offices may and will conduct inspections on a more frequent basis where it is deemed necessary. An active inspection program by BLM District/Field Offices is critical for ensuring compliance with the surface management regulations.

9.1.2.1 Acid Drainage and Chemicals

For operations where there is a significant potential for acidic or deleterious drainage, the regulations require an inspection at least four times a year. Special care should be taken to ensure that operations that pose a potential to generate acid drainage are adequately inspected.

In addition, special attention must be given to operations that use large amounts of chemicals, fuels, and explosives. Failure to follow the approved Plan and maintain compliance with performance standards at these operations has a potential to result in UUD. The inspector may spend extra time on the ground and review the approved Plan on file in addition to monitoring data in advance of the inspection.

9.1.2.2 Irregular Schedule

The BLM has the authority to inspect operations at any time. District/Field Offices are encouraged to maintain a frequent, recurring, but irregular schedule of inspections for all active Plans and Notices. Areas known to host large concentrations of casual use activity should be inspected as if they were an active operation under a Plan or Notice.

9.1.2.3 Operator Notification

The District/Field Office is not required to notify the operator of the inspection or have the operator present during an inspection. When criminal activity is suspected, Law Enforcement personnel may require that the operator not be present or be informed of the inspection.

[273] 43 CFR 3809.600(b).

9.1.2.4 Frequency of Occupancy Related Inspections

Occupancies will be inspected on a regular basis to ensure they meet the requirements of 43 CFR 3715. Failure to comply with 43 CFR 3715 constitutes UUD which is a prohibited act under 43 CFR 3809.605(a) and (f).

9.1.3 Inspection Activities

The BLM may inspect any physical aspects of the operation, including all structures, equipment, and workings located on the public lands. As part of the inspection, the BLM may also examine any pertinent files the operator may have pertaining to the permitting of the operation and the storage of chemicals and supplies. Permits, approvals, and authorizations subject to verification include any such documents issued or required by local, state, or Federal authorities that are, or may be, required for lawful operation.

Before the inspection:

- Review the last inspection report for the operation. Note any items identified for follow-up during the last inspection. Check the case file for ongoing or unresolved compliance problems.
- Review monitoring reports, if any, provided by the operator since the last inspection.
- Determine additional resource specialists whose expertise may be needed during the inspection and solicit their participation.
- Review the Plan or Notice on file and identify areas or aspects of the operation where you want to focus the inspection to determine compliance. Pay particular attention to any conditions of approval placed upon the operation.
- Schedule the inspection with the operator if you need the operator's assistance or participation during the inspection. Consider scheduling the inspection when the operator or other agencies' personnel, such as the state regulators, can be present.
- Ensure that all field and safety equipment is available and in working order. This includes hard hat, steel-toed boots, camera, sample bottles or bags, global positioning system (GPS) unit, field test instruments, inspection forms, etc.

During the inspection:

- Compare the on-the-ground operation with the Notice or Plan on file and note any discrepancies.
- Discuss with the operator or the operator's designated representative the status of the operation and any difficulties they may be experiencing in implementing the Plan or Notice.

- Use photos to document site conditions, especially where there are compliance issues.

- Where appropriate and feasible, take field measurements and/or lab samples of water, soil, waste rock, etc., as needed to verify the operator's monitoring plan or to make compliance determinations. Carefully mark and maintain the chain of custody for any sample that will be used in compliance determinations. Locate the samples or measurements with GPS. Typical modern non-survey GPS accuracies are within 3 meters if the receiver has Wide Area Augmentation System (WAAS) or within 15 meters if it does not.

- Take detailed notes during the inspection in order to support preparation of the inspection report. For Notices or some Plans, it may be possible to directly document inspection results on a pre-printed inspection form while onsite.

- Prior to leaving the site, hold a close-out discussion with the operator, or their designated representative, on the results of the inspection. If using a pre-printed inspection form, leave a copy with the operator. Be sure to document any field resolution of compliance issues or other agreements made with the operator in the inspection report.

- If at any time during the inspection you encounter suspected criminal activity or other dangerous conditions, such as the release of hazardous materials, leave the site immediately and report the situation to your supervisor and BLM Law Enforcement and/or hazardous materials staff.

After the inspection:

- Deliver any samples collected during the inspection to the appropriate analytical lab.

- If not prepared while onsite based on the field notes, prepare a written inspection report that documents site conditions. Attach any photos and test results to the inspection report.

- Brief management on any compliance problems noted during the inspection. Prepare any follow-up enforcement orders that may be warranted based on the results of the inspection.

- Place a copy of the inspection report in the case file and send a copy to the operator and appropriate state agency.

- Enter the inspection into the LR2000 system within 5 working days.

9.1.4 Safety

Safety must be foremost in the mind of the inspector and his/her supervisor. When conducting an inspection, the inspector is ultimately responsible for making safe choices. If there is a doubt

in the inspector's mind about the safety of structure, excavation, or storage facility, the inspector must not enter. In these situations supervisors will not take any action to force or compel the employee to conduct an inspection until adequate steps have been taken to mitigate the hazard to a degree that an inspection can be performed. If such a situation exists, there may be a violation of either 43 CFR 3715 or 43 CFR 3809 or both, and further inspection may not be necessary for the enforcement process to proceed. In short, the regulations governing use and occupancy and surface management of mining claims are in place to protect BLM personnel as well as the general population from immediate threats to health and safety.

9.1.4.1 Safety Equipment

Proper field gear must be provided each inspector. At a minimum, this equipment must include a hard hat, safety glasses with appropriate UV/glare protection, steel-toed shoes, adequate supplies of water, and a first aid kit. When conducting inspections, the BLM employee must wear the safety equipment applicable to the type of operation and stage of activity.

9.1.4.2 Inspector Safety Training

Any BLM employee engaged in inspecting active mining operations must be given any safety training routinely provided other field personnel. We recommend for surface operations, BLM employees performing inspections receive training equivalent to that required by the MSHA regulations found at 30 CFR part 48B.

9.1.4.3 Underground Operations

Inspections of underground operations for surface compliance issues are not routine. When it is necessary to inspect underground operations, the BLM employee must comply with the procedures and guidance, including training requirements, found in the BLM's underground entry policy.

It is the responsibility of the operator to make sure that underground portions of its operations can safely be inspected, consistent with the MSHA regulations. At a minimum, the operation should be registered with the MSHA, and be subject to routine inspections by that agency. All mine operations, regardless of size, are required to notify MSHA of their existence. MSHA inspection frequency may vary from district to district, so anyone entering an underground mining operation should inquire as to when the last MSHA inspection was conducted. Nevertheless, appropriate caution should be exercised when entering any underground mine, regardless of MSHA inspection frequency. Do not enter any portion of an underground mine that has been closed by the operator.

9.1.4.4 Safety Procedures around Suspected Criminal Activities

During the inspection of a mining operation, BLM inspectors may find evidence of criminal activities such as illegal drugs, illegal drug labs, illegal weapons, explosive caches, and fraudulent activities. In such cases, the inspector must terminate the inspection immediately and

notify, through his/her supervisor, BLM Law Enforcement. The inspector should not attempt to collect evidence or in any way disturb a possible crime scene.

9.1.4.5 Safety Procedures around Hazardous Materials

A BLM inspector may discover an unauthorized waste dump or spill that indicates the presence of potential hazardous substances (e.g., containers of unknown substances, pools of unidentifiable liquids, piles of unknown solid materials, unusual odors, or any materials out of place or not associated with an authorized activity), any type of Hazardous Materials release, or suspected violations of either the RCRA or the CERCLA. In such cases, the BLM inspector must take the following precautions:

- Treat each site as if it contains hazardous materials.
- Do not handle, move, or open any containers, breathe vapors, or make contact with any materials.
- Move a safe distance upwind from the site.
- Contact the appropriate site personnel for the operator (Hazardous Materials or Environmental Coordinator). In addition, notify the appropriate BLM and state officials.

The Occupational Safety and Health Act (OSHA) hazardous waste operations and emergency response regulations are contained in 29 CFR 1910.120, and are referred to as the HAZWOPER regulations. The HAZWOPER regulations identify requirements for first responders, who are described as "...individuals who are likely to witness or discover a hazardous substance release, and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release."

Any BLM employee working in the field may witness or discover a hazardous substance release while conducting his/her job responsibilities. In order to ensure that field personnel are familiar with the potential hazards associated with such a release:

- A minimum of 2 hours of First Responder Training must be completed by all new field personnel; this training should be provided by a Hazardous Materials Coordinator in the State or District/Field Office who has completed the necessary hazardous materials awareness training offered by the National Training Center (NTC).
- Additional training materials such as films and presentations are available through the NTC and should be reviewed on a periodic basis.
- District/Field Managers are responsible to ensure that field personnel meet this health and safety requirement.

9.1.5 Documentation of Inspections

The findings and results of each inspection must be documented. At the end of each inspection, and before the inspection can be entered in LR2000, an inspector must complete an inspection report. Checklists and inspection report forms can be used but they must always be accompanied by sufficient narrative to completely describe the situation found during the inspection. The report must be prepared using sufficient narrative and photographs to completely document the nature of any violations found during the inspection. See Chapter 13 Records Management of this handbook for further guidance concerning documenting requirements.

Since the state and Federal regulatory requirements vary by state, the individual BLM State Offices may develop a standard inspection report format to be used in their state as statewide program guidance. Each State Office's report format must contain the following:

- The date the report was written.
- The date of the inspection.
- The name(s) of anyone present during the inspection and affiliation (BLM employees, state or Federal regulators, operator's employees, law enforcement).
- Geographic coordinates (UTM – NAD83) for a location, or township, range, and section descriptions sufficient to locate the operation on the ground.
- A discussion of the site including any and all elements of occupancy, descriptions of chemical, explosive, and fuel storage, and the extent of all surface disturbances.
- A description of any suspected compliance violations, including site conditions, citation of regulatory provision violated, and any follow-up action to be taken.

Portable GPS units should be used for mapping whenever possible. Photos to document site conditions are especially valuable and must be appropriately labeled with a suitable caption, the date, and the name of the photographer.

Proper documentation is not limited to an inspection report. It is critical that any identified noncompliance be documented in a noncompliance order (see Section 9.2.3.1 Noncompliance Order). A noncompliance order is the BLM's primary means of documenting noncompliance and directing the operator as to the steps needed to remedy the situation.

9.2 Enforcement Actions

9.2.1 Prohibited Acts

The regulations at 43 CFR 3809.601 through 3809.604 address the BLM's authority to take enforcement actions when operators engage in one of the prohibited acts under 43 CFR

3809.605, or otherwise do not meet the requirements of these regulations. Prohibited acts include, but are not limited to, the following:

- Causing any UUD.
- Conducting operations, other than casual use, without an accepted Notice or approved Plan.
- Conducting operations outside the scope of the accepted Notice or approved Plan.
- Conducting operations without an acceptable financial guarantee.
- Failing to meet all regulatory requirements when not conducting operations.
- Failing to comply with all applicable performance standards.
- Failing to comply with any enforcement action.
- Abandoning any operation prior to complying with all reclamation and closure requirements.

9.2.2 Regulatory Overlap of Enforcement Actions

Paragraph 43 CFR 3809.601 specifies what types of enforcement action the BLM may take for operations that do not meet the requirements of these regulations. However, where there is a violation under 43 CFR 3809, there may also be a violation under 43 CFR 3715.

In general, the 43 CFR 3809 regulations should be used in instances dealing with "Unnecessary or Undue Degradation" under FLPMA Section 302(b), 43 U.S.C. 1732(b), specifically violations of Notices, Plans, and the provisions governing financial guarantees. The Use and Occupancy Regulations at 43 CFR 3715 also incorporate the UUD standard, but should be used to deal with occupancies or activities that are not "Reasonably Incident to Mining" under the Surface Resources Act, 30 U.S.C. 612. There is, however, considerable overlap between the two sets of regulations. For example, violations involving the lack of permits and/or violations that is or could cause environmental damage can be enforced with either set of regulations. That is because failure to comply with applicable permits and regulations is by definition "unnecessary or undue degradation" under the 43 CFR 3809 regulations, as well as being a prohibited act under 43 CFR 3715.6. In addition, an operator is by definition causing UUD if use and occupancy is not "reasonably incident" under 43 CFR 3715 (see 43 CFR 3809.5). Despite the overlap, when issuing an enforcement order, the BLM will issue the order under either 43 CFR 3809 or 43 CFR 3715. If enforcement under both regulations is appropriate, the BLM must issue two separate enforcement orders because the appeal requirements under the two regulations differ.

Enforcement actions issued by the BLM against operators for failure to obtain local, state, or other Federal permits, or for violating those permit conditions, must be based on a finding from

the applicable permitting authority that the operator is either operating without a required permit or is in violation of its permit conditions. The BLM does not independently determine if a permit from another agency is required for the operation or that a local, state, or other Federal agency's permit conditions have been violated. Rather, the BLM relies on those agencies to first determine whether their own laws or regulations have been violated. If another agency notifies the BLM that they have determined an operation on public lands is in violation of their local, state, or Federal requirements related to environmental protection or protection of cultural resources, then it may be appropriate for the BLM to issue an enforcement order against the operator citing noncompliance with 43 CFR 3809.420 or, if occupancy is involved, 43 CFR 3715.6.

9.2.3 Types of Enforcement Orders

Enforcement actions under 43 CFR 3809.601 are taken when there is a clear violation of one or more of the prohibited acts listed under 43 CFR 3809.605. The BLM may issue three types of enforcement orders: - noncompliance orders, suspension orders, and immediate temporary suspension orders. To assist with the proper implementation of enforcement orders, Figure 9.2-1, Inspection and Enforcement Order Procedures, shows when enforcement actions are to be taken.

9.2.3.1 Noncompliance Order

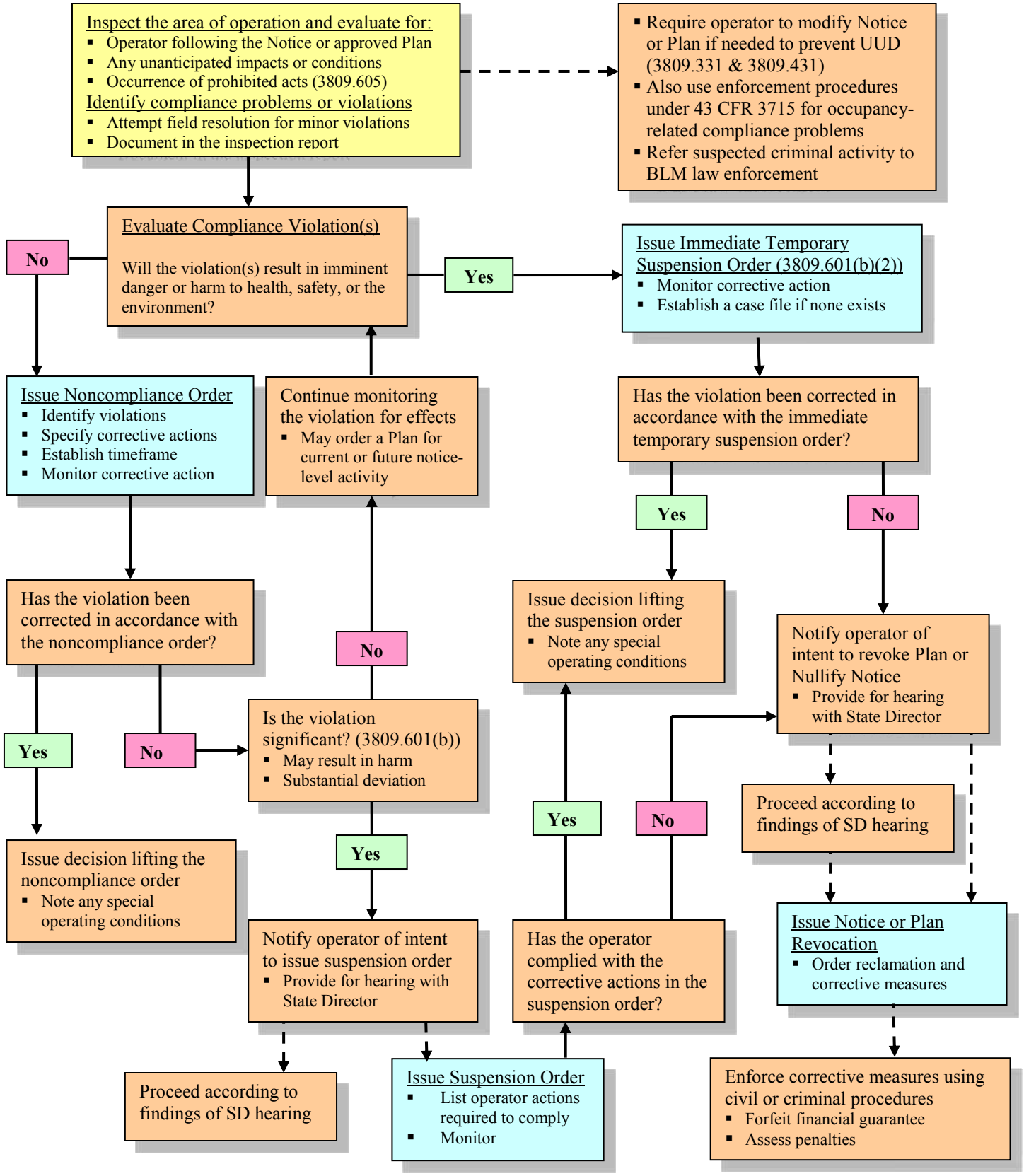
A noncompliance order[274] will be issued for failing to comply with the provisions of a Notice or Plan, or any violation of 43 CFR 3809.[275] Appendix A, Template 9.2-1, Noncompliance Order, presents a template for a noncompliance order. A noncompliance order must include all of the following:

- Describe the violation.
- Identify the corrective action.
- Provide the timeframe in which the corrective action must occur.

A noncompliance order must be issued by itself and not in conjunction with a suspension order or an immediate temporary suspension order. Generally a noncompliance order is issued for infractions of the regulations that do not involve immediate danger or harm to health, safety, or the environment. A noncompliance order should never be issued for violations that are significant to a degree that health, safety, or the environment are at immediate risk. In these instances, an enforcement action under 43 CFR 3715 or 43 CFR 3809.601(b)(2) must be taken.

[274] Note that the term "notice of noncompliance" (NON) is not used in 43 CFR 3809.601. The correct title of this enforcement action is a "noncompliance order." A NON is a term used in 43 CFR 3715 and carries differing penalties and appeals authorities. The two terms are not interchangeable.
[275] 43 CFR 3809.601.

Figure 9.2-1 - Inspection and Enforcement Order



9.2.3.2 Suspension Order

Suspension of all or part of an operation may be ordered for failure to comply with a noncompliance order[276] for a significant violation. Before issuing the suspension order, the District/Field Manager must:

- Determine that the operator has failed to timely comply with a noncompliance order for a significant violation.
- Notify the operator of the BLM's intention to issue a suspension order.
- Provide the operator an opportunity for an informal hearing before the State Director to object to the suspension.

9.2.3.2.1 Determination of Significant Violation

A "significant" violation under 43 CFR 3809.601(b) is one that causes or may result in environmental or other harm or danger, or that substantially deviates from the complete Notice or approved Plan of Operations. Examples of significant violations include, but are not limited to:

- The disturbance of surface areas not covered in an accepted Notice or approved Plan of Operations.
- The unauthorized storage or use of chemicals or fuels.
- Operating without an acceptable financial guarantee.

If you are unsure whether a violation can be considered "significant," contact the Solicitor's Office for further guidance.

9.2.3.2.2 Operator Notification to Issue Suspension Order

Before issuing a suspension order, the District/Field Manager must notify the operator of the Bureau's intent to issue a suspension order (See Appendix A, Template 9.2-2 Notification of Intent to Issue a Suspension Order). This notification must be in writing and take the form of a letter, rather than a formal decision. The notification will not contain any appeals language as it merely informs the operator of an impending action and the availability of an informal hearing at the operator's request. The notification must reference the original noncompliance order and must remind the operator of its responsibilities under the original order.

The notification must not in any way alter the terms of the noncompliance order. In those instances where the conditions of the noncompliance order must be amended, an amendment to the noncompliance order must be written before the notification may be sent.

[276] 43 CFR 3809.601(a).

The notification must also inform the operator that it has an opportunity for an informal hearing before the BLM State Director to object to the suspension.
Following issuance of the Notification of Intent to Issue a Suspension Order (Appendix A, Template 9.2-2), if the operator still fails to comply with the noncompliance order, the authorized officer may issue a suspension order (See Appendix A, Template 9.2-3 Suspension Order).

When writing a suspension order, remember that the objective is to stop the action or activities that are in violation of the regulations and not necessarily the entire operation. In addition, suspension orders must not be issued for violations that are minor in nature and probably will not rise to a level that is significant.

9.2.3.2.3 Informal Hearing

An informal hearing with the State Director must be offered to an operator before a suspension order is issued unless an immediate temporary suspension order is issued. A request for an informal hearing with the State Director must be made with the office of the State Director within 15 days of the District/Field Manager's decision.

The informal hearing should be arranged as soon as possible but no later than 10 working days after the operator requests an informal hearing. The informal hearing may be conducted via teleconference if agreed upon by all parties.

The informal hearing as well as all conversations held with the District/Field Office or the affected party must be documented in the case file. No court reporter is used or other transcript of the informal hearing is made.

9.2.3.3 Immediate Temporary Suspension

The District/Field Manager may order an immediate, temporary suspension of all or any part of an operation without issuing a noncompliance order, notifying the operator in advance, or providing the operator an opportunity for an informal hearing if:

- The operator does not comply with any provision of their Notice, Plan of Operations, or the surface management regulations; <u>and</u>

- An immediate, temporary suspension is necessary to protect health, safety, or the environment from imminent danger or harm.

Note that 43 CFR 3809.601(b)(2) requires both conditions to be met before issuing an immediate, temporary suspension (Appendix A, Template 9.2-4, Immediate Temporary Suspension Order).

The exception to meeting both conditions occurs where operations are being conducted without proper authorization. Where an operator is conducting plan-level operations without an

approved Plan of Operations or Notice-level operations without submitting a complete Notice, the BLM may presume that an immediate suspension is necessary.

9.2.3.3.1 Use and Occupancy

The language used in 43 CFR 3809.601(2) is similar to the language found in 43 CFR 3715.7-1(a)(ii) for issuing an immediate, temporary suspension. However, because an Immediate Temporary Suspension under 43 CFR 3715 cannot be stayed by appeal, it is the most powerful order available to the BLM and should be used in all instances involving chemical releases or ongoing activities that are causing environmental damage at a mine site. In instances where a direct threat to health, safety, or the environment results from actions taken by an operator, an immediate temporary suspension order under 43 CFR 3715.7-1 must be considered. An immediate temporary suspension order under 43 CFR 3715 cannot be stayed by an appeal to IBLA and does not require State Director review. An order under 43 CFR 3715 also provides for civil as well as criminal penalties for those who do not comply and offers the most direct, positive means for dealing with a serious threat. In instances where violations of the Clean Water Act, Safe Drinking Water Act, RCRA, or CERCLA are involved, an order issued under 43 CFR 3715 should be written.

9.2.4 Preparation of Enforcement Orders

All enforcement orders must be in writing, issued as formal decisions, and include the pertinent appeals language. In addition, any enforcement order must clearly require abatement of the violation under the appropriate subpart.[277] This is necessary to ensure that, should subsequent criminal violations ensue, the administrative record will not be vague and that knowing and willful misconduct is established and documented. Documenting the BLM's notice of the violation is extremely important. If subsequent criminal violations ensue, such documentation in the administrative record will support a charge of knowing and willful misconduct, which will generally cause the amount of damages to be increased. In addition, such documentation in the case file is important to defend against any administrative appeal of the enforcement order.

Any enforcement order under 43 CFR 3809.601(a) or (b) must specify:[278]

- How the operator is failing or has failed to comply with the regulatory requirements of 43 CFR 3809. This must be a detailed list of the regulations that the operator is violating, including the subsection if applicable.

- The portion of the operation, if any, that the operator must cease or suspend. Note that a noncompliance order does not require an operator to cease any particular action but provides a list of actions that the operator must take to avoid further actions that would or could involve the suspension of all or part of their operations.

- The actions the operator must take to correct the noncompliance and the time, not to exceed 30 calendar days, within which the operator must start corrective action.

[277] 43 CFR 3715 or 43 CFR 3809.
[278] 43 CFR 3809.601(c).

- The time within which the operator must complete corrective action. Note that the timeframe for actions to take place begins with the "effective date" of the order. The effective date is specified as the date of receipt of the order (date received for certified mail - return receipt requested) or the date of personal service for orders delivered by hand.

- A reference to specific and pertinent details from the case file that establish the facts on which the action is predicated. These facts should lead concisely and logically to the conclusions drawn concerning the violations.

- A reference to 43 CFR 3809.604 that specifies the civil actions that the BLM may request for violations of the order, that the BLM may revoke an approved Plan of Operations or nullify a Notice as allowed by 43 CFR 3809.602, and the criminal penalties at 43 CFR 3809.700.

9.2.5 Serving an Enforcement Order

Under 43 CFR 3809.603(a), the BLM will serve a noncompliance order, a notification of intent to issue a suspension order, a suspension order, or another enforcement order on the person to whom it is directed or his or her designated agent.

The BLM will send the notification or order by certified mail - return receipt requested, by hand to the operator or his or her designated agent, or consistent with the rules governing service of a summons and complaint under Rule 4 of the Federal Rules of Criminal Procedure (see Appendix F – Arrest Warrant or Summons upon Complaint).[279] The BLM may also serve the notification or order by leaving a copy at the operator's residence or usual place of abode with another adult residing at that location and by mailing a copy to the operator's last known address. If the operator is an organization or corporation, the BLM will deliver a copy of the notification or order to an officer, a managing or general agent, or another agent appointed or legally authorized to receive service of process. A copy of the notification or order must also be mailed to the organization's last known address within the district or to its principal place of business elsewhere in the United States. Service is complete when the written notification or order is offered or certified mail is received, and is not incomplete because of refusal to accept.

The BLM may also deliver a copy of the written notification or order at the operator's project area to the designated agent or to the individual who, based upon reasonable inquiry, appears to be in charge. If no such individual can be located at the project area, the BLM may offer a copy of the written notification to any individual at the project area who appears to be an employee or agent of the person to whom the notification or order is issued. Service is complete when the notice or order is offered, and is not incomplete because of refusal to accept. Following service at the project area, the BLM will send an information copy by certified mail - return receipt requested to the operator or the operator's designated agent.

[279] Federal Criminal Code and Rules, Rules of Criminal Procedure, Preliminary Proceedings, Rule 4 – Arrest Warrant or Summons on a Complaint.

When delivery is made by hand, the serving official must place a declaration in the case filing stating that hand-delivery was made, giving the date and time of the delivery, the name of the person who received service, and the name of the serving official. Note that the regulations specify that when serving a notification or order by personal service, an information copy will also be sent by certified mail - return receipt requested.

The mining claimant or operator may designate an agent for service of notifications and orders. The mining claimant or operator must provide the designation in writing to the local BLM District/Field Office having jurisdiction over the lands involved.

The BLM authorized officer's personal dealings with operators and claimants must be courteous and professional, as with any member of the public. Professional detachment must be exercised in all matters involving the enforcement process. While the BLM agent must strive for cordial relations, the BLM's ultimate responsibility is to regulate the activities of those wishing to engage in mineral exploration and mining on the public lands.

Safety of all BLM employees is paramount. When dealing with potentially dangerous situations, where law enforcement assistance may be warranted, arrangements should be made in advance.

9.2.6 Duration of Order

All enforcement orders remain in effect until the BLM determines that the violation is abated or, if the violation is not abated, the enforcement order is terminated by IBLA or the court. Under 43 CFR 3809.601(b)(3), the BLM will issue a decision terminating a suspension order when it is determined that the operator has corrected the violation (Appendix A, Template 9.2-5 Suspension Order Terminated).

9.2.7 Failure to Comply

The BLM may take a variety of actions where an operator fails or refuses to comply with an enforcement order. Actions may include one or more of the following: initiating a civil action against the operator or claimant in Federal District Court, requiring the operator to submit a Plan of Operations for existing and future operations that would otherwise only require a Notice, or revoking the operator's Plan or Operations or nullifying the operator's Notice.

9.2.7.1 Initiating a Civil Action

Under 43 CFR 3809.604, if an operator does not comply with a BLM order issued under 43 CFR 3809.601 or 3809.602, DOI may request the US Attorney's Office to institute a civil action in Federal District Court for an injunction or order to enforce its order, prevent the operator from conducting operations on the public lands in violation of this subpart, and collect damages resulting from unlawful acts. This relief may be in addition to the enforcement actions described in 43 CFR 3809.601 and 3809.602, and the penalties described in 43 CFR 3809.700.

If the BLM has determined that the operator has not complied or the BLM has reason to believe that the operator will not comply with an enforcement order even before the time period for

complying has expired, the BLM will contact the Solicitor's Office to discuss whether to request assistance from the US Attorney's Office, and supporting documents will be placed in the case file.

9.2.7.2 Loss of Operator Notice Eligibility

In addition to the other remedies available if the operator fails to timely comply with a noncompliance order issued under 43 CFR 3809.601(a), or has a history of noncompliance, the BLM may order the operator to submit a Plan of Operations under 43 CFR 3809.401 for all current and future notice-level operations[280] (see Appendix A, Template 9.2-6 Order Requiring Plans). If, for example, an operator or claimant fails to comply with an order and remains in noncompliance for a period longer than 6 months, a decision requiring the submission of a Plan of Operations (see Appendix A, Template 9.2-3 Suspension Order) and/or a decision to revoke or nullify the authorization (see Appendix A, Template 9.2-8 Nullification of Notice/Revocation of Plan) may be issued.

9.2.7.3 Revoke the Plan or Nullify the Notice

In addition to the other remedies available, as provided for under 43 CFR 3809.602(a), the BLM may revoke a Plan of Operations or nullify a Notice upon finding that:

- A violation exists of any provision of the Notice, Plan of Operations, or the 43 CFR 3809 regulations, and the operator has failed to correct the violation within the time specified in the enforcement order issued under 43 CFR 3809.601, or

- A pattern of violations exists at the operations.

A decision to revoke or nullify the authorization to operate is at the District/Field Manager's discretion. Whether the manager's decision is the result of an operator's failure to correct a significant violation or a pattern of violations, the need to take such action must be clearly documented in the case file. When looking at a pattern of violations, violations from other concurrent or previous operations conducted by the operator may be considered. Before revoking a Plan or nullifying a Notice, the District/Field Manager must notify the operator of its intention to take the action (see Appendix A, Template 9.2-7 Notification of Intent to Nullify Notice/Revoke Plan); and provide the operator an opportunity for an informal hearing before the State Director.[281]

The informal hearing before the State Director follows the same procedures as the informal hearing for a notice to issue a suspension order under 43 CFR 3809.601(b), see Section 9.2.3.2.3 Informal Hearing.

If, after the informal hearing, the Field Manager believes that it is still necessary to revoke the plan or nullify the notice, the Field Manager will issue a formal written decision to the operator (see Appendix A, Template 9.2-8 Nullification of Notice/Revocation of Plan of Operations). A

[280] 43 CFR 3809.604(b).
[281] 43 CFR 3809.602(b).

decision to revoke a Plan or nullify a Notice constitutes an appealable decision and must include standard appeals language.

If the BLM revokes a Plan of Operations or nullifies a Notice, the operator must not conduct operations on the public lands in the project area, except for reclamation or other measures specified by BLM.[282] If the operator continues to conduct operations after receiving the decision, and the decision is not stayed by the IBLA, the BLM must contact the Solicitor's Office to determine whether to request assistance from the US Attorney's Office to enforce the order.

9.3 Criminal Penalties

In certain circumstances, the BLM may seek criminal penalties in addition to the other enforcement remedies in section 9.2. The criminal penalties established by statute for individuals and organizations who knowingly and willfully violate 43 CFR 3809 are found at 43 CFR 3809.700.

9.3.1 Individuals

If an operator or claimant knowingly and willfully violates the regulatory requirements, he/she may be subject to arrest and trial under Section 303(a) of FLPMA.[283] If the operator or claimant is convicted, he/she will be subject to a fine of not more than $100,000 or the alternative fine provided for in the applicable provisions of 18 U.S.C. 3571, or imprisonment not to exceed 12 months, or both, for each offense.

9.3.2 Organizations

If an organization or corporation knowingly and willfully violates the regulatory requirements, it is subject to trial and, if convicted, will be subject to a fine of not more than $200,000 or the alternative fine provided for in the applicable provisions of 18 U.S.C. 3571.

[282] 43 CFR 3809.602(c).
[283] 43 U.S.C. 1733(a).

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Chapter 10 Decisions and Appeals

This chapter provides guidance on what must be included in a surface management decision and how to process appeals of those decisions. It discusses the roles and responsibilities of the District/Field Office, State Office, Solicitor's Office, and the IBLA in the appeals process.

10.1 Decisions

10.1.1 Decision Content

A well-drafted decision will contain the following:

- A complete statement of the material facts, i.e., those facts necessary to decide the issues.
- Reference to relevant documents in the case file used in deciding the case, (e.g., inspections, records of telephone conversations, environmental analysis, consultation results, etc.).
- The issue(s) on which the decision hinges.
- Statement of relevant law (statutes, regulations) to the facts to resolve the issues.
- Appeals provisions.

10.1.2 Appeals Language

All formal decisions must contain the appropriate appeals language. The appeals language for District/Field Manager decisions is different from that needed to describe the process to appeal the results of a State Director Review (SDR). The following two sections contain the appropriate appeal language for each of these decisions. BLM Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals, may be included with the decision, but the decision will still contain the relevant appeals language.

10.1.2.1 District/Field Office Decisions - Appeals Language

All decisions issued by the District/Field Office in administering the surface management program under 43 CFR 3809 must, at a minimum, contain the following appeals information (see Appendix A, Template 10.1-1, Field Office Decision – Appeal Language):

> If you are adversely affected by this decision, you may request that the (*enter appropriate State*) BLM State Director review this decision. If you request State Director Review, the request must be received in the (*enter appropriate state*) BLM State Office at (*insert State Office mailing address*), no later than 30 calendar days after you receive or have been notified of this decision. The request for State Director Review must be filed in accordance with the provisions in 43 CFR 3809.805. This decision will remain in effect while the State Director Review is pending, unless you request and obtain a stay from the State Director. If you request a stay, you have the burden

> of proof to demonstrate that a stay should be granted using the standards and procedures for obtaining a stay from the Interior Board of Land Appeals (IBLA).[284]
>
> If the State Director does not make a decision on your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the IBLA. You may contact the (*enter appropriate state*) BLM State Office to determine when the BLM received the request for State Director Review. You have 30 days from the end of the 21-day period in which to file your Notice of Appeal with this office at (*insert address of Field Office issuing the decision*) which we will forward to IBLA.
>
> Under 43 CFR 3809.801(a)(1), if you wish to bypass a State Director Review, this decision may be appealed directly to the IBLA in accordance with the regulations at 43 CFR part 4. Your Notice of Appeal must be filed in this office at (*insert address of Field Office issuing the decision*) within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 which contains information on taking appeals to the IBLA. This decision will remain in effect while the IBLA's decision is pending, unless you request and obtain a stay under 43 CFR 4.21. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted under the criteria in 43 CFR 4.21.

Failure to include the proper appeals language in a District/Field Office decision does not limit the appeal rights of the recipient.[285] However, not including the language may result in extending the period during which an adversely affected party may request SDR or file an appeal with IBLA.

10.1.2.2 State Director Decisions - Appeals Language

All decisions issued by the State Director in administering the surface management program must, at a minimum, include the following appeals information in the decision (see Appendix A, Template 10.1-2, State Director Decision – Appeal Language):

> This decision may be appealed to the Interior Board of Land Appeals (IBLA) in accordance with the regulations contained in 43 CFR part 4 and the enclosed Form 1842-1. If an appeal is taken, your Notice of Appeal must be filed in this office (*insert State Office address*) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error. This decision will remain in effect while the IBLA's decision is pending, unless you request and obtain a stay under 43 CFR 4.21. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted under the criteria in 43 CFR 4.21.

Failure to include the appeals provisions in the State Director decision does not limit the appeal rights of the recipient but may result in extending the timeframe in which an appeal can be filed with IBLA.

10.1.2.3 Request for Stay

All decisions under 43 CFR 3809 are effective immediately unless the operator or other adversely affected party requests and is granted a stay of the decision.[286] The office issuing the decision must include language in the decision on how to request a stay, including the standards

[284] 43 CFR 4.21(b).
[285] 43 CFR 4.410.
[286] 43 CFR 3809.803.

for obtaining a stay. The provided language must include the following information (see Appendix A, Template 10.1-3, Request for a Stay):

> If you wish to file a petition pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by IBLA, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision, to the IBLA, and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.
>
> Standards for Obtaining a Stay
>
> Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:
> 1. The relative harm to parties if the stay is granted or denied.
> 2. The likelihood of the appellant's success on the merits.
> 3. The likelihood of immediate and irreparable harm if the stay is not granted.
> 4. Whether the public interest favors granting the stay.

10.1.3 Issuing the Decision

Decisions must be sent via certified mail - return receipt requested, in order to ensure receipt by the intended party and to establish a timeframe for the filing of appeals. Where there is a high level of public interest or the BLM is aware of parties other than the operator who may claim to be "adversely affected" by the decision, it may be appropriate to announce the decision through the media and via public mailings of applicable decision documents. In some cases, it is advisable to deliver copies via certified mail of the decision to those individuals or groups, other than the operator, who have been active in the review and analysis process for a particular decision and who are potential appellants. This ensures these parties are aware of the final decision and establishes a timeline for the filing of appeals.

10.2 Administrative Review Process

An operator or other adversely affected party may request administrative review of a BLM decision. The party adversely affected by a decision under Part 3809 may either request a SDR[287] or appeal directly to the IBLA[288] (see Figure 10.2-1, *Administrative Review Process*).

10.2.1 Decisions Subject to Administrative Review

There are a variety of decisions issued in connection with the surface management program by either the District/Field Office or the State Office that are subject to administrative review by adversely affected parties.

[287] 43 CFR 3809.800(a).
[288] 43 CFR 3809.800(b) and 43 CFR 4.410.

Examples of decisions subject to the administrative review procedures in 43 CFR 3809.800 include:

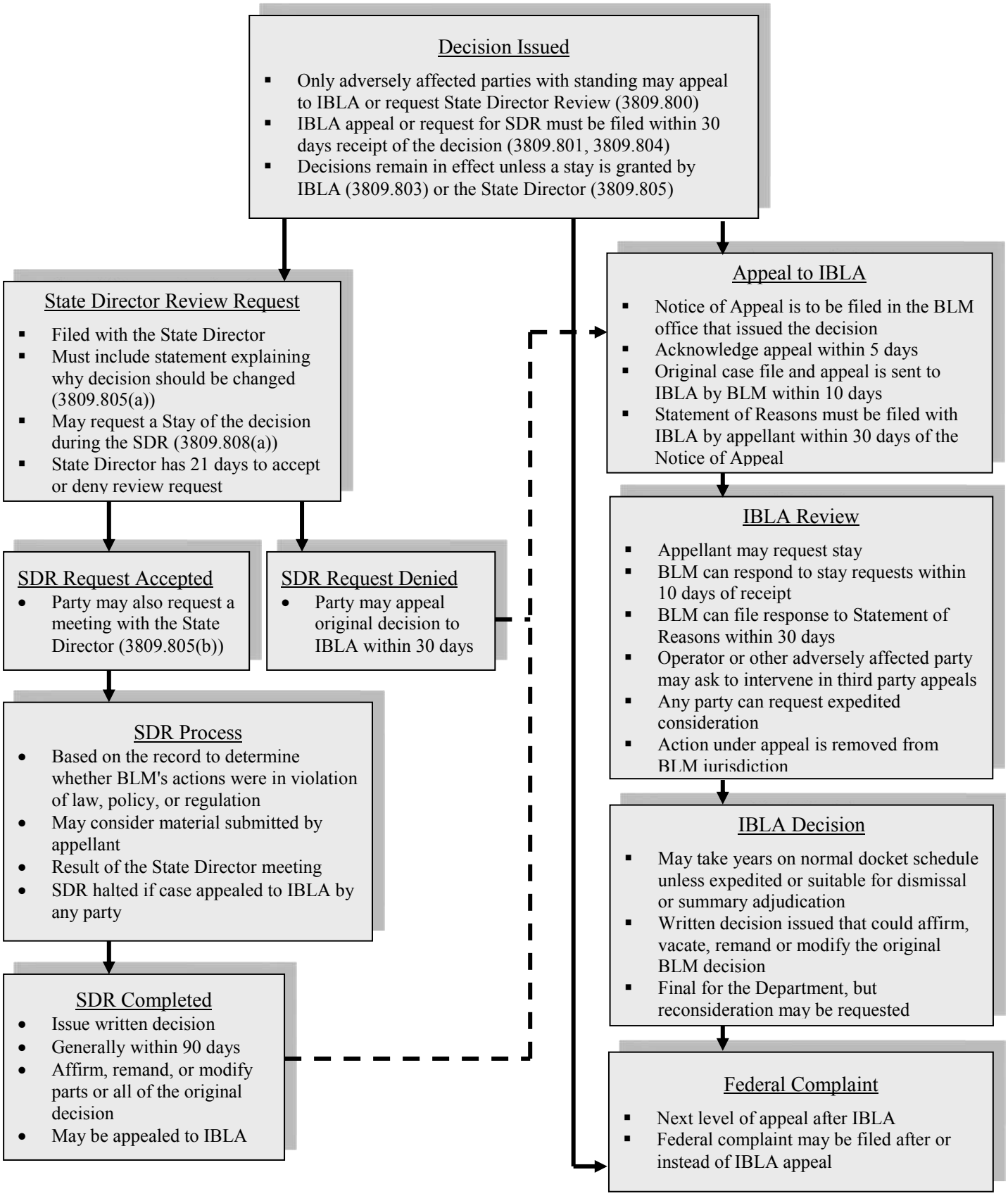
- Establishment of the financial guarantee amount that must be posted for a Notice operation.
- Establishment of the financial guarantee amount that must be posted for a Plan of Operations.
- Acceptance, rejection, or forfeiture of a financial guarantee instrument.
- Approval of a Plan of Operations.
- Denial or withholding approval of a Plan of Operations.
- Rejection of a Notice or Plan of Operations.
- A decision that a Notice has expired.
- A decision requiring submission of a modification to a Notice or Plan.
- Issuance of an enforcement order.
- A decision determining that a Notice or Plan has been abandoned.
- A decision revoking a Plan or nullifying a Notice.
- Concurrence on use and occupancy associated with a Notice or Plan (must appeal direct to IBLA, no SDR process available[289]).
- The State Director's decision on a SDR request.

10.2.2 Decisions Not Subject to Administrative Review

Not all actions taken by the BLM in administering the surface management program are subject to administrative review because the actions do not involve a decision by the BLM. Certain actions are considered intermediate steps in a larger process which itself is subject to review. For example, communications with the operator about the proposed actions are not final decisions, and hence should not to be issued in the form of a decision nor should the communication include the standard appeals provision.

[289] Note that there is no SDR because this is a 3715 decision and 43 CFR 3715 does not provide for SDRs.

Figure 10.2-1 – Administrative Review Process



Examples of non-reviewable actions:

- Notification that a Notice is complete or incomplete and/or requests for additional information.
- Notification of additional review time for a Notice.
- Notification that a Plan of Operations is complete or incomplete and/or requests for additional information.
- Advice to the operator of consultation or coordination requirements.
- Advice to the operator of environmental information needs or deficiencies.
- Notification of Intent to issue a suspension order, or to nullify a Notice or to revoke a Plan of Operations.

10.2.3 Standing to Seek Administrative Review

IBLA appeals or SDR requests may be filed by any individuals or entities that are adversely affected by the decision. Individual or entities may be "adversely affected" if they are the named recipient(s) of the BLM decision, or if they participated in the decision-making process. For decisions involving NEPA documentation, this can occur by providing comments or input to the BLM prior to the action, such as commenting on a draft EIS.

If you believe the party appealing to the IBLA or requesting SDR is not "adversely affected" within the meaning of the regulations, and the BLM should argue for dismissal based on lack of standing, you should raise the issue with the Solicitor's Office during preparation of the case file and answer.

10.2.4 Where and When to File a Request for Administrative Review

A request for a SDR must be filed with the office of the State Director within 30 days of receipt of the District/Field Manager's decision. Appeals to IBLA of the District/Field Manager's decisions must be filed with the Field Office that issued the decision within 30 days of receipt of the decision. An appeal to IBLA of a State Director decision, including a decision as the result of a SDR, must be filed with the State Office within 30 days of receipt of the decision.

Because decisions issued to operators are served by certified mail - return receipt requested, determining whether an appeal or SDR request was filed within the 30-day period is relatively straight forward. For parties other than the operator, the appeal period begins from the date the party might reasonably be expected to be aware of the decision. Unless the decision is sent to the party via certified mail, the appeal period is determined based on the timing of public notice mechanisms such as a press release, mass mailing, *Federal Register* notice, etc. For deliberation concerning the timeliness of an administrative review filing use the procedures defined at 43 CFR 4.401(a).

10.2.5 Full Force and Effect

Under 43 CFR 3809.803, the BLM's decisions under the surface management regulations are in full force and effect upon issuance unless a request for a stay is filed and granted by the reviewing entity. Requests for a stay must be filed directly with IBLA and accompany the initial Notice of Appeal or with State Director and accompany a SDR request and address the four criteria in Section 10.1.2 Appeals Language.[290]

10.3 State Director Review Procedures

10.3.1 SDR Request

A request for SDR must be made in writing and include the serial number of the Notice or Plan of Operations, a written statement explaining why the BLM should change its original decision, and any documents that support the written statement. The request must also contain contact information for the requester, including a telephone or fax number. The requester may also request a meeting with the State Director.

If a timely filed SDR request is missing some of the information required by the regulations, the BLM will contact the affected party to obtain the missing information. If the missing information is not received in a reasonable amount of time (not to exceed 60 days), the State Director will proceed with the SDR process based on the information submitted and the case file.

10.3.2 Decision to Review

Within 21 days of receipt of the request, the State Director will notify the party seeking the SDR whether he/she will review the original BLM decision.[291] This notification is sent by certified mail - return receipt requested. If the State Director declines to review the original BLM decision, the adversely affected party has 30 days from receipt of the State Director's notification to file an appeal of the District/Field Office's decision with the IBLA. The State Director's decision whether to review the District/Field Office decision is not subject to administrative review.

If the adversely affected party files an appeal to IBLA while the State Director is reviewing the District/Field Manager's decision, then the State Director must stop his/her review and forward the original decision and case file to IBLA. If the State Director is not aware that the affected party filed an appeal with IBLA, then the State Director decision will be voided by a subsequent IBLA action. The adversely affected party may choose to file with IBLA at any time while the original decision is being reviewed by the State Director.

10.3.3 Purpose of SDR

The primary purpose of the review by the State Director is to ensure the original decision is not flawed or in error by violating any applicable law, regulation, or policy. Based on this review,

[290] 43 CFR 4.21.

the State Director may affirm the original decision or remand the original decision back to the office that issued the decision.

To facilitate the review, the State Director may request the case file from the appropriate office that issued the challenged decision. If requested, the District/Field Office will provide the original case file to the State Office within 10 business days after receiving the request for the case file. A copy of the case file will be retained in the District/Field Office.

A determination by the State Director to affirm the original decision will be issued as a new decision by the State Director. Once the State Director issues a decision to affirm the District/Field Office's decision, the State Director's decision replaces the original BLM decision which is no longer in effect. The only decision that can then be appealed to IBLA is the State Director's decision. The adversely affected party must file their Notice of Appeal with the State Director within 30 calendar days of the appellant's receipt of this decision. Because the SDR decision that affirms the original decision will be the basis of any subsequent IBLA or judicial appeal, the State Director must consult with the Solicitor's Office before issuing the SDR decision.

A decision to reject the original decision and remand the case back to the District/Field Office may be made when the case file does not support the decision of the District/Field Manager. The State Director's decision will provide clear guidance to the District/Field Office on how to address remanded items. A determination by the State Director to remand the original decision back to the issuing office must be issued by the State Director; however, the State Director's decision is not subject to administrative review as it does not represent the agency's final decision. As such, the State Director's decision to remand the original decision should not include appeal language.

The State Director must complete the review and issue a decision within 90 days or sooner, if possible, from the date of the original decision. The SDR decision will be sent certified mail - receipt requested.

10.3.4 State Director Meeting

The party requesting SDR may request a meeting with the State Director as part of the review process. The State Director must determine whether or not he/she can accommodate the meeting request. In general, BLM policy is for the State Director to accommodate meeting requests as part of the SDR process. However, if the request involves an issue that is not under the State Director's jurisdiction, then the meeting could be denied.

If the meeting is determined appropriate, then it should be held as early in the process as possible. The meeting is an opportunity for the party requesting the SDR to discuss the problems in a non-adversarial setting. The State Director will determine who should be present during the meeting. This meeting and all conversations held with the District/Field Office or the affected party must be documented in the case file. The results of the meeting are to be documented and used in conjunction with the case file review to formulate the State Director's decision.

10.4 IBLA Appeals

10.4.1 IBLA Background

10.4.1.1 Summary Disposition Cases

All incoming IBLA appeals are screened by a Docket Attorney to determine whether or not they are suitable for summary disposition. Cases suitable for summary disposition are those subject to dismissal for lack of jurisdiction (e.g., untimely appeal) or where the facts preclude any chance of affording appellant any relief on the appeal. These cases are generally decided by orders that are not published in the volumes of IBLA decisions and therefore cannot be cited. The summary disposition process expedites the resolution of appeals where no genuine issue requires legal research, opinion drafting, or deliberation.

10.4.1.2 Types of filings before the IBLA

Although the most common filings before the IBLA are the Notice of Appeal, Statement of Reasons, and Answer, there are many other types of filings. Either the BLM or the appellant may file requests for extensions of time, expedited consideration, consolidation, or hearing. In addition to these filings, the appellant may also file a request to stay the BLM's decision, and other parties may file requests for intervention.

The time for filing any document other than the Notice of Appeal itself may be extended by the IBLA.[292]

The BLM's decision is not effective if the IBLA grants a stay. The decision is pending until the appeal is decided.

If the item(s) under appeal is (are) a pressing matter, the BLM may request an expedited review. This is considered an extraordinary procedure and should only be requested when absolute necessary (e.g., immediate action is necessary to protect health, safety, or the environment from imminent danger or harm).

The IBLA may consolidate separate pending appeals if the appeals involve identical or closely factual context and legal issues. Intervention is the recognition that a party with an interest adverse to the appellant may potentially be adversely affected by the decision on appeal. Generally, IBLA appeals are decided on the briefs alone, without oral argument or a hearing. However, at the request of one of the parties or on its own motion, the IBLA can refer the matter to an administrative law judge for a hearing if there are significant factual or legal issues remaining to be decided and the record without a hearing would be insufficient for resolving them.[293]

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[292] 43 CFR 4.401(a) and 4.422(d).
[293] 43 CFR 4.415.

10.4.2 IBLA Appeals

10.4.2.1 Filings by the Appellant

10.4.2.1.2 Notice of Appeal and Statement of Reasons

A decision of the District/Field Manager may be appealed directly to IBLA or after the SDR decision is issued. In either case, the appeal must be filed in the office where the decision under appeal was issued within 30 calendar days of receipt of the decision.

No extension of time to file a Notice of Appeal can be granted.[294] Under 43 CFR 4.401(a), any delay in filing a Notice of Appeal will be waived if it is filed within 10 days after the due date, and it is determined that the appeal document was transmitted or probably transmitted before the due date. If the BLM receives the Notice of Appeal within the 10-day period, but determines that it was not transmitted before the due date, the Field or State Office will forward the Notice of Appeal along with any supporting documentation to the IBLA for dismissal.

If the BLM receives the Notice of Appeal after the 10-day period, District/Field Office Surface Management Specialist or the State Office Program Lead will return it to the appellant with a cover letter explaining that the case was closed because no timely appeal was filed. The letter should have photocopies of documents in the case file that show the appeal was received after the grace period, including the return receipt card showing the date that the appellant received the decision, the envelope showing the postmark of when the appeal was mailed, and the date stamp showing when the appeal was received by the BLM. The letter is not a formal decision and should not include appeals language. If the appellant objects to the closing of the case and rejecting the appeal as untimely, then the case file will be forwarded to the IBLA which will determine whether a timely appeal was in fact filed.

The Notice of Appeal should contain the following information: the name of the affected party and address and the BLM serial number of the Notice or Plan of Operations that is the subject of the appeal. An appeal not containing all the information required by 43 CFR 3809.802 is still forwarded to IBLA within 10 business days.

The Notice of Appeal may contain the Statement of Reasons for filing the appeal or the Statement of Reasons may be filed separately. If the appellant does not file a Statement of Reasons with its Notice of Appeal, then the appellant must file the Statement of Reasons with the IBLA within 30 days after the Notice of Appeal was filed. See 43 CFR 4.412 and 4.413 for further guidance on the appeals requirements.

10.4.2.1.2 Requests for Stay

The appellant may also file a request for a stay under 43 CFR 4.21. The request for stay must be filed with the IBLA along with a copy of the Notice of Appeal, and with the BLM office that issued the decision. The appellant has the burden to demonstrate that the four factors listed in 43 CFR 4.21 justify the issuance of a stay.

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[294] 43 CFR 4.411(c).

10.4.2.2 BLM's initial review of the appeal

When a new appeal is filed with the BLM, the District/Field or State Office must review the documents filed to ascertain what will be filed in response and the due dates. It is sometimes difficult to tell whether the document filed by the appellant is a Notice of Appeal and/or a Statement of Reasons and/or a Request for a Stay. If you have any doubt, contact the Solicitor's Office to review the appellant's filing.

If the appellant only files a Notice of Appeal, then the BLM's only responsibility is to prepare the case file and transmit it along with the Notice of Appeal to IBLA within 10 working days. The BLM then waits for the appellant to file its Statement of Reasons or the time for filing a Statement of Reasons expires. The BLM has 30 days from receipt of the Statement of Reasons, or the date when the Statement of Reasons was due (if no Statement of Reasons is filed), to file its answer.

If the appellant files a Notice of Appeal and a Statement of Reasons together, the BLM must transmit the case file to IBLA within 10 days as well as file its answer with IBLA within 30 days of receipt. The answer must be served on all parties within 15 days of serving the IBLA, and is usually served at the same time.

If the appellant files both a Notice of Appeal and request for stay, the BLM must transmit the case file to IBLA as well as any response to the stay request within 10 working days. Because of this short timeframe for responding, it is very important that you contact the Solicitor's Office immediately when you receive any appeal that contains a request for a stay so that you can determine whether a response is required. The BLM's response to the stay request (if any, see below for further discussion) may also include a request to extend the time for filing the BLM's answer until 30 days after the IBLA makes a decision on the stay request or 30 days after the appellant files its Statement of Reasons, if not included with the Notice of Appeal and request for stay.

10.4.2.3 Preparing and transmitting the case file to IBLA

The Notice of Appeal is placed in the original case file. The original case file and index, but not any confidential, privileged, or protected information (see Section 13.3.2 Confidential or Proprietary Information) is forwarded to IBLA within 10 business days of receipt of the appeal and is sent by certified mail - return receipt requested. A copy of the case file must be maintained in the District/Field Office. In order to transmit the case file to IBLA, Standard Form 1842-2 is completed by the forwarding office.

The contents of the case file for IBLA cases must conform to the attached guidance from the Solicitor's Office on preparing administrative records for judicial litigation. If the appeal is related to a decision on a Plan of Operations or plan modification, an electronic copy of the relevant NEPA document(s) must be included in the case file submitted to IBLA.

Confidential information, including Privacy Act information, proprietary information, and attorney-client privileged communications, must be handled in accordance with the special

procedures found at 43 CFR 4.31 and discussed in further detail in Section 13.3.2 Confidential or Proprietary Information.

If the case file is very large and/or would take significant resources to copy before sending to the IBLA, contact the Solicitor's Office immediately before undertaking any copying or scanning. The Solicitor's Office can contact the IBLA Docket Attorney to determine whether the entire case file must be sent, and/or whether parts of the case file may be provided in electronic format. As of the date of this handbook, the IBLA is not accepting the case file in electronic format, but this may change in the future.

The BLM may contact the IBLA Docket Attorney to discuss procedural matters only (such as questions about the format of the administrative record); however, no communication regarding the merits of the appeal can be made directly to anyone at the IBLA who has jurisdiction over the merits of the case by the BLM unless all parties to the case are present. This is the rule of fundamental fairness. Violation of the rule constitutes *ex parte* communication. If the communication regarding the merits of the case is made in writing then a copy is served on all the parties to the case to ensure the BLM is not engaging in *ex parte* communication. If the BLM orally communicates with someone at the IBLA who has jurisdiction to decide the merits of the case, then all parties to the appeal must be present. See Section 13.7.3 Avoiding Ex parte Contact with IBLA for discussion of *ex parte* contact in relationship the administrative record.

10.4.2.4 BLM's Answer

The BLM's answer is due 30 days after the BLM receives the Statement of Reasons. The Field Office Surface Management Specialist and State Program Lead are to work closely with the Solicitor's Office to prepare the BLM's the case file and the BLM's answer as documented by the case file. In some cases, the BLM and the Solicitor's Office may also determine that the appeal has identified a legitimate error in the BLM's decision, and the BLM may ask the Solicitor's Office to request the IBLA to remand the decision back to the BLM rather than file an answer.

10.4.2.5 BLM's Response to a Request for Stay

The decision under appeal is in full force and effect unless the adversely affected party seeks a stay from the IBLA and the IBLA grants the stay. If the appeal consists of both a Notice of Appeal and Request for Stay, the BLM must transmit both the case file along with any response to the stay request to the IBLA within 10 working days. Depending on the circumstances, the BLM's response to the stay request may also include a request to extend the time for filing the

BLM's answer until 30 days after the IBLA makes a decision on the stay request or 30 days after the appellant files its statement of reasons, whichever is later.

If the appellant files a request for a stay under 43 CFR 4.21, the BLM should contact the Solicitor's Office immediately to determine how to respond. In some cases, the BLM may determine that it is not necessary to oppose the stay request, in which case the Solicitor's Office will file a short brief with the IBLA stating that it takes no position on the stay request. If the

BLM and the Solicitor's Office determine that a response is required, the response will address why the appeal does not warrant a stay under the four criteria listed in 43 CFR 4.21.

If the IBLA grants a stay, the IBLA's order will specify what portion of the BLM decision under appeal is stayed. Any portions of the BLM decision not appealed remains in full force and effect. The Field Office must continue regular inspections of the project while the decision is under appeal.

10.4.3 Intervenors

In some cases, a party other than the appellant will file a request to intervene in the appeal. For example, if the appeal was brought by an environmental group, the operator may seek to intervene or vice versa. The IBLA will look at whether the party seeking to intervene could have independently brought the appeal it seeks to participate in, and whether the interests of the party seeking to intervene could be adversely affected by the outcome of the appeal.

Although the intervenors may provide the BLM with advance or draft copies of the filings they intend to file with the IBLA, the BLM must not share drafts or other information not available in the case file with intervenors, even if the intervenors have become a party to the case on the same side as BLM.

10.5 Litigation in Federal Court

10.5.1 Judicial Challenges

A BLM decision under 43 CFR 3809 may be challenged in Federal court in two ways. First, a party may seek judicial review of a decision made by the IBLA or during SDR.

Second, a party may challenge a BLM decision in Federal court without going to IBLA or seeking SDR first. Under 43 CFR 3809.803, all decisions made under the surface management regulations are effective immediately. Consequently, decisions made under the surface management regulations are exempt from the requirement to exhaust administrative remedies in 43 CFR 4.21(c), and anyone with standing may immediately challenge a BLM decision in Federal court.

Judicial challenges of BLM decisions under 43 CFR 3809 are "record review" cases under the Administrative Procedures Act. This means that the court may look only to the administrative record to determine whether the BLM's actions were arbitrary, capricious, or in violation of law.

10.5.2 Legal Representation

The Department of Justice (DOJ) or the local United States Attorney's Office represents the BLM in Federal court. The Solicitor's Office will assist the DOJ attorney or Assistant United States Attorney (AUSA) in case preparation and will act as the liaison with the BLM.

The BLM District/Field and State Offices will provide background information, case file history, chronology of events leading to the court case, etc., as requested by the Solicitor's Office to help

prepare litigation reports and briefs. In general, the BLM will work through the Solicitor's Office rather than contacting or being contacted by the AUSA/DOJ attorney directly.

10.5.3 Judicial Enforcement

In accordance with 43 CFR 3809.604, DOI may request the United States Attorney to initiate a civil action when the operator fails to comply with an order. This process is initiated by the State Director writing a memorandum to the Solicitor's Office. The memorandum must contain the case file number, background information about the case, and the reason affirmative litigation is requested. A copy of the case file will be included with this memorandum. The Solicitor's Office will review the case file and identify the legal authority(ies) for taking affirmative litigation.

The United States Attorney's Office makes the final decision regarding whether or not it will pursue the case. If the case is pursued by the United States Attorney, then the Office Surface Management State Lead and all appropriate District/Field Office personnel must be available to work with the Solicitor's Office to support this litigation effort. If the case is not pursued by the United States Attorney, then the BLM must consult with the Solicitor's Office to determine what if any additional action is necessary to administratively close the case file.

Chapter 11 Public Visits

The surface management regulations[295] provide the public with a process to visit mine sites and associated facilities on public lands. The purpose of the visit is to give the public an opportunity to view the mine site and associated facilities. The operator must, however, provide reasonable access to public lands.

Nothing in the regulations allows nor authorizes the BLM to sponsor public mine visits to non-public lands, including operations on private and state lands. In addition, nothing in the regulations allows nor authorizes the BLM to sponsor public visits to underground operations.

11.1 Public Requests

Members of the public may request BLM sponsor an annual visit to any mine on public lands. Under 43 CFR 3809.900(c), members of the public must provide their own transportation to the mine site, except in rare instances when transportation is provided by the BLM.

The requester must include names and contact information (telephone number and address) of all parties to participate in the visit with the request. In addition, a request must be made a minimum of 30 days before the proposed date for the visit to ensure the BLM District/Field Office will be able to properly coordinate with the operator.

11.2 Processing a Request for Public Visit

When the BLM receives a request from the public to visit an operation located on public lands, the District/Field Office will work with the operator to address the logistics and timing for the visit. The District/Field Office will coordinate mine visits with the operator to avoid disruption of operations and will schedule visits during normal BLM business hours. After consulting with the operator, the BLM District/Field Office may limit the size of the public group for safety reasons. The BLM will also provide the operator with a list of all participants.

The BLM will discuss with the operator whether the operator is able to provide necessary safety equipment and transportation within the project area. If the operator is unable to provide safety equipment or transportation within the project area, the BLM will do so. However, operators must make available any safety equipment they normally provide to other visitors. Under no circumstance will a member of the public be allowed to operate his/her own vehicle within the project area.

Once the operator and BLM District/Field Office have agreed on the logistics and timing for the public visit, the District/Field Manager will communicate, in writing, to the requester this information and any safety limitations, such as clothing and equipment requirements. The visitors to the mine site must wear a BLM visitor pass (see Appendix G – Visitor Pass) at all times while on the visit. The conditions and statement must be agreed upon and signed by the visitor or the individual prior to being allowed to go on the trip.

[295] 43 CFR 3809.900.

11.3 Operator Responsibilities

The operator must allow the public to visit operations on public lands and must provide access to all surface areas and surface facilities on public lands that are ordinarily made available to visitors on operator sponsored public tours. For example, if the operator normally allows the public to view a refinery facility, that facility would be available for the BLM-sponsored public visit. Where the operator does not normally sponsor any public tours, the District/Field Manager, in consultation with the operator, will determine what surface areas and surface facilities on public lands may be made available for the visit.

Operators must not exclude persons whose participation the BLM authorizes. An operator's representative must accompany the group on the visit. Operators must make available any necessary safety training that they provide to other visitors. Operators are not required to provide transportation within the project area, but if they do not, the operator must provide access for BLM-sponsored transportation.

Chapter 12 Federal-State Agreements

This chapter covers the requirements for establishing an agreement with the state under 43 CFR 3809.200 through 3809.204. The procedures and timeframes for reviewing and revising agreements the BLM had with the state on January 20, 2001, are also discussed in this chapter.

12.1 Existing Agreements

Federal-State Agreements that were in place on January 20, 2001, were not cancelled by the revised regulations. The regulations do, however, require a review of all existing agreements.[296] The BLM was directed to review existing agreements by January 20, 2002, to determine if revisions were needed to meet the requirements of the regulations. The governor of the state or the delegated representative of the governor could request an extension in writing. The State Director could grant an additional year or two to review an existing agreement. If an extension was not requested and revisions were needed to meet requirements of the regulations, the existing agreement terminated on January 20, 2002. If an extension was granted but the review determined revisions were necessary and these revisions were not completed by January 20, 2004, the existing agreement terminated.

12.2 New Agreements

To prevent administrative delays and avoid duplication of effort, the BLM may enter into agreements with a state agency or agencies. Such an agreement may provide for joint management or defer to the state administration of certain surface management responsibilities.

12.2.1 Memorandum of Understanding (MOU)

An MOU is an agreement that outlines the roles, responsibilities, and commitment of each party to the agreement. Such agreements may be between two parties, e.g., the BLM and the state, or may involve multiple parties, such as an agreement between the BLM, state, and U.S. Forest Service. It needs to be noted, no funds may be transferred under an MOU.

The BLM and the state may agree to jointly regulate operations or the state may request that BLM defer to the state regulation of some or all of the aspects of the surface management program subject to the limitations specified in 43 CFR 3809.201 through 3809.203. The type of MOU being written (joint management agreement or deferral to state administration) should be determined early in the process so an appropriate schedule can be developed for the effort.

An MOU with the state should be developed at the State Office-level and signed by the State Director and the appropriate state agency administrator(s). More than one agreement may be developed between the BLM and different state agencies, or more than one agreement with a single state agency may be used to address different aspects of the surface management program.

[296] 43 CFR 3809.204.

The agreement must conform to the BLM's content and format requirements for MOUs, see BLM Manual 1786, *Memorandums of Understanding*, Illustration 2, for an example of the correct format. BLM Manual 1786 also provides guidance on development, implementation, review and recordkeeping for MOUs.

12.2.2 Joint Management Agreement

A joint management agreement[297] between the BLM and one or more state agencies, and possibly one or more Federal agencies, is intended to facilitate the management of certain surface management responsibilities. Where joint administration of the surface management program by BLM and a state is contemplated, the agencies should document this relationship in an MOU. This type of an agreement may identify a lead agency for certain actions and responsibilities, but does not let the BLM defer program administration to the state.

The BLM should consider all areas of overlapping Federal-State program responsibility when developing a joint management agreement with the state. At a minimum, BLM must consider:

- Common approaches to review Plans of Operations, including effective cooperation regarding NEPA.
- Performance standards.
- Interim management of temporary closure.
- Financial guarantees.
- Inspections.
- Enforcement actions, including referrals of violations to state enforcement agencies.

It is possible for a joint management MOU to address only a single aspect of the regulation of mining operations; however, it is the intent of the regulations to minimize delays and avoid duplication of administration and enforcement actions by working cooperatively with the responsible state agencies. Therefore, the entire program should be reviewed when developing a joint management MOU with the respective state agency or agencies.

An MOU for joint management does not require public notification or an evaluation of the state's surface management program.

12.2.3 Defer to State Administration

A deferral MOU is a commitment by the state to administer some or all aspects of the BLM's surface management responsibilities.[298] To avoid confusing a deferral agreement with a joint

[297] 43 CFR 3809.200(a).
[298] 43 CFR 3809.200(b).

management agreement, the MOU must clearly state that the purpose of the agreement is to defer the administration of some or all of the surface management program to the state. The format for this type of agreement is the same as an MOU for joint management of the program with one modification. The deferral MOU must provide for, and thoroughly describe, the auditing system that will be used to verify compliance with for those elements of the program deferred to state administration.

12.2.3.1 State's Request

A deferral must be requested in writing by the state[299] requesting to regulate operations on public lands in place of BLM administration for some or all of the requirements under 43 CFR 3809. The state must send the request to the State Director that has jurisdiction over the public lands for the state. Figure 12.2-1, Deferral Agreement Development is a flow chart of how such a request is processed.

The state request must contain the following items:

- An analysis of the state's legal authorities as compared to the BLM's authority to regulate mining activity on public land.
- Identification of the resources to be committed, i.e., position titles, position qualification requirements, computers, equipment, training, etc., needed to conduct the task(s) requested to be deferred in the agreement.
- Documentation that sufficient funding is available to administer the program.

12.2.3.2 Deferral Limitations

An agreement to defer to state administration of the surface management program is limited by the provisions listed in 43 CFR 3809.203(a) through (d). These limitations are:

- The BLM must still concur with each state decision to approve a Plan of Operations.
- The BLM retains the responsibility for compliance with NEPA.
- The BLM remains responsible for land use planning on its public lands and for implementing other Federal laws[300] relating to the public lands.
- The financial guarantee must still be redeemable by the BLM, and the BLM must concur in the approval, release, or forfeiture of a financial guarantee for public lands.

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[299] 43 CFR 3809.202(a).
[300] For example, the BLM is still responsible for ensuring compliance with use and occupancy regulations under 43 CFR 3715, conducting validity exams if required under 43 CFR 3809.100, making determinations of common versus uncommon variety, and protecting cultural resources (historic as well as prehistoric) and threatened and endangered plant and animal habitat.

12.2.3.3 BLM's Review

The BLM State Director will review the request to ensure all required information[301] is present. The State Director will notify the state that the BLM has received the request and whether the request is complete. If additional information is required, the letter will identify the information needed in order for the BLM to conduct its evaluation of the state program.

Unlike a joint management MOU, an MOU for deferral of the regulation of mining operations to the state requires public notification and comment. Once a complete request has been presented, the State Director will notify the public and provide an opportunity for comment on the proposed deferral. The notification must clearly define what BLM responsibilities are proposed for deferral and what responsibilities will be retained, including those responsibilities that may not be deferred which are identified in 43 CFR 3809.203. Public notification will, at a minimum, include publication in a daily newspaper with statewide circulation. Other outreach methods, such as mailings to interest groups, may be used to ensure interested parties are aware of the deferral request. The public will be given a minimum of 30 days to comment on the request.

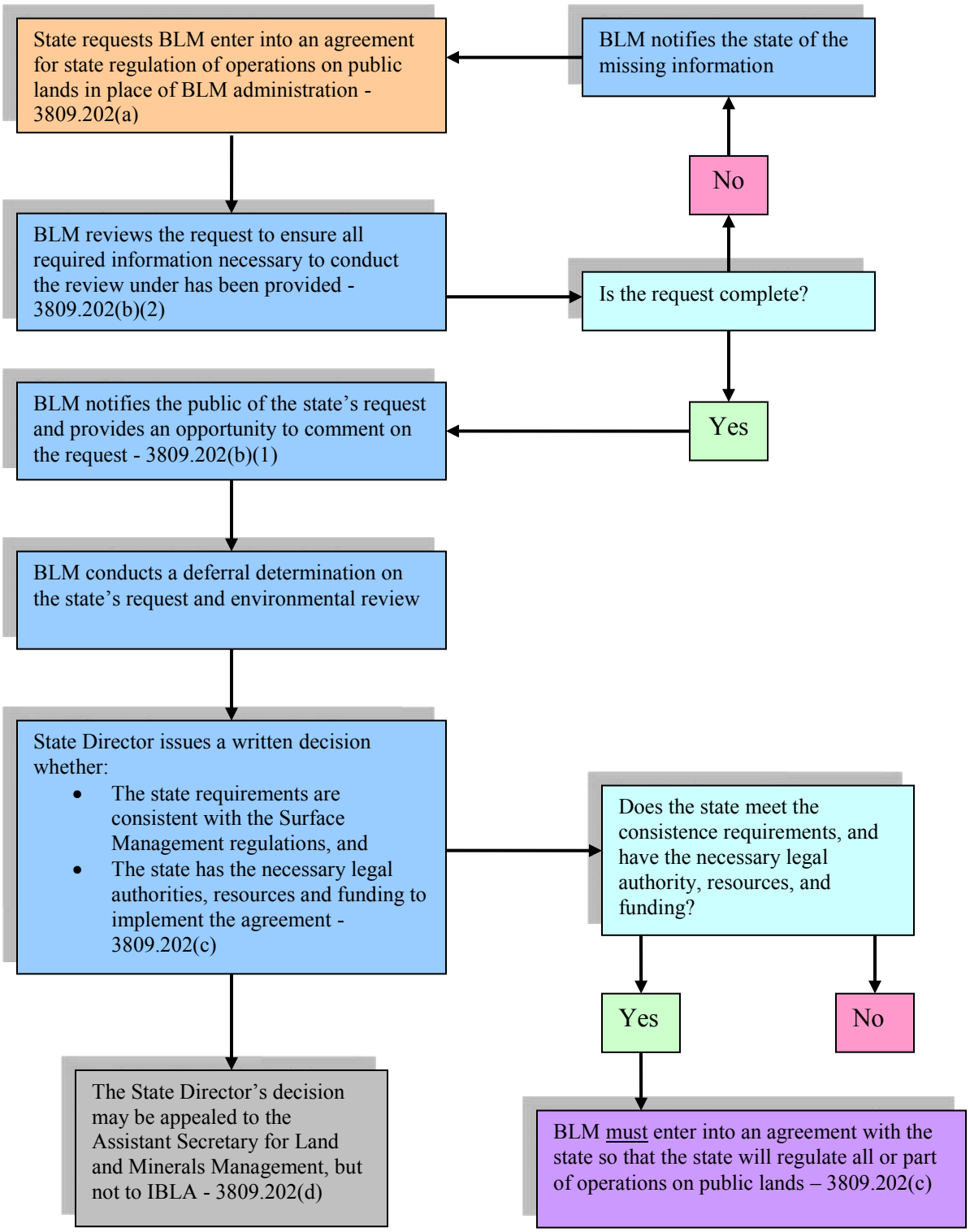
The State Director must determine whether the state has the legal authorities, resources, and funding to do the work that would be deferred to them. The BLM will determine consistency with the 3809 regulations by comparing the state standards on a provision-by-provision basis to determine whether the non-numerical and numerical state standards are "functionally equivalent" to BLM counterparts.[302] When comparing state and Federal regulations, the state timeframes do not have to be the same as corresponding Federal timeframes to be functionally equivalent. In addition to laws and regulations, the state may use guidelines, policy manuals, and permitting practices to demonstrate that the state standard is functionally equivalent to the BLM standard. A state regulatory standard that is more stringent than the Federal standard meets the functionally equivalent requirement provided it does not preempt Federal intent to allow occurrence of the activity. In reviewing the state standard to determine whether it is functionally equivalent, the BLM will request assistance from the Regional Solicitor's Office.

Once the public notification period has ended, the BLM will prepare a determination to document the State Director's evaluation of the state's request. This report must contain the following elements:

- Summary of the request, i.e., what portions of the surface management program administration were requested deferred to the state.
- Evaluation/Analysis of the Request, i.e., based on the criteria at 43 CFR 3809.202(b)(2).
- Summary of salient public comments and the BLM's responses.
- Determination Findings.

[301] 43 CFR 3809.202(b) (1).
[302] 43 CFR 3809.202(b)(2)(i).

Figure 12.2-1 – Deferral Agreement Development



The State Director will make a decision on the state's deferral request based on whether the state has the necessary legal authorities, resources, and funding to implement an agreement.[303] It is important to note that the decision to defer administration of some of or the entire program to the state is not implemented until a deferral MOU has been developed and signed. It is the deferral MOU stating how and what is deferred that allows the state to administer all or portions of the BLM's surface management program. If the state's requirements are consistent with the requirements of the surface management regulations and the state has the resources and funding, then the BLM must enter into an agreement that defers to state regulation some or all operations on public lands.

A deferral decision by the State Director is categorically excluded from NEPA review in accordance with 43 CFR 46.210(h).

12.2.3.4 Appeal of State Director's Decision

The State Director's decision concerning a state's request to defer administration of the surface management program will be the final decision of the BLM.[304] If the state or any other adversely affected party does not agree with the State Director's determination that the state has or does not have the legal authorities, resources, and/or funding to do the work, then the state or other adversely affected party may appeal to the Assistant Secretary for Lands and Minerals Management within 30 days of the decision. An appeal of the State Director's decision to defer or not to defer administration to the state is not made to Interior's Office of Hearing and Appeals (OHA).

Even though the appeal is not to OHA/IBLA, it must include all of information required in 43 CFR 3809.802. The Notice of Appeal must be made in writing and filed with the BLM State Office that made the decision. The Notice of Appeal must contain the appellant's name and address (state agency or other adversely affected party appealing the State Director's decision), case file management number (if one was assigned) or reference to state's request to defer, and a statement of reasons for the appeal. If the statement of reasons does not accompany the Notice of Appeal, the appellant must file the statement of reasons with Assistant Secretary for Land and Minerals Management within 30 days after the Notice of Appeal was filed. The decision of the Assistant Secretary will be the final decision of the Department.

12.2.3.5 State Performance

A deferral MOU requires the BLM to monitor the state's administration and enforcement of the surface management requirements to ensure all tasks deferred to the state are in compliance with the MOU. In the deferral MOU, a procedure to conduct periodic program reviews must be established. The program will be reviewed annually, at a minimum, or more often if deemed appropriate by the BLM. The program review will include procedures for notifying the state when the state is not in compliance with all or part of the MOU. The procedures must also include reasonable timeframes for the state to correct items identified as not being in compliance with the MOU.

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[303] 43 CFR 3809.202(b)(2).
[304] 43 CFR 3809.202(d).

12.2.3.6 Termination

The agreement must provide procedures for either the BLM or the state to terminate the MOU. The termination of a joint management agreement may be done by either party with a 60-calendar-day notification. The BLM may terminate the deferral MOU if the state does not timely correct items identified as not in compliance with the MOU.[305] The state may terminate the deferral MOU by notifying the BLM 60 calendar days in advance.[306] The agreement must provide that each agency agrees to maintain the existing financial guarantees until such time as an agreement can be reached between the operator, BLM, and state agency to replace or release the financial guarantee.

12.2.4 Suction Dredging Agreement

An agreement may address suction dredging if the state permits this type of activity (see Section 8.4 Suction Dredging). In cases where the Federal-State Agreement addresses suction dredging, the BLM can defer administration of the activity to the state if the agreement addresses the following:[307]

- The MOU describes the type and level of activity covered by the agreement. For example, limits on the size of the intake diameter of the suction dredge or vacuum, limits on the horsepower rating of the equipment, limits on the activity beneath the existing water surface of an active stream channel or non-vegetated sand and gravel bar exposed within the active stream channel, limits on the number of days the permit may be used in a year, and the number of people that can use a permit.

- The MOU contains a list of standard operating procedures that the operator must follow and the state will enforce on suction dredging activities.

- The MOU provides that the state will notify the BLM within 15 days of receipt of a suction dredging application. The purpose of the notification is so that the BLM can review the location of the proposed activity and inform the state of any federally proposed or listed threatened or endangered species or their proposed or designated critical habitat that may be affected by the proposed activity.

- The MOU must provide that if the BLM requests it, the suction dredging application will not be approved by the state until the BLM completes consultation with the FWS under the ESA.

[305] 43 CFR 3809.203(f)(1).
[306] 43 CFR 3809.203(f)(2).
[307] 43 CFR 3809.31(b) and 3809.201(b).

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Chapter 13 Records Management

The primary objective of this chapter is to ensure the creation of a complete administrative record that documents the BLM's actions to prevent unnecessary or undue degradation of the lands in accordance with the mandate of Section 302(b) of FLPMA, 43 U.S.C. 1732(b). Specifically, the administrative record documents operator and agency actions associated with surface disturbance conducted under the surface management regulations at 43 CFR 3809 and use and occupancy conducted under the regulations at 43 CFR 3715.

In addition, the BLM maintains records about its surface management activities to facilitate budget planning, assess units of accomplishment, respond to information requests from the Washington Office, identify unnecessary or undue degradation, ensure that the approved Plan of Operations or accepted Notice is followed, support enforcement actions, and document the BLM decision-making process in the event of administrative or judicial review. The BLM uses both manual and automated record systems to maintain records.

See Office of the Solicitor's June 2006 Standardized Guidance on Compiling a Decision File and Administrative Record; BLM Manual 1220, *Records and Information Management;* and DOI Manual 380, *Records Management,* for information on what constitutes an official record and how it is to be managed.[308] Questions concerning records and records management should be directed to your State Records Administrator.

Proper documentation of a case file and subsequent records maintenance are vital to the way the BLM performs its minerals functions. Increasing demands by the public to be included in our decision-making processes have resulted in more and more requests to inspect and review our records, and more questioning of our actions to authorize the use of public lands. We need, therefore, to take our records and our recordkeeping practices very seriously. Too often, by the time the record of a BLM decision reaches a point where an appeal and/or lawsuit is filed, the case file contains extraneous material, such as handwritten notes, that were never intended to be part of the permanent record. Any unnecessary materials inadvertently or carelessly left in the file become part of the official record and may reflect poorly on an otherwise proper decision.

Generally, when an appeal of a BLM decision goes to the IBLA for review, the Board has only the case record to examine in support of the decision being appealed. The need to defend an action may also arise after the principal processors have forgotten the specifics, or been replaced by new employees unfamiliar with the specifics. Proper documentation of the official case file then becomes the only basis from which to defend the BLM's action.

13.1 Records

Records, as defined by 44 U.S.C. 3301, "…includes all books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under the Federal law or in connection with the transaction of public business and preserved or appropriate

[308] Federal Records Act, 44 U.S.C. 3301

for preservation by the agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the information value of data in them." This includes electronically stored data and software created or enhanced by the BLM.

13.2 Records Management Responsibilities

The District/Field Manager will ensure preparation and maintenance of a complete written record, known as the administrative record, that covers the BLM's management of all mineral activities authorized by the 3809 and 3715 regulations, other than casual use, on BLM-administered public lands.

All BLM employees, including program specialists at all levels of the organization, are responsible for collecting, creating, using, maintaining, disseminating, and disposing of BLM information in accordance with established policies and procedures. The BLM will also protect all information from degradation and will safeguard Privacy Act, proprietary/confidential, and attorney-client privilege information, or other sensitive information as required to protect the BLM's and the public's interest (see BLM Manual 1270, Records Administration).[309]

Case file maintenance is every user's responsibility. This responsibility starts with properly establishing the case file to proper closure. If there are inappropriate personal notes, duplicate copies of documents, torn case jackets, case jackets with missing bar codes, etc., the person discovering the situation should either take the necessary corrective action or bring it to the attention of someone to have the problem remedied. All Privacy Act, proprietary/confidential, and attorney-client privilege information should be maintained as required by 42 CFR part 2 (see Section 13.3.2 Privacy Act, Confidential and Proprietary Information).

In addition to the physical case file, the district/field office staff is responsible for establishing and maintaining surface management records in the LR2000 database system and the Alaska Land Information System (ALIS). The surface management case data entered in LR2000/ALIS is used by the BLM at district/field, state, and Washington office levels, and is also available to the public via a BLM web page. The system is used for case management and tracking units of accomplishment. This includes tracking of numbers of Notices and Plans of Operations, compliance inspections, enforcement actions, and trespasses resolved. Standard data entry procedures must be used to enter the required information into the LR2000/ALIS systems.

13.3 Case Files

The surface management case file is the BLM's official record of exploration and mining operations conducted on public land. This record is available for public viewing (except for proprietary data, attorney-client privileged information, or Privacy Act information[310]). The case file documents the basis for any BLM decision regarding the use of the public lands under the surface management regulations. Because a BLM decision may be appealed to IBLA, or be

[309] 43 CFR 2.51 and 2.52
[310] These files are subject to the Privacy Act and must be maintained in accordance with 43 CFR 2.48.

litigated in the Federal judicial system, an accurate and complete record is vital in documenting the BLM's decision-making process. The surface management case file should be organized as a single entity, not a collection of documents scattered over several locations within an office.

Once the operation has been accepted or approved and an acceptable financial guarantee submitted and obligated, the surface management case file serves to provide a record of inspections, amendments/modifications, noncompliance, and enforcement actions taken. Proper documentation is crucial during all phases of the operation. The case file provides a record of conditions on the site at closure of an operation following final approval of reclamation by the District/Field Manager. Such a record may be useful to future land use management actions or if a subsequent operator proposes activity in or near the project area.

13.3.1 Case File Procedures

Upon receipt of a Notice or Plan of Operations, the district/field office staff must immediately establish/serialize the case in LR2000/ALIS and place the documents into a case jacket. The Notice or Plan, and any extensions, amendments or modifications to it, will be date stamped upon receipt and recorded in the LR2000/ALIS case recordation system within 5 days. The surface management case types used in establishing/serializing a case file in the LR2000 Case Recordation System (CRS) are 380210, 380910, and 381402 for Plans of Operations and 380913 for exploration Notices. Alaska's ALIS case types differ from LR2000. Properly entering data into LR2000/ALIS as actions occur will generate a serial register page that is useful to the BLM and to its customers.

When initially received, all submitted information will be considered confidential until the case file has been established and the taxpayer identification number redacted. Any information identified in the proposal as confidential will be removed until the BLM determines whether it is truly confidential or proprietary, and then handled accordingly. See Section 13.4, Confidential or Proprietary Information, for guidance on the handling of such information.

Stamp all incoming correspondence with the date it was received by the BLM. The date of receipt by the BLM may be crucial in the event of a duplicate filing, an appeal, or a lawsuit. It is recommended that the date of receipt be stamped on the front of correspondence, if possible, as it simplifies copying the file. Make sure that dates are legible and dark enough to read when documents are copied.

13.3.2 Case File Content

13.3.2.1 Pre-Acceptance or Approval

The case file should include all of the following, if applicable:

- The original proposed Notice or Plan of Operations as received by the appropriate BLM office.

- A Master Title Plat - land status check. At certain strategic points, master title plats, survey plats, and/or historical indices must be inserted into the file; when the case file is established, master title plats are required as evidence of the land status at the time the application/proposal was received.

- An LR2000 "Geo Report" might be included to indicate other actions or encumbrances that might affect the proposed operations.

- Requests for resource clearances and the actual resource clearances (Botanical, T&E, Cultural, Wilderness, Wildlife, Range, etc.) with original signature and date of the respective specialist. Cultural resource reports and archaeological site forms and maps, which would identify the nature and location of sites, should not be included in official case files. However, memoranda based upon those documents that summarize the cultural findings and make recommendations concerning final disposition of the application should be placed in the official case file.

- If Section 7 of the ESA consultation is required, Section 106 of the NHPA compliance processes, and/or Native American consultation is required for an operation, all relevant original documents are to be contained in the case file.

- Copies of any maps, pre-operation archival photographs, and aerial photos, if available.

- Reference(s) to closed 3809 exploration/mining cases and/or copies of previous operations conducted in the same location or occupancies under subpart 3715.

- The operator's proposed reclamation cost estimate and the BLM's analysis of the operator's reclamation cost estimate.

- For Plans of Operations requiring an EIS, the case-by-case fee estimate(s) for cost recovery.

- All letters requiring the operator to provide additional information and the operator's response to those letters.

- Printouts of any emailed correspondence (including attachments) between the BLM, the operator, the Solicitor's Office, other agencies, or the public, regarding the Notice or Plan that constitutes a record. Emails between the BLM and the Solicitor's should be placed in the holding file rather than in the main portion of the case file.

- A phone conversation record or a memo to the file documenting phone conversations related to proposed operations. Remember, document the file so that someone else can pick up the case and know what you said and did, and <u>why</u>.

- Copies of notes or preferable a memo to the file documenting any meetings held with companies, individuals, or agencies that are associated with the proposed operations.

- For Plans of Operations, the original NEPA document with signature and date of the approving official, along with all related documents and correspondence. If the size of the NEPA document and related information justifies establishing a separate case file (using same LR2000/ALIS serial number).

- For Plans of Operations, finding of No Significant Impact (FONSI) decision if an EA was prepared, with original signature and date of the approving official.

- Where appropriate, reports for the following: groundwater and surface water hydrology, pit-water chemistry, biological assessments and opinion, baseline studies, etc.

- Where appropriate, spill prevention plans, storm-water runoff control plans, monitoring plans, etc. Also, any reports submitted as part of the monitoring plans.

- Pre-operation reports, including all photos, field notes, sampling results, etc., associated with the inspection.

- An updated LR2000/ALIS Serial Register Page with appropriate action codes and comments attached on the front left inside cover of the case file.

- All case files at the conclusion of the review/approval process should contain a statement as to how the District/Field Manager concluded the operation would not result in unnecessary or undue degradation. The statement should be included in the Decision Record for EA level reviews, the Record of Decision for EIS level review, or made part of the acceptance letter in the case of a Notice. Conversely, a decision to not approve (or to impose conditions) on a Plan, or to not accept a Notice, must be documented in the case file with specifics on how the proposed Plan or Notice would result in unnecessary or undue degradation.

13.3.2.2 Post Acceptance or Approval

Post review files must contain all inspection reports. Additional items will be filed as they are developed, including the following:

- All follow-up documentation related to the operation, once operations have commenced.

- All inspection reports, photographs, supporting documentation such as field notes and follow-up correspondence. Inspection reports and field notes must be signed and dated by the specialist.

- Non-digital photos should be affixed or taped to the appropriate paper size and labeled with the LR2000/ALIS case number. If digital photos are taken, their reproduction must not alter the image other than its size. Non-digital photos are preferred if it is anticipated that a case action may be appealed.

- All decisions and letters requiring the claimant/operator to complete a task. Green return-receipt cards should be kept in the case file with the applicable decision.

- All office meetings and telephone conversation confirmation forms or memoranda pertaining to the operation. Document conversations and meetings about important aspects of case processing with a memorandum in the case file. To be of future value, such documentation should include the names and telephones numbers of all parties involved, the role of each party, the date, meeting location, and a clear and concise accounting of what was discussed, including any agreements reached. Further, the documentation must legibly identify the preparer and be authenticated with a full signature. With few exceptions, case files are open to public review. A professional tone should be maintained at all times in documentation of telephone calls and conversations, notes to the case file, and informal transmittal memoranda.

- Appeals filed by the claimant/operator or other adversely affected parties to noncompliance/enforcement, orders, or other decisions by the BLM concerning the operations and the BLM or IBLA decision.

- A listing of MOUs or letters of agreement with other state and Federal agencies that concern the coordination of Inspection and Enforcement (I&E) activities between the BLM and these agencies.

- Reclamation cost estimate review documents and calculations.

- Reclamation cost estimate and financial guarantee acceptance/obligation decisions. The office adjudicating the financial guarantee will issue the decision concerning acceptance and obligation of the financial guarantee; however, the district/field office must place copies of those decisions in the case file. Financial guarantee documents may contain confidential or proprietary information (such as tax payer identification numbers) and must be kept in a holding file that is stored in a locked metal file cabinet or a locked room (see Section 13.3.2.1 Holding File).

- For periodic review of the reclamation cost estimate for ongoing operations where the review does not result in an adjustment, i.e., a decision is not issued, the authorized officer will add a statement to the case file certifying that the cost estimate(s) and financial guarantee(s) have been reviewed in conformance with the established review periods, and the estimate(s) and guarantee(s) continue to meet the requirements of the regulations.

- All District/Field Manager's concurrences under 43 CFR 3715 or approvals.

- Current LR2000/ALIS Serial Register Page.

- Where an action requires public notification, insert into the case file copies of proof of publication of notices in the *Federal Register* or a newspaper, as appropriate, which pertain to the proposal being processed.

13.3.3 Case File Organization

All documents contained in the surface management case file should be filed in reverse chronological order (most recent on top) as specified by BLM Manual Section 1274.53B1 and stored in one central location in the office with other case files of the same case type. For voluminous case files, additional volumes should be added, labeled accordingly (e.g., volume 2, etc.) and filed in with the most recent document on top. Add as many volumes as necessary to hold the records created over the life of the project. Large, oversize documents, such as, baseline reports, EISs and EAs, etc., must be referenced (in reverse chronological order as received or completed) in the case file and may be stored separately but in close proximity to the case file. At a minimum, the case file must include the documents listed above (Section 13.3.2) when applicable.

Secure accounting data and current serial register pages on the left bottom of the case jacket. For multi-part case files, keep all accounting data and serial pages in Part 1. Place file serial pages on top of the accounting documents, with each document type (e.g., serial pages) being grouped together in reverse chronological order. In the event that confidential information has been stored separately, reference to that location should be placed on top of the serial register page(s). It may also be appropriate to file serial register pages on the right top of the case file as long they are kept on top of the other documents for ready reference.

As necessary, secure copies of checklists, instruction memoranda, manuals, handbooks or other guidance, and draft documents used during the processing of the application on the top left of the case jacket. Checklists are to be filed on top of the other documents for ready reference. As most of these documents are not usually stored permanently in the case file, remove them when the need for them no longer exists. If a case is appealed, IBLA may need to have access to these documents, especially if germane to the decision appealed. The documents may need to be included in the file when it is sent to IBLA for consideration. If the documents (especially voluminous documents) are in electronic format, they can be integrated into the case file, in that format, when sent to IBLA.

Secure all other documents in the case file on the right top of the case jacket in reverse chronological order by date of receipt for incoming documents and by date of creation for BLM-generated documents. Any attachments should be kept with the parent documents.

Securely fasten all documents in the case file. If a document is too thick, a photocopy of the document's cover page should be filed in its place. On the copy of the cover page, note that the original document is filed loosely in the case jacket. Establish multi-part case files when an individual file becomes too thick for one folder. If a bar-code system is available to track case files, each new case jacket should also be coded to reflect the new part. For multi-part files, the specific part should be noted, e.g., "Complete document filed in Part 4 of 7."

Do not store duplicate copies of reports, correspondence, and other documents in the official case file unless multiple copies were required by regulation, etc., to be submitted. If there is an essential reason to retain more than one copy of certain documents, they may be stored separately from the official case file or in a separate folder of a multi-part file. The case file

should not contain any drafts/pre-decisional documents that have been superseded (see Appendix D - Compiling an Administrative Record for additional guidance).

Fasten master title plats, survey plats, historical indices, and maps in the file, folded so they can be opened without having to remove documents filed on top. If the application is accompanied by many pages of maps or drawings, or the proposal necessitates inclusion of numerous master title plats and historical indices, all the maps, drawings, plats, indices, etc., should be filed in a separate case jacket to facilitate review of the file. Mark the outside of each folded master title plat or historical index with the township, range, and the date it was last updated in the bottom, right-hand corner. As a normal part of the adjudication process, include an individual Meridian/Township/Range Information Report in the file to identify any third-party rights that may be affected by the proposal.

Where photographs are included in the case file, certain procedures must be followed. Each affixed photo must be identified by number, direction of view indicated, date the photo was taken and by whom, and a description of what was photographed. The LR2000/ALIS case number must also be noted on each photograph/label. Labels with the required information may be affixed to the back of each photograph. Remember that upon appeal or litigation, the photos need to be self-explanatory to the reviewing officials. The photographs can then be placed in the official photograph storage envelope (Form 1277-3) or placed in clear photo holders. Envelopes and photo holders that might allow photos to spill from the case file while being moved are not to be used.

13.4 Privacy Act, Confidential, and Proprietary Information

13.4.1 Holding File

All Privacy Act, proprietary/confidential, and attorney-client privilege information should be kept separate from the rest of the case file. The preferred method is to establish a “holding file” for each case that is kept in a separate locked cabinet or locked room. The information should be in a file folder labeled with the serial number and Form 1273-2, Proprietary/Confidential Information, to clearly identify the confidential nature of the contents. The official case file should be noted to show where such Privacy Act, proprietary/confidential, and attorney-client privilege information is stored and who is responsible for its safekeeping.

The holding file should contain all Privacy Act, proprietary/confidential, and attorney-client privilege information associated with the case and should not contain any documents that do not need to be held secure.

13.4.2 Taxpayer Identification Numbers

As of January 20, 2001, according to 43 CFR 3809.301(b)(1) and 3809.401(b)(1), in order for a Notice or Plan of Operations to be complete, the operator(s) must provide a Taxpayer Identification Number (TIN). A TIN is a nine-digit Employer Identification Number (EIN) or Social Security Number (SSN) as defined in Section 6109 of the Internal Revenue Code of 1986 (26 U.S.C. 6109).

Taxpayer identification numbers are subject to the Privacy Act[311] and therefore must be maintained with appropriate administrative, technical, and physical safeguards to ensure the security and confidentiality of records (see 43 CFR 2.45-2.79 and DOI Manual 383 *Privacy Act*). In addition, these records must be protected against any anticipated threats or hazards to their security or integrity that could result in substantial harm, embarrassment, inconvenience, or unfairness to any individual on whom the information is maintained (5 U.S.C. 552a(e)(10)). Individuals handling taxpayer identification numbers must take care to protect the integrity, security, and confidentiality of this information at all times.

The document/page of the Notice or Plan of Operations containing a taxpayer identification number is to be copied and the taxpayer identification number on the copy redacted by blacking it out with a marker. A copy of the redacted page (the copy) is to be placed in the surface management case file and the initial copy, where the redaction was made, must be shredded. In other words, do not just make a copy, black out the part with a marker, and put that copy in the case file; two different copies are made – one with marker and one a copy of the marker one – the former shredded and the latter filed.

The operator's original taxpayer identification document submission is to be placed in a holding file that is separate from the case file. The corresponding LR2000/ALIS serial number will be prominently written on the tab of the holding file. Form 1273-2, Proprietary/Confidential Information, will be placed on the front of this holding file to clearly indicate the information in the file is confidential and not available to the public. Access to the holding file containing the taxpayer identification number must be restricted by storage in a locked metal file cabinet or a locked room.

If the operator submits the taxpayer identification number on Internal Revenue Service Form W-9, Request for Taxpayer Identification Number and Certification, instead of in the proposed operations submission, the W-9 form will be placed in the holding file.

Taxpayer identification numbers and proprietary/confidential information may only be used by or disclosed to individuals with a need-to-know in the performance of their duties. "Need-to-know" is defined as a need by the District/Field Manager or agency employee for access to proprietary, confidential, or otherwise sensitive information or material sought in connection with the performance of official duties or contractual obligations. The determination of that need will be made by officials having responsibility for proprietary/confidential or other sensitive information or material.

If a debt collection process is initiated, the taxpayer identification number must be entered into the CBS. In these circumstances, the original non-form document may be returned to the case file, along with a note to the file as to the date when it was entered into CBS. The original non-form document with the taxpayer identification number must be returned timely to the holding file.

[311] Privacy Act of 1974 (5 U.S.C. 552a).

13.4.3 Confidential or Proprietary Information

Information marked by the operator as "confidential" or "proprietary" will initially be treated as such pursuant to 43 CFR 2.13(c)(4). This information will not be made available to the public until the BLM determines whether the information warrants special procedures.

Upon receipt, any information marked "confidential" or "proprietary" should be processed in accordance with BLM Manual 1278.32-D. Prior to its status being determined, the information will be placed in the holding file containing the taxpayer identification information created above. The results of the status determination will resolve where the identified material is stored and who can access the information.

If the BLM determines that the material is confidential, it is to be kept in the holding file. Access to the holding file with confidential or proprietary information must be restricted by storage in a locked metal file cabinet or a locked room.

Note: Financial guarantees instruments (bond) documents may be considered confidential and/or proprietary information. However, the detailed reclamation cost estimates, upon which the financial guarantee amount is calculated, are not confidential and do not need to be held separately from the case file.

If the BLM determines the material marked by the operator as "confidential" does not satisfy the definition of "confidential" or "proprietary," the material should be transferred to the surface management case file that is available to the public. The BLM will notify the operator in writing of their determination that the information is not "confidential" or "proprietary" and the reasons for the determination (BLM Manual 1278.32 D.5). This notification will also inform the operator that the material will be maintained in the operator's case file which is available to the public.

The BLM does not usually require proprietary or confidential operator information to process most Notices or Plans of Operations. Generally, information regarding the location, anticipated depth, orientation, or inclination of features such as roads, trenches, drill holes, pits, adits, shafts, or declines, etc., is not considered as confidential or proprietary. Nor is information considered as confidential or proprietary that (1) describes chemicals used, stored, or generated during mining or mineral processing, (2) characterizes the waste to be created by the operation, (3) is a general description of the mining and processing operations at the level of detail needed to prepare a NEPA document, or (4) information already provided to the public or shareholders in press releases or Securities and Exchange Commission (SEC) filings, or information provided to another Federal or state agency that is considered public under their rules.

The types of information that might qualify as confidential or proprietary includes (1) assay results and intercepts showing grade or reserves which might be of value to competitors, (2) proprietary physical or chemical processing methods (although information on the anticipated waste streams and affects from such activity could not be withheld from public disclosure), and (3) inventory data protected from disclosure under other authorities, such as the location of historic properties under NHPA regulations at 36 CFR 800.11.

13.4.4 Attorney-Client Communications

Some communications between the BLM and the Solicitor's Office, the Department of Justice, and the United States Attorney's Office are considered confidential attorney-client communications. These memoranda, emails, and other communications are still part of the administrative record or case file, but they may be withheld from disclosure to the IBLA or the courts under the under the attorney-client privilege. These communications may also be withheld under the Freedom of Information Act (FOIA).

Any documents that may be considered attorney-client communications, such as memos, records of conversations with the Solicitor's Office, or emails with the Regional Solicitor, should be placed in the holding file. In the event that an appeal or a judicial action is filed, the Solicitor's Office can review the documents in this portion of the holding file to determine if a privilege applies.

13.5 Use and Occupancy Cases

Proposed occupancies under the 43 CFR 3715 regulations associated with a Notice or Plan of Operations will be entered in LR2000 with the appropriate 3809 case type and action codes identified in the CRS Data Element Dictionary 2910. The case file should include all occupancy-related documents necessary to determine the concurrence of the proposed occupancy. These documents must be placed in the 3809 surface management case file as described above in Section 13.3 Case File. For proposed and existing occupancies that comply with the regulations, a separate 3715 case file will not be opened or maintained.

When an occupancy (mining-related) or exploration/mining operation of a locatable mineral is discovered on public land that has not been authorized under the 3809 or 3715 regulations, a 3715 case file (371511 LR2000 case type code) will be established in LR2000/ALIS. The case file will be established using the appropriate case type and action code for tracking the appropriate enforcement order issued under 43 CFR 3715.7-1, Use and Occupancy Regulations (see CRS Data Element Dictionary 2910). The initial inspection report and any subsequent correspondence will be placed in the case file in reverse chronological order. An associated 3809 case file will not be established until a Plan of Operations or Notice has been submitted by the operator. Once the Plan of Operations or Notice has been authorized or the occupancy has been resolved, the 3715 case file will be closed.

This section applies to the discovery of activities on the public lands conducted under the Mining Law. It does not apply to activities such as removal of mineral materials or timber without authorization. Before establishing a new 3715 case file, due care should be given to determining the type of unauthorized activity that is occurring. If it is not immediately known what type of unauthorized activity is occurring, a trespass case file (923000 LR2000 case type code) may be used. Once the suspected trespass is determined to be an unauthorized occupancy under the Mining Laws, a 3715 case file will be established.

13.6 Case File Closure

A case file should not be closed until the BLM has determined that reclamation has been completed according to the reclamation plan, including revegetation, and the financial guarantee (bond) period of liability is terminated. In situations where the operator fails to reclaim the operation and reclamation is completed by the BLM, the case file may need to remain open until the debt is collected or written off. All cases will include a memorandum stating the District/Field Manager's concurrence in closing the case file.

13.6.1 Retention of Records

Once a document is received by the BLM, it becomes a public record and, as such, cannot be returned, destroyed, or permanently removed from the public record. The surface management case file should be disposed of in accordance with the guidance provided in BLM Manual 1220, *Records and Information Management,* and the approved General Records Schedule (Schedule 04/22/c).

When it has been determined the case file may be closed, the district/field office staff should conduct a final review to ensure the case file is complete and to remove any extraneous files. Use of a checklist will assist in this review. Transfer of the case file to the National Archives and Records Administrations' Federal Records Center should follow the guidance provided in 36 CFR 1228.150 and in Departmental Manual 384 DM 4.5. In addition, detailed procedures are provided in the National Archives and Records Administration handbook. The district/field office staff should contact the state's Records Administrator if there are any questions concerning records retention and disposal.

13.6.2 Debt Collection

If enforcement actions or debt collection actions have been initiated, the case file should not be closed until those actions have been resolved and reclamation completed.

Where the BLM has determined that the operator has abandoned the operation (See Chapter 7 - Cessations and Abandonment) because the operator is unable or unwilling to complete the reclamation or the operator cannot be found, the BLM will take action to collect the operator's financial guarantee (See Section 6.6 Forfeiture of Financial Guarantee) and use the forfeited funds to reclaim the operation. If the financial guarantee does not cover the costs for complete reclamation or a financial guarantee was never provided for an outstanding reclamation obligation, upon reclamation of the site, the BLM should initiate a debt collection action to recoup the costs in excess of the financial guarantee that the BLM incurred in order to close the case.

At a minimum, the BLM must issue a Demand Letter for Payment and enter the debt into CBS. The letters must be mailed by certified return-receipt requested to the current address on file. If the letter is returned as undeliverable, then it may be necessary for BLM Law Enforcement to attempt personal service of the demand letter to the address of record or obtain a forwarding address from the United States Postal Service. If the district/field office is unable to obtain a

response (documented in the case file), then a memorandum to the case file must be prepared detailing the events in chronological order with recommendations to the District/Field Manager to pursue debt collection through the state office or to close the case. Once entered into CBS, the system will generate additional debt collection demand letters should the operator fail to meet reclamation obligations.

In order to close a case where the operator has filed bankruptcy, the site must be reclaimed and the case file must contain a copy of the Bankruptcy Court's order closing the bankruptcy.

13.7 Administrative Review

When a Notice of Appeal or request for SDR has been filed, it must be date stamped by the BLM and filed in the case file. The relevant potions of the case file must be transmitted to the reviewing office.

13.7.1 Transmitting the Case File

Before transmitting the case file, the BLM should review it carefully to verify that it contains only records pertaining to the decision appealed. See Appendix D - Compiling an Administrative Record for guidance on what constitutes part of the record and how to prepare an index.

Within 10 working days of receiving the appeal or SDR request, the District/Field Manager should transmit the relevant potions of the original case file to the State Director or the IBLA. A photocopy of the case file must be kept in the district/field office.

13.7.2 Transmitting Privacy Act, Proprietary/Confidential and Attorney-Client Privilege Information

Unless relevant to the appeal, all Privacy Act and proprietary/confidential information in the holding file should not be included in the files to be transferred to IBLA or the State Director. The BLM must, however, identify the documents withheld in the case file index. Should the information be pertinent to the case and/or IBLA or State Director requests the information, the BLM should place the Privacy Act and proprietary/confidential information in an envelope and clearly mark on the envelope that it is material that should not be provided to the public.

Records of communication between the BLM and the Solicitor's Office in the holding file are part of the case file, but these records may be eligible to be withheld from disclosure under the attorney-client privilege. Before transmitting the case file to IBLA, the BLM should review the holding file and identify any potentially privileged documents for review by the Solicitor's Office. In some cases, the BLM and the Solicitor's Office may decide that even though a record is covered by the attorney-client privilege, it can be disclosed and included in the case file.

If the BLM decides to withhold documents under the attorney-client privilege, the BLM must identify the documents withheld in the case file index. Any records the BLM withholds should not be sent with the case file to IBLA or the State Director, but should be returned to the holding file. The BLM should clearly mark on the envelope that it contains material that should not be provided to the public, and may attach a copy of the index to the outside of the envelope.

13.7.3 Avoiding Ex parte Contacts with IBLA

When an appeal has been filed with the IBLA, the district/field office loses jurisdiction over the case and BLM personnel must be careful not to engage in *ex parte* communication with the Board in violation of 43 CFR 4.27(b). *Ex parte* communication is any communication (oral or written, including email) regarding the merits of the appeal with the person hearing the case, without providing the opposing party with the same information.

For example, adding more information to the case file after an appeal is filed without transmitting the information to the other parties to the appeal is *ex parte* communication. It is also considered *ex parte* communication to send the IBLA any documents regarding the decision that post-dates the BLM's decision.

If the BLM finds records that were missing from the case file, the BLM should contact the Solicitor's Office before forwarding them on to the IBLA. If the Solicitor's Office determines that the records should have been part of the original case file, the records should be served to all parties concerned by certified return-receipt mail. Field personnel must be careful, also, in discussing the appeal and case file with the appellant. Once an appeal is filed, only a general discussion, such as matters concerning the actual process, should take place and the BLM should forward any correspondence directly related to the case to the Solicitor's Office.

13.8 Electronic Records Management

Electronically stored data and software created or enhanced by the BLM are considered "records." By this definition, records and data are considered synonymous, and all outputs produced from electronic systems are records regardless of the media. When manipulation occurs to a data element, layer, or theme, the resultant data also becomes a record. Collection, maintenance and disposal of all electronic records must be in conformance with the guidance found in BLM Manual 1220, *Records and Information Management,* and BLM Manual 1270, *Records Administration*, including BLM Handbook H-1270-1, *Electric Records Administration*.

13.8.1 Data Standards

The data standards necessary for establishment and serialization (case types/action codes, etc.) of case files in LR2000 can be found at www.blm.gov/lr2000 and/or obtained through Washington Office Instruction Memoranda and/or State or Washington Office LR2000 Data Stewards.

To keep the LR2000 record current, all data must be routinely entered within 5 business days of each action having taken place.

Data standards for Plan of Operations case types 380210, 380910, and 381402 are used to create a BLM-wide tracking system in LR2000 that computes timelines for specific actions related to processing Plans of Operations. It is mandatory that the action codes identified in the data standards be entered on all pending and authorized Plan of Operations cases.

In addition, data standards for Notice case type 380913 and Plan of Operations case types 380210, 380910, and 3814023 are used to generate a Bond Review Report in LR2000. The BLM State Directors are to use the Bond Review Report every fiscal year to certify to the BLM Director that RCEs have been reviewed within policy timeframes and are adequate to cover the cost of reclamation and closure requirements identified in the accepted Notice or approved Plan of Operations (see Section 13.5.3).

Surface management file types 380210, 380910, and 380913 must document any occupancy-related actions in LR2000 with the appropriate action code. The following actions codes are to be used to document a proposed or existing occupancy: AC 440 - Occupancy Proposed, AC 438 - Occupancy Concurrence, and AC 439 - Occupancy Non-Concurrence. Note 43 CFR 3715 regulations do not apply to 381402 case types (split estate lands); therefore, the aforementioned action codes should not be used.

13.8.2 Bond Review Report

The Bond Review Report generated by LR2000 documents the status of all financial guarantees recorded in LR2000, except for fund mechanisms required pursuant to 43 CFR 3809.552(c) relating to trust funds or other long term funding. Annually, the State Director must review the Bond Review Report to determine if all RCEs were reviewed within the required timeframes and all obligated financial guarantees are adequate to meet the requirements of the regulations. Within 60 days of generating the Bond Review Report, a corrective action plan will be prepared addressing any deficiencies identified in the Bond Review Report. By December 1, the State Director must certify to the BLM Director that the RCEs and financial guarantees have been reviewed and are adequate. When necessary, the State Director must also submit the corrective action plan to the BLM Director.

The State Directors must sign and date the Certifications. The Bond Review Reports, Certifications, and corrective action plan(s) must be forwarded from the State Directors to the BLM Director through the Assistant Director for Minerals and Realty Management (WO-300). The documents may be transmitted electronically or sent to the Washington Office by FedEx or UPS.

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Glossary

ACID ROCK DRAINAGE (ARD) (ACID MINE DRAINAGE): The exposure, usually as a result of mining, of sulfide-bearing minerals to air and water, forming sulfuric acid. This acid dissolves metals such as lead, zinc, copper, mercury, and cadmium, into ground and surface water. Acid rock/mine drainage can impact water quality, aquatic life and habitat. Commonly mined ore bodies that pose the risk of acid rock drainage include gold, silver, copper, iron, zinc, and lead.

ADIT: A nearly horizontal passage in an underground mine, driven from the surface, by which a mine may be entered, ventilated, or dewatered.

AQUIFER: A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water.

BACKFILLING: The replacement of soil and earth removed during mining.

BASELINE STUDIES: The establishment and operation of a designed surveillance system for continuous or periodic measurements and recording of existing and changing conditions that will be compared with future observations.

BENEFICIATION: The dressing or processing of ores to 1) regulate the size of a desired product, 2) remove unwanted constituents, and 3) improve the quality, purity, or assay grade of a desired product. Beneficiation includes concentration or other preparation of ore for smelting by drying, flotation, or magnetic separation.

BEST AVAILABLE TECHNOLOGY AND PRACTICES: The applying of the most advanced systems, techniques, procedures, and controls, determined on a case-by-case basis by the regulatory agency.

BIOLOGICAL ASSESSMENT: Information prepared by, or under the direction of, a Federal agency concerning listed and proposed species and designation and proposed critical habitat that may be present in the action area and may be affected by the proposed action. A biological assessment presents the BLM's determination of whether any such species or habitat is likely to be adversely affected by the action.

BULKHEAD: A partition or wall in mines for protection against gas, fire, and water.

BULK SAMPLING: As part of exploration, the removal of large amounts of mineral substances for testing.

CALIFORNIA DESERT CONSERVATION AREA (CDCA): CDCA is a 25-million acre expanse of land in southern California designated by the U.S. Congress in 1976 through FLPMA. About 10 million acres are administered by the BLM. Under 43 USC 1781(f), BLM surface management and other regulations continue to apply to the surface of patented mining claims within the CDCA that were patented after the enactment of FLPMA.

CASUAL USE: Mining activities that no or negligible disturbance to Federal lands and resources.

CLAIM: See MINING CLAIM.

CRITICAL HABITAT: (1) the specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon determination by the FWS and/or NMFS that such areas are essential for the conservation of the species. Critical habitats are designated in 50 CFR parts 17 and 226. The constituent elements of critical habitat are those physical and biological features of designated or proposed critical habitat essential to the conservation of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of

offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historical geographic and ecological distributions of a species.

COMMON VARIETY MINERALS: Stone, gravel, pumice, pumicite, and cinders that, though possibly having value for trade, manufacture, the sciences, or the mechanical or ornamental arts, do not have a distinct, special value for such use beyond normal uses. On the public lands such minerals are considered saleable (as opposed to locatable) and are disposed of by sales or by special permits to local governments. Development of these minerals is not subject to the BLM's surface management regulations. See SALEABLE MINERALS, MINERAL MATERIALS, and UNCOMMON VARIETY MINERALS.

CORPORATE GUARANTEES (BONDING): The use of corporate pledge as part or all of the financial assurance for reclamation. The BLM does not accept any new corporate guarantees for bonding purposes.

CULTURAL RESOURCE: A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. (Cf. "traditional cultural property;" see "definite location.") Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit described in this Manual series. They may be but are not necessarily eligible for the National Register (See "historic property" or "historic resource.")

CYANIDE LEACHING: The extraction of metal from an ore by dissolution in a cyanide solution.

DAVIS-BACON WAGES: For reclamation cost estimating purposes Davis-Bacon wage determination is applied to applicable construction contracts. Wage determinations are issued by the U.S. Department of Labor under the *Davis-Bacon and related Acts*. Information on Davis-Bacon wage rates can be found at www.access.gpo.gov\ davisbacon.

DEVELOPMENT (MINERAL): The preparation of a proven deposit for mining.

DISCOVERY: Under the Mining Law, a mining claimant has made a "discovery" on the mining claim "where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine." Castle v. Womble, 19 Pub. Lands Dec. 455, 457; Chrisman v. Miller, 197 U.S. 313, 322 (1905). Mining claims are not valid without a discovery.

DRAINAGE: The removal of excess water from land by surface or subsurface flow. See ACID ROCK DRAINAGE.

DRYWASHER: A mechanical device used to recover gold or other heavy minerals

EFFLUENT: Treated or untreated waste material discharged into the environment.

ENDANGERED SPECIES: Any species in danger of extinction throughout all or a significant portion of its range. Threatened and endangered species are designated by the U.S. Fish and Wildlife Service or National Marine Fisheries Service under provisions of the Endangered Species Act.

ENDANGERED SPECIES ACT (ESA): A Federal act passed in 1973 to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program for the conservation of such endangered species and threatened species.

ENVIRONMENTAL ASSESSMENT (EA): A concise public document prepared under the National Environmental Policy Act (NEPA) for any proposed major Federal action. An EA briefly discloses and analyzes the potential direct, indirect, and cumulative impacts of the BLM's proposed action to determine whether the impacts

will be significant. If there will significant impacts, the BLM will prepare an environmental impact statement (EIS); if the impacts will not be significant, the BLM will issue a finding of no significant impact (FONSI).

ENVIRONMENTAL IMPACT STATEMENT (EIS): A document prepared under the National Environmental Policy Act (NEPA) that discloses and analyzes potential direct, indirect, and cumulative impacts of a proposed major Federal action that significantly affects the human environment and its possible alternatives. The BLM prepares EISs to weigh the environmental consequences of potential decisions.

ESA CONSULTATION and CONFERENCING: The requirement of Section 7 of the Endangered Species Act that all Federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action may affect a federally listed species or its critical habitat.

EXPLORATION: The work of investigating a mineral deposit to using geological surveys, geophysical surveys, geochemical surveys, boreholes, pits, and underground workings. Exploration is undertaken to gain knowledge of the size, shape, position, characteristics, and value of the deposit. For the surface management regulations, exploration may mean creating surface disturbance that is greater than casual use and that includes sampling, drilling, or developing surface or underground workings to evaluate the type, extent, quantity, or quality of mineral values present. Exploration does not include activities where material is extracted for commercial use or sale.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA): The act that (1) provided standards for the BLM in managing the public lands, including land use planning, sales, withdrawals, acquisitions, and exchanges; (2) authorized the setting up of local advisory councils representing major citizens groups interested in land use planning and management; (3) established criteria for review of proposed wilderness areas; and (4) provided guidelines for other aspects of public land management such as grazing. Section 302(b) of FLPMA amended the Mining Law to require the BLM to prevent UUD to the public lands. This provision forms the basis for the surface management regulations.

FINANCIAL GUARANTEE: The surface management regulations use the term “financial guarantee” in reference to the contracted document and any financial instrument used to guarantee the operator will perform reclamation required by the regulations and authorization.

INTERIOR BOARD OF LAND APPEALS (IBLA): The Department of the Interior, Office of Hearings and Appeals, board that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because IBLA acts for and on behalf of the Secretary of the Interior, its decisions usually represent the Department’s final decision and are subject to appeal to the Federal courts.

LEACHATE: The liquid that has percolated through and dissolved minerals out of ore.

LOCATABLE MINERALS: Minerals that may be extracted under the Mining Law of 1872, as amended, consistent with surface management regulations.

LOCATION: The act of claiming a parcel of mineral land as a mining claim (or non-mineral land as a mill site), including the posting of notices, the recording thereof when required, and marking the boundaries so they can be readily traced. The word “location” can also be used as a noun to mean the mining claim or mill site acquired by the act of location itself. See MINING CLAIM.

MAGNUSON-STEVENS ACT: The Magnuson-Stevens Fishery Conservation and Management Act of 1976 is a Federal statute that is the principal Federal law governing marine fisheries in the United States.

MAXIMUM PROCESS SOLUTION INVENTORY: The maximum volume of solutions projected to be present in a leaching process circuit at any given time after considering precipitation, evaporation, runon, draindown of retained solution, addition of make-up water, normal discharge, or loss to ore wetting. Modeling is often done to assess the water balance and to determine the maximum process solution inventory under average operating conditions, during a wet year, or during a dry year. The remaining “free board” or available storage capacity is then compared to the expected solution addition from the design storm event (often the 100-year, 24-hour event) in order to determine whether the storage capacity is adequate to contain the design storm event.

METAL DETECTOR: A hand-held device that senses the presence of metal, specifically used in searching an area for coins or other metal objects. The use of a metal detector is generally considered casual use under the surface management regulations.

MILL: A processing facility in which ore is treated for the recovery of valuable minerals or valuable minerals are concentrated into a smaller bulk for shipping to a smelter or other reduction works.

MILL SITE: A parcel of non-mineral land located under the Mining Law and used and occupied in support of a mine. See LOCATION and MINING CLAIM.

MINE: An opening or excavation in the earth for extracting minerals.

MINERAL: Any solid or fluid inorganic substance that can be extracted from the earth for profit.

MINERAL ACTIVITY: Mining and mineral exploration.

MINERALIZATION: The processes taking place in the earth's crust resulting in the formation of valuable minerals or ore bodies.

MINERAL MATERIALS: Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended. See COMMON VARIETY MINERALS.

MINING CLAIM: A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. There are four categories of mining claims: lode, placer, mill site, and tunnel site.

MINING CLAIMANT: A person, association, corporation, or government that claims minerals rights or title in the public lands.

MINING LAW OF 1872 (GENERAL MINING LAW OR MINING LAW): The Federal act that, with its amendments, authorizes the mining of locatable minerals on the public lands.

MINING LAWS: The Lode Law of July 26, 1866, as amended (14 Stat. 251); the Placer Law of July 9, 1870, as amended (16 Stat. 217); and the Mining Law of May 10, 1872, as amended (17 Stat. 91); as well as all laws supplementing and amending those laws, including the Building Stone Act of August 4, 1892, as amended (27 Stat. 348); the Saline Placer Act of January 31, 1901 (31 Stat. 745); the Surface Resources Act of 1955 (30 U.S.C. 611-614); and the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 *et seq.*).

MINING LOCATION: A mining claim or mill site on the public lands.

MITIGATION: As defined in 40 CFR 1508.20, one or more of the following: (1) avoiding impacts altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying impacts by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating impacts over time by preservation and maintenance operations during the life of the action; and (5) compensating for impacts by replacing or providing substitute resources or environments.

MODIFICATION: A change in a Notice or Plan of Operations that requires some level of review by the BLM because it exceeds what was described in the accepted Notice or approved Plan of Operations.

NATIONAL CONSERVATION AREA (NCA): A congressionally designated public land area that contains important resources and whose management objectives are (1) to conserve and protect these resources, (2) to maintain environmental quality, and (3) to provide for present and future users within a framework of multiple use and sustained yield.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): The Federal law, going into effect on January 1, 1970, that established a national policy for the environment and requires Federal agencies (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed Federal actions and provide a mechanism for public input to Federal decision-making, and (3) to prepare environmental impact statements for every major Federal action that would significantly affect the quality of the human environment.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): A Federal statute that established Federal program to further the efforts of private agencies and individuals in preserving the Nation's historic and cultural foundations. NHPA (1) authorized the National Register of Historic Places, (2) established the Advisory Council on Historic Preservation and a National Trust Fund to administer grants for historic preservation, and (3) authorized the development of regulations to require Federal agencies to consider the effects of federally assisted activities on properties included on or eligible for the National Register of Historic Places.

NATIONAL MONUMENTS: Congress granted the President authority to designate national monuments in the Antiquities Act of 1906, which specifies that the law's purpose is to protect "objects of historic or scientific interest." In addition to presidentially created national monuments, Congress has established national monuments by passing a law to create each individual monument with its own purpose (generally to protect natural or historic features).

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): A process for controlling the amount of pollution discharged into waters by requiring polluters to obtain NPDES permits from the states involved and to comply with discharge standards. The NPDES is mandated by the Federal Water Pollution Control Act Amendments.

NATIONAL WILD AND SCENIC RIVERS SYSTEM (WSR): A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition established by the National Wild and Scenic Rivers Act of 1968. The system consists of three types of streams: (1) recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.

NATIONAL WILDERNESS PRESERVATION SYSTEM (NWPS): Federally owned areas designated by Congress as "wilderness areas" originally established under the National Wilderness Preservation Act of 1964.

NOTICE: The notification a mining operator must submit to the BLM of the intention to begin an operation that will disturb 5 acres or less a year within a mining claim or project area.

NOTICE-LEVEL OPERATION: Exploration that causes disturbance greater than casual use but less than 5 acres of disturbance. The operator is required to submit an acceptable Notice to the BLM.

NONCOMPLIANCE ORDER: An authorized officer's decision, sent to the mining operator and claimant, that (1) details provisions of the regulations that a mining operation has violated and (2) states corrective actions that the operator must take within a specified time.

NOXIOUS WEED: According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease on has other adverse effects on humans and their environment and is therefore detrimental to public health and the agriculture and commerce of the United States.

OFF-ROAD VEHICLE (ORV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. This definition excludes (1) any nonamphibious registered motorboat; (2) any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; and (3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved.

OPEN PIT MINING: A surface mining method in which overlying rock and soil are removed to expose an ore body, which is then drilled, blasted, and hauled from the pit.

OPERATIONS: All functions, work, facilities, and activities on public lands in connection with prospecting, exploration, discovery, and assessment work, development, extraction, and processing of mineral deposits locatable under the mining laws; reclamation of disturbed areas; and all other reasonably incident uses, whether on a mining claim or not, including the building of roads, transmission lines, pipelines, and other means of access across public lands for support facilities.

OPERATOR: Any person who manages, directs, or conducts mining operations at a project area, including a parent entity or an affiliate who materially participates in such management, direction, or conduct. An operator on a particular mining claim may also be the mining claimant.

OVERBURDEN: All the earth and other materials that overlie a natural mineral deposit.

PALEONTOLOGICAL RESOURCES (FOSSILS): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PATENT: The instrument by which the Federal Government conveys title to the public lands.

pH: A measure of acidity or hydrogen ion activity. Neutral is pH 7.0. All values below 7.0 are acidic, and all values above 7.0 are alkaline.

PIT LAKE: Water body that forms at the bottom of an open pit mine when mining extends below the water table.

PLACER: An alluvial deposit of sand and gravel containing valuable minerals such as gold.

PLACER MINING: A method of mining in which the overburden is removed to expose valuable mineral-bearing gravel deposits beneath. The gravel is then sluiced to separate the valuable minerals, usually the heavier metallic minerals.

PLAN: See PLAN OF OPERATIONS.

PLAN OF OPERATIONS: A plan for mineral exploration, development, and/or mining that an operator must submit to the BLM for approval, when more than 5 acres will be disturbed, when activity greater than exploration will occur on fewer than 5 acres, or when an operator plans to work in an area of critical environmental concern or a wilderness area. A Plan of Operations must document in detail all activities the operator plans to take, from exploration through reclamation and post-mine closure (including any post-mine economic uses) and, if necessary, long-term monitoring. Before commencing operations on an approved Plan of Operations, the operator must also provide the BLM with an acceptable financial guarantee.

PRESUMED ORE: That portion of the rock material excavated from a shallow open pit or small underground opening for evaluation and testing purposes, either onsite or off site, to determine whether it contains metals or other minerals that may be extracted efficiently and profitably. Bulk sampling of less than 1,000 tons of presumed ore may be conducted under a Notice. Any sampling of 1,000 ton or more of presumed ore requires a Plan of Operations. Also, onsite field-scale testing using chemicals such as cyanide or sulfuric acid to evaluate leachability must be done under a Plan of Operations, regardless of test sample size.

PROJECT AREA: The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.

PUBLIC LANDS: Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership,

except for (1) land located on the Outer Continental Shelf and (2) land held for the benefit of Indians, Aleuts, and Eskimos.

RECLAMATION: Measures stated in the accepted Notice or approved Plan of Operations as a condition of allowing the disturbance of public lands from mining operations. Reclamation measures must meet performance standards and achieve conditions required by the BLM at the end of operations. Components of reclamation may include 1) isolating, controlling, or removing acid-forming, toxic, or deleterious substances; 2) regrading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage, and minimize erosion; 3) rehabilitating fisheries or wildlife habitat; 4) placing growth media and establishing self-sustaining revegetation; 5) removing or stabilizing buildings, structures, or other support facilities; 6) plugging drill holes and closing underground workings; and 7) providing for post-mining monitoring, maintenance, or treatment.

RECORD OF DECISION: A document prepared after a final Environmental Impact Statement that states the decision that resulted from the NEPA process and provides the necessary background information for how the decision was made. The ROD is signed by the official authorized to make the decision and is an appealable BLM decision.

RIPARIAN AREA: A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

ROCK CHARACTERIZATION: A program of testing and evaluating the physical, chemical, and mineralogical nature of rock to evaluate its potential to produce acid rock drainage or other deleterious leachate.

SCARIFY: To break the surface of the soil with a narrow bladed instrument.

SCOPING: Generally a term associated with NEPA, scoping is an early and open process for determining the scope of issues to be addressed in an EIS and the significant issues related to a proposed action. Scoping may involve public meetings; field interviews with representatives of agencies and interest groups; discussions with resource specialists and managers; and written comments in response to news releases, direct mailings, and articles about the proposed action and scoping meetings.

SECTION 106 COMPLIANCE: The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to significant historic properties and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

SECTION 7 CONSULTATION: SEE ESA CONSULTATION and CONFERENCING

SEGREGATION: Any act by the Secretary or Congress such as a withdrawal or exchange that suspends the operation of some or all of the public land laws for a specified time. See WITHDRAWAL.

SERVICE CONTRACT ACT: The McNamara-O'Hara Service Contract Act requires contractors and subcontractors performing service on prime contracts in excess of $2,500 to pay service employees in various classes no less than the wage rates and fringe benefits found prevailing in the locality, or the rate contained in a predecessor contractor's collective bargaining agreement. (Referred to on Page 110 of the Handbook.)

SIMULATED WEATHERING TEST: This test attempts to mimic natural oxidation reactions of a field setting, and may include controlling temperature, moisture, wetting and drying cycles, and the influence of bacteria.

SLUICE: A device used to physically or mechanically separate and enrich the valuable mineral content of aggregate.

SPECIAL STATUS AREAS: Areas that the BLM has determined to have resources of unique or distinct value. These lands have a variety of designations, depending on the authority under which they were designated and the resources present. Such areas include (1) lands in the CDCA designated by the CDCA Plan as "controlled" or "limited" use areas, (2) areas in or designated for potential addition to the National Wild and Scenic Rivers System (WSR), (3) areas of critical environmental concern (ACECs), (4) designated wilderness areas administered by the BLM, and (5) areas closed to off-road vehicle use.

SPLIT ESTATE: Land whose surface rights and mineral rights are owned by different entities. The 43 CFR 3809 regulations apply when surface rights are privately owned and the mineral rights are owned by the Federal Government and managed by the BLM. The 43 CFR 2920 regulations apply when surface rights are owned by the Federal government and managed by the BLM and the mineral rights are privately owned.

STOCK RAISING HOMESTEAD ACT LANDS: Split estate lands patented under the SRHA of December 29, 1916. These lands were not considered suitable for cultivation but were considered suitable for stock grazing. All minerals on these lands were retained by the United States and they remain open to location.

SUCTION DREDGE: A dredge that lifts material and pumps it through a suction pipe.

TAILINGS: The waste matter from ore after the extraction of economically recoverable metals and minerals.

TAILING IMPOUNDMENT: An area closed at its lower end by a constraining wall or dam into which mill effluents are run and from which, after solids have settled out, clear water may be returned via penstocks and piping.

THREATENED SPECIES: As described in 16 U.S.C. 1532(20), any plant or animals species likely to become endangered within the foreseeable future throughout all or a part of its range and designated as threatened by the U.S. Fish and Wildlife Service under the Endangered Species Act. See ENDANGERED SPECIES.

TRIBE (TRIBAL): Terms that refer to federally recognized Indian tribes.

TUNNEL: A nearly horizontal underground passage open to the surface at both ends.

UNCOMMON VARIETY MINERALS: Deposits of stone, gravel, pumice, pumicite, and cinder deposits that were not withdrawn from location by the Common Varieties Act of 1955 because they have distinct and special properties making them commercially valuable for use in a manufacturing, industrial, or processing operation. Such minerals continue to be locatable under the Mining Law of 1872, as amended. In determining a deposit's commercial value for making a common variety determination, the following factors may be considered: quality and quantity of the deposit, geographic location, accessibility to transportation, and proximity to market or point of use. See COMMON VARIETY MINERALS.

UNNECESSARY OR UNDUE DEGRADATION: As defined in the part 3809 regulations, unnecessary or undue degradation results from conditions, activities, or practices that (1) fail to comply with one or more of the following: the performance standards in 43 CFR 3809.420, the conditions of an approved Plan of Operations, operations described in a complete Notice, and other Federal and state laws for environmental and cultural resource protection; (2) are not reasonably incident to prospecting, mining, or processing; or (3) fail to attain a stated level of protection or reclamation required by law in such areas as the CDCA, wild and scenic rivers, BLM-administered portions of the National Wilderness Preservation System, and BLM-administered national monuments and national conservation areas.

VALID EXISTING RIGHTS: Locatable mineral development rights that existed when FLPMA was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands requires the BLM to conduct a validity examination and is called a "valid existing rights" determination.

VALIDITY EXAMINATION (VALIDITY DETERMINATION): An examination of a mining claim by a mineral examiner to determine if the claim has a discovery or otherwise meets the validity requirements of the Mining Law or if all requirements for a mill site have been met. All claims for which a patent application has been filed must undergo such an exam. In addition, the BLM must perform validity examinations before approving plans of operations or accepting notices in areas that are withdrawn.

WASTE ROCK (WASTE): Barren rock at a mine or material that is too low in grade to be of economic value.

WATERSHED: The total area above a given point on a stream that contributes runoff water to the streamflow at that point.

WHOLE ROCK ANALYSIS (EVALUATION): A test that is designed to provide quantitative determination of rock forming minerals, major oxides, and trace elements.

WILDERNESS AREA: A congressionally designated area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value. Wilderness study areas (WSA) are not subject to the 3809 surface management regulations. Management of mineral activity within WSAs is addressed at 43 CFR 3802.

WITHDRAWAL: An action that restricts the use of Federal lands by removing them from the operation of some or all of the public land or mining laws. See SEGREGATION.

Abbreviations

2H:1V: slope (horizontal to vertical ratio)
ACEC: area of critical environmental concern
ARD: acid rock drainage
BLM: U.S. Department of the Interior, Bureau of Land Management
CBS: Collection and Billing System
CDCA: California Desert Conservation Area
CEQ: Council on Environmental Quality
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CRS: Case Recordation System
DNA: determination of NEPA adequacy
DOI: U.S. Department of the Interior
DOJ: U.S. Department of Justice
DR: decision record
EA: environmental assessment
ED&C: engineering, design and construction
EIS: environmental impact statement
EPA: U.S. Environmental Protection Agency
ESA: Endangered Species Act
FLPMA: Federal Land Policy and Management Act
FAR: Federal Acquisition Regulations
FONSI: Finding of No Significant Impact
FWS: U.S. Fish and Wildlife Service
GPS: global positioning system
IBLA: Interior Board of Land Appeals
Mg/l: milligrams per liter
MOU: memorandum of understanding
MSHA: Department of Labor, Mine Safety and Health Administration
NEPA: National Environmental Policy Act
NHPA: National Historic Preservation Act
NPDES: National Pollutant Discharge Elimination System
NTC: National Training Center
NV-MWMP: Nevada meteoric water mobility procedure
O&M: operation and maintenance
OHV: off highway vehicle
ORV: off-road vehicle
OSHA: Occupational Safety and Health Act
RCE: reclamation cost estimate
RCRA: Resource Conservation and Recovery Act
ROD: record of decision
SDR: State Director Review
SRHA: Stock Raising Homestead Act
T&E: threatened and endangered
TCLP: toxicity characteristic leaching procedures
UUD: unnecessary or undue degradation

Appendix A - Templates

This appendix contains templates for the most common correspondence or decisions to be issued in the surface management program. The templates are labeled according to the handbook section number where first referenced. The templates are in a consistent format and composed of example language for that particular type of correspondence or decision. Suggestions to authors on what to include or modify are written in italics. The letterhead and appeal language have been omitted from these example correspondences in the interests of space.

It is recognized that not one-size-fits-all when it comes to preparing correspondence. The templates are intended to provide a consistent starting point with the recognition that the author will need to modify the language to accommodate the particular circumstances or practices in his/her State or District/Field Office.

Template 2.2-1 - Proposed Activity does not qualify as Casual Use

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) proposes to conduct exploration activity within the [*insert designated area*]. On [*insert date filed*] ABC contacted this office as required by the resource management plan covering the [*insert designated area*] before commencing activities.

The Bureau of Land Management (BLM) has reviewed the notification and determined that the proposed activities within the [*insert designated area*] will result in more than negligible disturbance. Such activity would normally be considered casual use; but due to the cumulative level of activity within the [*insert designated area*], ABC must submit a Notice pursuant to 43 CFR 3809.300 through 3809.336 with this office, including the required reclamation financial guarantee, prior to commencing activities. Conducting the proposed activities before filing an acceptable Notice as required by 43 CFR 3809.21 is a prohibited act under 43 CFR 3809.605(b). Failure to suspend all unauthorized activities will result in enforcement action under 43 CFR 3809.601.

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

Template 3.2-1 - Proposed Operation Requires a Plan of Operations

3809 [*office code*]
[*serial number*]

[*date]*

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

PROPOSED OPERATION REQUIRES A PLAN OF OPERATIONS

The ABC Mining, Inc. (ABC) Notice to [*proposed activity, e.g., mine*] in [*insert project area name*] was received in this office on [*insert date filed*]. The Notice has been assigned Bureau of Land Management (BLM) case file number [*insert #*].

The proposed operation does not qualify under 43 CFR 3809.21 as notice-level activity. Specifically, [*proposed activity, e.g., mining*] requires the submission of a Plan of Operation to the BLM in accordance with 43 CFR 3809.11. You are required to file a Plan of Operations in this BLM Field Office. A specific form is not required but the Plan must contain all the information required under 43 CFR 3809.401(b) in order to be considered complete.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.

cc: [*State Office*]

Template 3.2-2 - Processing Notice or Plan Suspended

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) Notice to conduct exploration trenching and drilling in [*insert project area name*] was received in this office on [*insert date filed*]. The Notice has been assigned Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in any future communication concerning this project. [*If there were previous communication with the operator regarding the Notice, e.g., an acknowledgement or completeness letter, you would have told them the receipt date and case file number then, and do not need to repeat it.*]

The BLM has reviewed the Notice and determined it contains all the information required by the surface management regulations at 43 CFR 3809.301. However, because the BLM is unable to determine if the proposed operation is adequate to prevent unnecessary or undue degradation as defined by 43 CFR 3809.5, we will not be able to continue processing your Notice. When the situation [*e.g., mutually exclusive Notices filed for the same parcel of land*] has been resolved and the BLM can make such a determination, we will notify you and begin processing your Notice again.

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.

cc: [*State Office*]

Template 3.2-3 - Determination of Required Financial Guarantee Amount

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

DETERMINATION OF REQUIRED FINANACIAL GUARANTEE AMOUNT

The ABC Mining, Inc. (ABC) Notice to conduct exploration trenching and drilling in [*insert project area name*] was received in this office on [*insert date filed*]. The Notice has been assigned Bureau of Land Management (BLM) case file number [*insert #*]. Please refer to this number in any future communication concerning this project. [*If there were previous communication with the operator regarding the Notice, e.g., an acknowledgement or completeness letter, you would have told them the receipt date and case file number then, and do not need to repeat it.*]

The BLM has reviewed the Notice and determined it is complete, containing all the information required by the surface management regulations at 43 CFR 3809.301. The BLM has reviewed the proposed operation and determined it is adequate to prevent unnecessary or undue degradation as defined by 43 CFR 3809.5.

Amount of Financial Guarantee - This office has reviewed ABC's reclamation cost estimate for this project and determined that the amount of [*insert dollar amount*] is sufficient to meet all anticipated reclamation requirements. The amount of the reclamation cost estimate is based on the operator complying with all applicable operating and reclamation requirements as outlined in the Notice and the regulations at 43 CFR 3809.420.

Line items in the approved reclamation cost estimate are not to be considered as the limits of the reclamation expenditures should forfeiture of the financial guarantee be necessary. The line items listed are solely for the purpose of arriving at a total amount for the financial guarantee (see enclosure 1). This amount may be spent as the BLM deems necessary to implement the approved reclamation plan. The financial guarantee amount does not represent reclamation liability limits or constraints should the actual cost of reclamation exceed this amount.

Required Financial Guarantee -The financial guarantee in the amount of [*insert dollar amount*] must be submitted to and accepted by the [*insert name and address of the BLM office that will adjudicate and accept the financial guarantee*]. You must receive written notification from that office accepting and obligating your financial guarantee before you begin any surface-disturbing operations.

The types of instruments that are acceptable to the BLM for financial guarantees are found at 43 CFR 3809.555. Please contact [*insert adjudication office contact and phone number*] for forms and further information regarding acceptable financial guarantees.

The BLM's review of your proposed operations, determination that your Notice is complete, finding that the activity will not cause unnecessary or undue degradation, and decision concerning the amount of the required financial guarantee does not relieve you, the operator, of the responsibility to comply with all applicable Federal, state, and local laws, regulations, and permit requirements. You are responsible for preventing any unnecessary or undue degradation and for reclaiming all lands disturbed by your operations.

Template 3.2-3 - Determination of Required Financial Guarantee Amount
(continued)

This decision does not constitute certification of ownership to any entity named in the Notice, recognition of the validity of any associated mining claims, or recognition of the economic feasibility of the proposed operations.

Term of Notice - Your Notice will remain in effect for 2 years from the date of this decision, unless you notify this office beforehand that operations have ceased and reclamation is complete. If you wish to conduct operations for another 2 years after the expiration date of your Notice, you must notify this office in writing on or before the expiration date as required by 43 CFR 3809.333. You will also have to submit an updated reclamation cost estimate at that time.

Appeal of the Decision Determining the Required Financial Guarantee Amount

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

2 Enclosures
1 - Reclamation cost estimate worksheet
2 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Office*]
[Other applicable parties (state, claimant{s},etc.)]

Template 3.2-4 - Notice Not Complete

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) Notice to conduct exploration activity at [*project location*] was received in this office on [*date*]. The Notice has been assigned Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.311(a), the BLM has reviewed the Notice to determine if it meets the content requirements at 43 CFR 3809.301(b). Based on our review, the following information is required from ABC in order for the Notice to be complete:

[*List as many completeness requirements as applicable. Consider sending the operator a copy of the regulations to assist them in understanding the Notice and bonding requirements*]

1. There is no map showing the location of the proposed surface-disturbing activity. A map showing the project location in sufficient detail for the BLM to locate the proposed activity is required.

2. The Notice mentions drill holes but gives no indication as to the number of holes, their locations, or approximate depths. This information is required.

3. There is no mention how or if the drill holes will be plugged. A description of the drill hole plugging procedures that will be followed is needed.

4. The schedule of activity is listed as *indefinite*. A specific project schedule is required in order to determine reclamation timing, costs, and whether the activity will not cause unnecessary or undue degradation. Please note that a Notice can only be accepted for work to be done in a 2-year period. Therefore, the proposed activity schedule should not exceed 2 years. If for some reason the work is not accomplished within 2 years, the Notice may be extended at its expiration date. If you want to conduct additional exploration based on your initial test results, you can request the Notice be modified under 43 CFR 3809.330 to account for the additional activity.

5. A reclamation cost estimate is required in order for your Notice to be considered complete (43 CFR 3809.301(b)(4). Please provide this estimate in accordance with the requirements at 43 CFR 3809.552.

Until a complete Notice is filed with this office, the BLM is unable to determine that your proposed operations will not result in unnecessary or undue degradation as defined under 43 CFR 3809.5. In addition, we are unable to make a determination as to the amount of the required financial guarantee.

Template 3.2-4 - Notice Not Complete
(continued)

Please submit the required information at your earliest convenience. Until we receive this information your Notice cannot be processed and the proposed exploration activity is not to take place. Conducting the proposed activities before filing an acceptable Notice as required by 43 CFR 3809.21 is a prohibited act under 43 CFR 3809.605(b). Failure to suspend all unauthorized activities will result in enforcement action under 43 CFR 3809.601.

If you have any questions on these information requests, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

Enclosure
1 - 43 CFR 3809 [*optional*]

cc: [O*ther agencies as applicable*]

Template 3.2-5 - Modification Required (New Notice)

3809 [*office code*]
[*case serial No.*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) Notice to [*proposed activity, e.g., mine*] in [*insert project area name*] was received in this office on [*insert date filed*]. The Notice has been assigned Bureau of Land Management (BLM) case file number [*insert #*]. Please refer to this number in any future communication concerning this project.

Consistent with the surface management regulations at 43 CFR 3809.311(c), the BLM has reviewed the Notice to determine if your operation prevents undue or unnecessary degradation (UUD). Based on our review specifically, [*proposed activity that causes UUD*] does not comply with surface management regulations at 43 CFR 3809 [*insert specific citation*]. Before beginning operations you must address this issue by submitting a modified notice. The notice modification must prevent UUD and comply with 43 CFR 3809.300 through 3809.336. The BLM recommends:

[*List measure(s) that the operator may take to prevent UUD.*]

Please submit the required information at your earliest convenience. Until we receive this information your Notice cannot be processed and the proposed exploration activity is not to take place. Conducting the proposed activities before filing an acceptable Notice as required by 43 CFR 3809.21 is a prohibited act under 43 CFR 3809.605(b). Failure to suspend all unauthorized activities will result in enforcement action under 43 CFR 3809.601.

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*State Office*]
[*Appropriate State Agencies*]
[*Surety*]

Template 3.4-1 - Notice Expired

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

NOTICE EXPIRED – RECLAMATION REQUIRED

The ABC Mining, Inc. (ABC) Notice [*enter case file number*] to conduct exploration trenching and drilling in [*insert project area name*] expired on [*insert date Notice expired*]. Due to your failure to [*enter reason for Notice expiring; failure to notify the BLM by the deadline their intent to extend the Notice, failure to provide the BLM with required information within the specified timeframe, or failure to provide the BLM with the required financial guarantee within the specified timeframe*], the Notice has expired as required by 43 CFR 3809.333.

Notice Expired - All activities after the expiration date, except reclamation, are not authorized and must cease as required by 43 CFR 3809.335. Any unauthorized activities continuing after the expiration date will be subject to enforcement actions.

If the operator files a new Notice or Plan of Operations, the requirements of the 43 CFR 3809 regulations, including, but not limited to, environmental review of Plans of Operations under the National Environmental Policy Act, and full cost bonding under 43 CFR 3809.500 for both Notice- or Plan-level operations must be met prior to resuming operations.

Reclamation Required - Unless you file a new Notice or Plan of Operations for that project area, you must immediately commence reclamation. Within 30 days of receiving this decision, you must commence the reclamation required by your Notice on file with the Bureau of Land Management (BLM). All reclamation, including required earthwork and reseeding, [*add other elements that are needed*] must be completed within 90 days of this decision. The BLM resource specialists will continue to monitor your progress in meeting your reclamation obligations, including the success of the revegetation in the disturbed area. The BLM will inform you when all reclamation standards have been met and whether your financial guarantee amount may be reduced or released.

Should you fail to commence reclamation within 30 days of issuance of this decision or fail to complete necessary reclamation within 90 days of issuance of this decision, the BLM may initiate forfeiture of all or part of your financial guarantee as provided for under 43 CFR 3809.336(b) and 43 CFR 3809.595. You may also be subject to enforcement actions under 43 CFR 3809.601.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,
[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.

cc: [*State Office*]

Template 3.4-2 - Conditional Extension

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) notification to extend your Notice [*serial number*] for 2 additional years was received in this office on [*date*]. The Bureau of Land Management (BLM) has reviewed the Notice to determine if the Notice qualifies for an extension (i.e., that it has not already expired), that the operation will not cause unnecessary or undue degradation, and that all information required for a complete Notice has been submitted, including an acceptable revised reclamation cost estimate. Based on our review, the following information is required from ABC in order for the Notice to be complete:

[*List all information that is required for the Notice to be considered complete under 43 CFR 3809.301(b):*]

Your Notice has been conditionally extended subject to ABC providing the BLM with the required information within 30 days of receiving this notification. Failure to provide the required information will result in the Notice expiring immediately upon conclusion of this timeframe. Should the Notice expire you must cease all operations, except reclamation. If you wish to continue operations, you must immediately submit a new Notice or Plan of Operations, if required by 43 CFR 3809.11. If you do not immediately submit a new Notice or Plan, you must promptly complete all reclamation according to the Notice.

If you have any questions on these information requests, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

Template 3.5-1 - Reclamation Required

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

OPERATION DETERMINED ABANDONED - RECLAMATION REQUIRED

Operation Abandoned – On [*date*], personnel from the [*field office name*] Field Office inspected your Notice operation, in [*project location, i.e., Meridian, Township, Range, Section, County, State*]; Bureau of Land Management (BLM) case file number [*serial number*]. This was the second inspection this year, the previous one occurring on [*date*]. During both inspections, no personnel or equipment was present, and there was no sign of recent activity. Nor was the reclamation complete as required by your Notice and the applicable regulations at 43 CFR 3809.420. Based on the above described site conditions, we have determined that the operation has been abandoned.

Reclamation Required – Abandoning an operation prior to completing the required reclamation is a prohibited act under 43 CFR 3809.605(h). Within 30 days of receiving this decision, you must commence the reclamation required by your Notice on file with the BLM. All reclamation, including required earthwork and reseeding, [*add other elements that are needed*] must be completed within 90 days of this decision. The BLM resource specialists will continue to monitor your progress in meeting your reclamation obligations, including the success of the revegetation in the disturbed area. The BLM will inform you when all reclamation standards have been met and whether your financial guarantee amount may be reduced.

Should you fail to commence reclamation within 30 days of issuance of this decision or fail to complete necessary reclamation within 90 days of issuance of this decision, the BLM may initiate forfeiture of all or part of your financial guarantee as provided for under 43 CFR 3809.336(b) and 43 CFR 3809.595. You may also be subject to enforcement actions under 43 CFR 3809.601.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

Contact – BLM personnel are available to assist you in resolving this matter. If you have any questions, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.
cc: [*State Office*]
[*Appropriate State Agencies*]
[*Surety*]
[*Solicitor's Office*]

Template 4.3-1 - Reclamation Cost Estimate for Plan Required

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

Your Plan of Operations to conduct mining activities in [*project location, i.e., Meridian, Township, Range, Section, County, State*] was received in this office on [*date*]. The Plan of Operations has been assigned Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.411(a), the BLM has reviewed the Plan and has determined that the filed Plan of Operations meets the content requirements at 43 CFR 3809.401(b). As provided for in 43 CFR 3809.401(d), the BLM is advising you that you must submit a cost estimate covering all anticipated reclamation obligations as part of the Plan approval process.

The BLM requests that your reclamation cost estimate submission covers the equipment type, time, and rate needed to perform reclamation tasks such as mobilization, grading, topsoil placement, seeding, and structure removal for each component of the mining project. The cost estimate must be based on the assumption that the BLM will hire a third-party contractor and must include contract administration and overhead costs. The cost estimate must also include appropriate costs for contractor profit and insurance.

Please provide this information to [*Field Office name and address*] [*include due date if appropriate*]. If you have any questions on these information requests, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*Appropriate State Agencies*]

Template 4.4-1 - Complete Plan Submitted

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

Your Plan of Operations to conduct mining activities [*project location, i.e., Meridian, Township, Range, Section, County, State*], was received in this office on [*date*]. The Plan of Operations has been assigned Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.411(a), the BLM has reviewed the Plan and has determined that the filed Plan of Operations and reclamation cost estimate meets the content requirements at 43 CFR 3809.401(b) and 43 CFR 3809.401(d). Note this notification does not constitute authorization to commence operations nor is the submission of a complete Plan necessarily adequate to meet the performance requirements of the regulations and avoid unnecessary and undue degradation.

Be advised the next step in the review process is for the BLM to solicit public comment on the Plan of Operations under 43 CFR 3809.411(c), either separate from or as a part of the environmental review process required by the National Environmental Policy Act. Soliciting public comment must occur before making an approved/not approved decision on the Plan of Operations according to 43 CFR 3809.411(d). The BLM estimates we will complete our review and make an approval decision on the Plan by [*provide estimated completion date*].

If you have any questions, please contact [*Name and address and phone number of contact-either program specialist or manager*].

Sincerely,

[*Signature*]
Field Manager

cc: [*Appropriate State Agencies*]

Template 4.4-2 - Plan Not Complete

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

Your Plan of Operations to conduct mining activities [*project location, i.e., Meridian, Township, Range, Section, County, State*], was received in this office on [*date*]. The Plan of Operations has been assigned Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.411(a), the BLM has reviewed the Plan to determine if it meets the content requirements at 43 CFR 3809.401(b). Based on our review, the following information is required in order for the Plan of Operations to be complete:

[*List the specific information that the operator for the plan of operations to be considered complete; an example of sample language follows:*]

1. Page 1, section 1.2. Required operator information includes the taxpayer identification number of the operator. If the operator is an individual, the taxpayer identification number is the individual's social security number. Please provide the appropriate taxpayer identification number. Operator social security numbers are maintained by the BLM as privacy information and are not available for public disclosure.

2. Page 9, section 3.2. Please provide a mine site layout diagram that shows the location of the pit boundaries; soil, overburden, and stockpile locations; access road route; fencing perimeter; and any other facilities proposed to be located onsite.

3. Page 9, section 3.2. The Plan references reseeding but fails to state what seed mix or application rate would be used. Please provide the seeding information.

4. Page 9, section 3.2. The regulations at 43 CFR 3809.401(b)(5) require operators to provide an interim management plan that describes how the project area would be managed during periods of temporary closure, including seasonal closure. Please address this requirement by providing information on site stabilization measure that will be employed.

5. Page 10, section 3.5. Your Plan indicated that you were trying to arrange for the transport of water from an artesian well in Wyoming for use in dust control. Please state whether an agreement has been reached regarding the use of water from this well, or alternatively what water source would be used for dust suppression on the haul road. Provide information on the amount of water and number of haul trips anticipated.

6. Page 11, section 3.9. Information on the size (width) of the haul road disturbance needs to be clarified. The text refers to a 12-foot running width for the haul road, but then says it is expected to be widened by an average of 4 feet. The text then discusses additional 1-foot ditches along the roadway with soil distributed beyond the limits of the ditches, plus mentions the blading of topsoil deposited in these areas during reclamation. Please provide additional detail on the location of disturbance associated with construction, reconstruction, and reclamation of the haul road that accounts for all areas of potential disturbance.

Template 4.4-2 - Plan not Complete (continued)

7. Page 14, section 4.0. Please provide more information on the proposed configuration of the pit area at reclamation. Identify any areas where a highwall is planned to be left after reclamation.

8. Page 14, section 4.3. The Plan states, "runoff would be controlled," yet there is not discussion as to the type and location of runoff control measures. The Plan needs to depict on a map the location and type of runoff control measure that would be used.

9. Page 15, Fencing. Please address the duration the project area will be fenced. Assuming that the fencing is intended only to be temporary, the reclamation plan should indicate that it will be removed upon successful establishment of vegetation.

10. Page 23, Blasting. The Plan states that blasting is not likely to be needed. The Plan needs to definitely state whether or not blasting would be required as part of mining. If blasting is anticipated, the Plan must specify the frequency of blasting and prevent public entry into the area in accordance with state and Federal mine safety regulations.

Please provide a response to the above information requests at your earliest convenience. You may provide replacement pages or a narrative response. Upon receipt of the required information, the BLM will determine whether or not the Plan of Operations is complete.

Once the Plan is determined complete, the BLM will solicit public comment on the Plan under 43 CFR 3809.411(c), either separate from or as a part of the environmental review process required by the National Environmental Policy Act. Soliciting public comment must occur before making decision on the Plan of Operations according to 43 CFR 3809.411(d).

In order to prepare the environmental review document and process your Plan, the BLM requires that the intended disturbance area be inventoried for cultural resources. As required by 43 CFR 3809.401(c), the operator is responsible for providing this survey information. Please provide the required cultural resource inventory as soon it is finished. If you require further information on inventory methods and qualifications please contact the Field Office Archaeologist at [*phone number*].

If you have any questions on these information requests, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*Appropriate State Agencies*]

Template 4.4-3 - Additional Actions Required

3809 [*office code*]
[*serial number*]

[date]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

Your Plan of Operations to conduct mining activities in [*project location, i.e., Meridian, Township, Range, Section, County, State*], was received in this office on [*date*]. The Plan of Operations has been assigned the Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.411(a), the BLM has reviewed the Plan to determine if it meets the content requirements at 43 CFR 3809.401(b). However, the BLM cannot approve the Plan until certain steps are completed, specifically the BLM must [*identify any action included in 43 CFR 3809.411(a)(3)*]. [*Where feasible, identify timeframes for completion of these actions.*]

If you have any questions on these information requests, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*Appropriate State Agencies*]

Template 4.4-4 - Decision on Plan

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

PLAN OF OPERATIONS APPROVED – CONDITIONS OF APPROVAL REQUIRED

DETERMINATION OF REQUIRED FINANACIAL GUARANTEE AMOUNT

The Plan of Operations for the XYZ Mine is hereby approved subject to conditions of approval listed below. ABC Mining, Inc. (ABC) must conduct operations as described in the Plan of Operations and in accordance with the following Bureau of Land Management (BLM) conditions of approval (COA):

[*List Conditions of Approval as needed to prevent undue or unnecessary degradation (UUD). Include a rationale for the COA to justify the requirement to the operator and provides a basis for accepting a minor modification later should an alternate approach be found that meets the intent of the COA*; *an example COA follows:*]

Conditions of Approval:

1. ABC must construct the waste rock repository with an overall 3h:1v slope, with at least 15-foot wide benches constructed (not pioneered) every 100 vertical feet. Benches must be backsloped and drain toward common surface water drainage ditches built along the edges of the repository. Reclamation of the repository is to be conducted concurrent with mining operations. Final engineering-approved designs must be submitted at least 60 days in advance of repository construction to verify conformance with this requirement.

   This COA is needed to improve runoff control and minimize the exposure of waste rock to precipitation that may generate undesirable leachate.

2. ABC is not to mine limestone needed for runoff controls from the LS-1 limestone quarry. Instead, ABC is to mine limestone needed for the operation from the LS-2 site. The quarry must be reclaimed using the same procedures proposed by ABC for the LS-1 quarry.

   This COA confines the mine disturbance to a single watershed and reduces the disturbance area by eliminating the need for some 1,500 feet of haul road.

3. Underdrains constructed beneath the Goslin Flats leach pad and the waste rock repository, and seepage collection systems must be built only with coarse and durable unmineralized carbonates.

   Unmineralized limestone is required for fill in state waters as an additional precaution to buffer acidic drainage and to minimize the potential for impacts to water quality.

4. ABC must use the water balance and water barrier reclamation covers shown on Figure 2.11-4 in the Final Environmental Impact Statement (EIS). Cover soil must be placed at least 12 inches thick on all other disturbance areas.

Template 4.4-4 - Decision on Plan (continued)

These reclamation covers increase revegetation potential, reduce soil loss, and improve long-term surface stability with low infiltration rates and low maintenance requirements. There is adequate soil available for salvage to construct these reclamation covers upon mine closure.

5. ABC must design and construct all permanent drainage and diversion ditches, and water capture and treatment systems to accommodate runoff from a 6.33-inch, 24-hour storm event with 1 foot of freeboard. This is the calculated 100-year storm event for the mine site.

   The 100-year storm event design criterion is needed to ensure adequate drainage capacity, and to protect reclaimed areas and adjacent water resources.

Financial Guarantee

Based on your reclamation cost estimate, the BLM review of the cost estimate, and consideration of the above conditions of approval, the required financial guarantee amount is hereby set at [*dollar amount*] for reclamation of the XYZ Mine. You must provide a financial guarantee in this amount using one or more of the acceptable financial guarantee instruments listed under 43 CFR 3809.555. The financial guarantee must be provided to the BLM [state] State Office, Solid Minerals Adjudication, *[insert State Office mailing address]*. That office will issue you a decision as to the acceptability of your financial guarantee. You must not begin activities under the approved Plan of Operations until you receive notification from the BLM [*state*] State Office that the financial guarantee has been accepted and obligated.

Approval of a Plan of Operations by the BLM does not constitute a determination regarding the validity or ownership of any unpatented mining claim involved in the mining operation. ABC is responsible for obtaining any use rights or local, state, or Federal permits, licenses, or reviews that may be required for the operation.

[*If the Decision will include a determination of concurrence for a proposed occupancy per 43 CFR 3715.3-4, then the following paragraph will be included. If no occupancy is proposed then the following paragraph will be omitted.*]

This decision also constitutes concurrence with ABC's use and occupancy of public lands as described in the approved Plan of Operation. ABC must maintain compliance with the Use and Occupancy regulations at 43 CFR 3715.2, 3715.2-1, and 3715.5 throughout the duration of the approved Plan of Operations. Concurrence by the BLM on ABC's proposed use and occupancy is not subject to State Director Review, but may be appealed by adversely affected parties directly to the Interior Board of Land Appeals as outlined in enclosed BLM Form 1842-1.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, please contact me at [*phone number*] or contact [*Name and address and phone number of contact-either program specialist or manager*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.

cc: [*State Office*]

Template 6.2-1 - Unacceptable Reclamation Cost Estimate

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ABC Mining, Inc.
Attn: Kevin Smith, General Manager
P.O. Box 3013
Frostbit Falls, Montana 59555

Dear Mr. Smith:

The ABC Mining, Inc. (ABC) Notice to conduct exploration activity at [*project location, i.e., Meridian, Township, Range, Section, County, State*] was received in this office on [*date*]. The Notice has been assigned the Bureau of Land Management (BLM) case file number [*serial number*]. Please refer to this number in any future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.311(a), the BLM has reviewed the Notice to determine if it meets the content requirements at 43 CFR 3809.301(b). Based on our review, the Notice adequately describes the proposed exploration and reclamation operations; however, the reclamation cost estimate submitted with the Notice under 43 CFR 3809.301(b)(4) is missing the following cost information or cost considerations:

[*List missing or deficient content; example language follows:*]
1. The reclamation cost estimate does not include costs for mobilization and demobilization of either the excavator for road reclamation or the drill rig used for drill hole plugging. These costs need to be included in the estimate.

2. The reclamation cost estimate only lists the cost of plugging a single drill hole, while ABC's Notice proposes to drill 28 holes. ABC must include the costs for plugging all of the drill holes in the exploration project, or modify the Notice and commit to not having more than a single drill hole open at any one time.

3. Your cost estimate for road reclamation includes 2,000 feet of drill road reclamation at $1.25 per linear foot. The average side slope where the road cuts are located is on the order of 45 percent. In our experience, reclamation of roads like this costs between $2.25 and $2.75 per linear foot [*insert or attach references*]. Please adjust your estimate accordingly.

4. The reclamation cost estimate does not include any amount for overhead such as contractor insurance, profit, and contract administrative costs. For a project of this general size, the BLM estimates these costs total approximately 22.6 percent of the direct reclamation costs.

[*Continue to list the deficiencies in the reclamation cost estimate*]

Please submit a revised reclamation cost estimate to correct the above deficiencies. As a reminder, ABC is not to conduct surface disturbing activity under this Notice until the revised reclamation cost estimate amount has been accepted by the BLM, you provide a financial guarantee instrument to BLM for that amount, and the BLM notifies you that the financial guarantee has been accepted and obligated.

If you have any questions, or would like to discuss the reclamation cost estimate requirements, please contact [*insert program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

Template 6.2-2 - Financial Guarantee Increase – Ongoing Operations

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

DETERMINATION OF REQUIRED FINANACIAL GUARANTEE AMOUNT
ONGOING OPERATIONS

The Bureau of Land Management (BLM) [*state*] Field Office has completed a review of the reclamation cost estimate, as provided for under 43 CFR 3809.552(b), for the Frostbit Plan of Operations [*enter case file number*]. Based this office's review of your reclamation cost estimate on file, the required financial guarantee amount is hereby set at [*dollar amount*] for reclamation of the Frostbit operation.

The ABC Mining, Inc. has previously provided the BLM an acceptable financial guarantee of [*dollar amount*] for this operation. The increase of [*dollar amount*] to the amount of financial guarantee must be provided to the BLM [*state*] State Office, Solid Minerals Adjudication, [*address*]. You must provide an acceptable increase to the financial guarantee to this office within 60 days from receipt of this decision. Failure to provide an acceptable financial guarantee increase within the specified timeframe will result in enforcement action(s) under 43 CFR 3809.601 for failure to maintain an adequate financial guarantee.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, please contact me at [*phone number*] or contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals.

cc: [*State Office*]

Template 6.4-1 - Required Financial Guarantee Amount -Reduction

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

DETERMINATION OF REQUIRED FINANCIAL GUARANTEE AMOUNT REDUCTION

The Bureau of Land Management (BLM) inspected [*insert project name*] on [*date*]. All required reclamation has been completed according to the reclamation plan and the performance standards at 43 CFR 3809.420. [*This decision can be used with either a Notice or a Plan.*]

[For a Plan of Operations insert the following: *In accordance with 43 CFR 3809.590, the BLM published a notice of final financial guarantee release for your project and accepted public comment for 30 days on the final reduction of your reclamation bond amount. The BLM received* [*quantity*] *comments on release of your financial guarantee – (continue and address any public comments in this decision, explain why the BLM will release the final financial guarantee, or alternatively, write another decision denying final release).*]

This decision reduces the estimated reclamation cost from [*present amount*] to $0.00. A copy of this decision has been provided to the adjudication staff in the BLM [*state*] State Office. You may file a request with that office at [*insert state office address*] for final release of your financial guarantee instrument [*or obligation*] for this project.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions concerning this reduction in the financial guarantee amount, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Office*]
[*Other agencies or claimant(s)*]

Template 6.5-1 - Forfeiture of Financial Guarantee

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

FORFEITURE OF FINANCIAL GUARANTEE

Pursuant to the provisions at 43 CFR 3809.595 through 3809.599, the Bureau of Land Management (BLM) is pursuing forfeiture of the financial guarantee for your operation [*serial number and legal description*]. On [*date*], a decision was issued by this office requiring [*state required action, e.g., conduct reclamation as provided for and as scheduled in the reclamation plan; meet the terms of the Notice or approved Plan of Operations; and/or meet the conditions under which the operator obtained the financial guarantee*] by [*date*]. Forfeiture of your financial guarantee is being taken because you failed to meet these conditions within the timeframe provided in the noncompliance order.

Based on the estimated total cost of achieving the reclamation plan requirements, including the BLM's administrative costs, the BLM will require the forfeiture of [*dollar amount*] from your financial guarantee. [*If the financial guarantee is provided through a surety bond include the following sentence, otherwise omit.*] Within 30 days the penal sum, [*dollar amount*], of surety bond number [*number*] must be surrendered to the BLM [*state*] State Office at the following address:

[State Office Address]
Attn: Adjudication [*Office Code*]

You may avoid this forfeiture action by completing one of the following:

Providing a written agreement under which you or another person will perform reclamation operations in accordance with a compliance schedule which meets the conditions of your Notice or approved Plan of Operations and reclamation plan. Where the work will be done by another person, the agreement must demonstrate they have the ability, both technically and financially, to satisfy the conditions.

Obtaining written permission from the BLM for a surety to complete the reclamation, or portion of the reclamation, applicable to the bonded phase or increment. The surety must demonstrate an ability to complete the reclamation in accordance with the reclamation measures incorporated in your Notice or approved Plan of Operations.

Template 6.5-1 - Forfeiture of Financial Guarantee (continued)

If you fail to meet the requirements listed above, and you do not appeal the forfeiture decision under 43 CFR 3809.800 to 3809.807, or Interior Board of Land Appeals (IBLA) does not grant a stay under 43 CFR 4.321, or the BLM's decision is affirmed, the BLM will:

Immediately collect the forfeited amount as provided by applicable laws for collection of defaulted financial guarantees, other debts, or State bond pools, and

Use funds collected from financial guarantee forfeiture to implement the reclamation plan, or portion thereof.

If the amount of forfeited funds is insufficient to pay for the full cost of reclamation, you are liable for the remaining costs as set forth in 43 CFR 3809.116.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions concerning this reduction in the financial guarantee amount, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Office*]
[*Other applicable parties (state, claimant(s),etc.)*]

Template 6.5-2 - Notice of Liability, Demand for Payment

3809 [*office code*]
AZB-08309

[*Date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
[Effective date is date of receipt]

DECISION

ABC Mining, Inc.	:	43 CFR 3809
Attn: Kevin Smith, General Manager	:	
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

NOTICE OF LIABILITY
DEMAND FOR PAYMENT AND BILL FOR RECLAMATION OF ABC MINING, INC. OCCUPANCY SITE

Pursuant to the authorities contained in [*cite appropriate authority*], and statutes applicable to the management of lands administered by the Department of the Interior (DOI), Bureau of Land Management (BLM), has completed the clean-up and reclamation of the ABC Mining, Inc. occupancy site [*Notice or Plan of Operations #*] located on BLM managed land described as T.13N., R.7E., Sec.21 SE¼ and 30 NE ¼, Gila and Salt River Base Meridian, Yavapai County, Arizona.

On October 30, 2009, ABC Mining, Inc. received from the BLM Phoenix Field Office (PFO) a [cite the enforcement order under 43 CFR 3809.601] to remove all equipment, abandoned vehicles and trash from the occupancy site (site), and reclaim all disturbed lands. Any property remaining on public lands after 90 calendar days from the effective date of the order would become property of the United States and subject to removal and disposition by BLM. ABC Mining, Inc. would be liable for the cost the BLM incurs in removing and disposing of the property and site reclamation.

ABC Mining, Inc. appealed the order to the Interior Board of Land Appeals (IBLA). On March 10, 2010, the IBLA issued decision 152 IBLA 57, denying ABC Mining, Inc.'s request for a stay and affirming the order. Based on the IBLA decision the BLM informed ABC Mining, Inc. by certified return receipt mail on April 4, 2010, that it had until June 8, 2010, to comply with the October 30, 2009, order.

ABC Mining, Inc. was notified by certified return receipt mail on June 8, 2010, that it had failed to comply with the order and that the reclamation deadline had passed. Any property remaining on BLM land was property of the United States and subject to removal and disposition at the BLM's discretion. ABC Mining, Inc. would be liable for the costs the BLM incurs in removing and disposing of the property and any costs associated with site reclamation.

A government contractor began restoration of the site on or around November 6, 2011, and completed reclamation of the [*project name*] site on December 11, 2011.

NOTICE OF LIABILITY

The BLM has evaluated the mining claim records and field office 3809 case file AZB-08309 in connection with the site and has determined that ABC Mining, Inc. is the responsible party due to its activities and occupancy of the site from the early 1990s until abandonment in the year 2011. Accordingly, this letter notifies ABC Mining, Inc. of its liability under 43 CFR *[3809.336(b) or 3809.424(a)(4), and 3809.598 when BLM completes the reclamation of a Notice or Plan of Operations*].

Template 6.5-2 (continued)
Notice of Liability, Demand for Payment

Through July 10, 2002, the BLM and DOI have incurred costs related to the site of at least $14,413.00. This statement of expenditures is preliminary and does not limit the BLM and DOI from providing revised figures to the extent additional past costs are identified.

DEMAND FOR PAYMENT

In accordance with 43 CFR 3809.598 demand is hereby made for payment of $14,413.00. Enclosed is a bill for collection in the amount of Fourteen Thousand Four Hundred and Thirteen Dollars ($14,413.00) and notice of action in the event of delinquency. Interest on costs incurred will accrue from the date of this demand for payment. [*Use the CBS system to generate this bill and any follow-up notices of delinquency should they become necessary*]

Payment is due within thirty (30) calendar days of your receipt of this demand for payment. Remittance must be made by certified check payable to the "Department of the Interior - BLM" and must reference the site name and bill number. Please send your remittance to:

Bureau of Land Management
Phoenix Field Office
12605 N. 8th Avenue
Phoenix, AZ 85027

If you fail to respond to this demand within thirty (30) calendar days, the BLM will, following our regulations and manual guidelines, continue the debt collection action against you. The debt collection action may include civil litigation and/or other actions necessary to recover the debt owed.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions, or if you wish to schedule a meeting to discuss this matter, please contact [*Name and address and phone number of contact-either program specialist or manager*]. We hope that you will take this opportunity to resolve this matter expeditiously.

[*Signature*]
Field Manager

Enclosures (2):
1 - Bill for Collection [*Attach automated bill generated by CBS*]
2 - Form 1371-22, Notice of Action in Event of Delinquency

Template 9.2-1 - Noncompliance Order

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

NONCOMPLIANCE ORDER

A compliance examination of the ABC Mining, Inc. (ABC) mining operation under Plan of Operations [*serial number*] in [*project location*], was conducted on [*date*]. [*Provide a brief description of all pertinent facts discovered through the inspection process. The purpose of this section and the following section, which deals with a review of the records, is to provide sufficient information to anyone who might read the order for them to determine the nature of the violation(s) that prompt the order.*]

A review of the Bureau of Land Management (BLM) records indicates the following facts: [*Refer to any filing made by the operator and correspondence between the operator and BLM that are pertinent to the issuance of the order.*]

Based on our inspections and records, the ABC activity is unauthorized and is in violation of [*list the laws that are being violated such as the Federal Land Policy and Management Act (FLPMA), etc*.]. Specifically, ABC is in violation of the following regulations: [*List those regulations under 43 CFR 3809 that the operator/claimant is violating. A Noncompliance order needs to be tied to a violation of one or more of the prohibited acts listed in 43 CFR 3809.605. As an example:*]

ABC has failed to stockpile the necessary soil material as required in its approved Plan of Operations. Failure to follow the approved Plan of Operations constitutes unnecessary or undue degradation and is a prohibited act under 43 CFR 3809.605 (a).

Under authority of 43 CFR 3809.601(a), ABC is ordered, within [*specify the time by which the operator must take corrective action to resolve the noncompliance, generally not to exceed 30 days]* from receipt of this order to: [*List the specific actions that the claimant/operator must take to comply with the order. These actions must be clear and concise, leaving little room for interpretation. The actions are listed with the understanding that if they are taken by the claimant/operator, the order will be lifted and the operations will be in compliance with respect to this order.*]

If ABC does not comply with this order, the BLM may take further action against you pursuant to 43 CFR 3809.601(b) and issue a Suspension Order for all or part of the ABC operation. Additionally, action could be taken under 43 CFR 3809.604 or 3809.700. [*Depending on the nature of the noncompliance, you may want to cite the specific regulations language that mention the BLM may request the United States Attorney to institute a civil action in United States District Court for an injunction to enforce this order; the collection of damages resulting from unlawful acts (see 43 CFR 3809.604); arrest and trial under section 303(a) of the FLPMA; fines up to $100,000 or the imprisonment (see 43 CFR 3809.700)*].

Template 9.2-1 - Noncompliance Order (continued)

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have any questions concerning this Noncompliance Order, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

2 Enclosures
1 - 43 CFR 3809 [*optional*]
2 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Office*]
[Regional solicitor][O*ther agencies or claimant(s)*]

Template 9.2-2 - Notification of Intent to Issue a Suspension Order

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NOTIFICATION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

INTENT TO ISSUE A SUSPENSION ORDER

Due to your failure to comply with the Noncompliance Order issued by the Bureau of Land Management (BLM) on [*date*], you are hereby notified that the BLM intends to issue a Suspension Order against your Plan of Operations [*serial number*]. Specifically, you have failed to comply with the Noncompliance Order by not: [*List specifically the manner in which the operator/claimant has failed to comply with the order*].

Pursuant to 43 CFR 3809.601(b)(iii) you are entitled to an informal hearing before the BLM [*state*] State Director before the BLM takes further action against you under 43 CFR 3809.601(b). To request an informal State Director hearing, you must submit the request in writing to the [*State Office address*] - Attention SD3809 Hearing, within 30 days of receiving this notification. If you do not make such a request within 30 days, you will have waived your right to an informal hearing with the State Director, and the BLM will continue enforcement actions against you.

If you choose an informal hearing with the BLM State Director, the BLM will not provide a court reporter, and will follow certain procedures, including [*Identify any procedural requirements that will govern the informal hearing. For example, the State Director may limit the time that will be allotted for the hearing.*].

Be advised that a request for a hearing with the BLM State Director does not relieve ABC from its obligation to comply with any previously issued enforcement orders including the Noncompliance Order issued to ABC on [*date*]. The BLM may pursue or continue to pursue those remedies available under 43 CFR 3809.604 and/or 43 CFR 3809.700 before your hearing with the State Director [*include those relevant to the circumstances*]. If you have any questions concerning this notification, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*State Director*]
[*Regional Solicitor*]

Template 9.2-3 - Suspension Order

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

SUSPENSION ORDER

ABC Mining, Inc. (ABC) is hereby ordered to suspend operations under Plan of Operations [*serial number*] immediately. This Suspension Order is issued due to your failure to comply with the Bureau of Land Management (BLM) Noncompliance Order issued by this office on [*date*].

[*Provide narrative outlining the operator's failure to resolve items of noncompliance; example language follows:*]

Field inspection of the project area on March 3, 2011, shows that ABC is still engaging in mining activity without stockpiling the soil material required under their Plan of Operations, thereby resulting in unnecessary or undue degradation. ABC was issued a Noncompliance Order on October 31, 2010, with instruction on how to correct the noncompliance. ABC failed to follow the Noncompliance Order as evidenced by the inspection on January 3, 2011, and a notification that the BLM intended to issue a Suspension Order was issued to ABC on January 10, 2011. ABC was provided an informal hearing with the BLM State Director on February 13, 2011, in an attempt to resolve the noncompliance. At the State Director hearing, ABC said it would correct immediately the soil salvage problem, but has failed to comply.

[*Provide a brief description of all pertinent facts discovered through the inspection process that show that the conditions of the Noncompliance Order were not met and that the BLM is justified in issuing the Suspension Order*].

Therefore, in accordance with the authority at 43 CFR 3809.601(b), ABC is ordered to immediately cease surface disturbing activity including all excavation, waste rock placement, and leach pad construction until it complies with the October 31, 2010, Noncompliance Order and is told by the BLM that operations may proceed.

[*List specific actions that the operator must take to comply with both this order and the noncompliance order. These actions must be clear and concise, leaving little room for interpretation. The actions are listed with the understanding that if they are taken by the claimant/operator, the order will be lifted and the operations will be in compliance with respect to this order.*]

If you do not comply with this order, the Department of the Interior may request the United States Attorney to institute a civil action in United States District Court for an injunction or order to enforce this order to prevent you from conducting operations on the public lands in violation of this subpart, and collect damages resulting from unlawful acts (see 43 CFR 3809.604). Additionally, if you fail to adhere to the terms of this order, you may face arrest and trial under Section 303(a) of the Federal Land Policy Management Act (43 U.S.C. 1733(a)). If convicted, you will be subject to a fine of not more than $100,000 or the alternate fine provided for in the applicable provisions of 18 U.S.C. 3571, or imprisonment not to exceed 12 months, or both, for each offense (see 43 CFR 3809.700).

Template 9.2-3 - Suspension Order (continued)

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have questions concerning this order, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

2 Enclosures
1 - 43 CFR 3809 [*optional*]
2 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Director*]
[*Regional Solicitor*]
[*Other agencies and claimant(s)*]

Template 9.2-4 - Immediate Temporary Suspension Order

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

IMMEDIATE TEMPORARY SUSPENSION ORDER

ABC Mining, Inc. (ABC) is hereby ordered to immediately suspend all operations at the [*insert project name and location*]. This suspension order has been issued under 43 CFR 3809.601(b)(2) because ABC is operating without an approved Plan of Operations. [*In other cases, insert other applicable rationale for the immediate suspension order which is necessary to protect health, safety, or the environment—e.g., significantly outside the scope of the Notice or Plan.*]

Beginning operations prior to the BLM approving a Plan of Operations is a prohibited act under 43 CFR 3809.605(b); and warrants the issuance of this Immediate Suspension Order to protect health, safety, or the environment from imminent danger or harm that would result from surface disturbance.

In order to resolve this enforcement order and terminate the suspension, ABC must Provide the BLM Field Office a proposed Plan of Operations as required by 43 CFR 3809.401. The BLM Field Office must issue a decision approving the Plan of Operations before we will terminate this Suspension Order.

Failure to comply with this enforcement order may result in the BLM requesting the United States Attorney to institute a civil action in United States District Court for an injunction or order to enforce this order to prevent you from conducting operations on the public lands in violations of this subpart, and collect damages resulting from unlawful acts (see 43 CFR 3809.604). Additionally, if you fail to adhere to the terms of this order, you may face arrest and trial under Section 303(a) of the Federal Land Policy Management Act (43 U.S.C. 1733(a)). If convicted, you will be subject to a fine of not more than or the alternate fine provided for in the applicable provisions of 18 U.S.C. 3571, or imprisonment not to exceed 12 months, or both, for each offense (see 43 CFR 3809.700*)*.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have questions concerning this order, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

2 Enclosures
1 - 43 CFR 3809 [*optional*]
2 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Director*]
[*Regional Solicitor*]

Template 9.2-5 - Suspension Order Terminated

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

TERMINATION OF SUSPENSION ORDER

The Bureau of Land Management (BLM) hereby terminates the Immediate Temporary Suspension Order it issued on [*date*], against the ABC Mining, Inc. (ABC) Plan of Operations [*serial number*] for failure to provide the required financial guarantee.

The ABC's financial guarantee instrument in the required amount of [*dollar amount*] was received by the [*state*] State Office and accepted as adequate on [*date*]. The BLM appreciates ABC resolving this matter in a timely fashion.

[*If the Immediate Temporary Suspension Order was issued for failure to file a Plan or Notice, then the suspension order would not be terminated until the Notice or Plan had been processed and bonded. If issued for activity outside the scope of a Notice or Plan, then the suspension order would not be terminated until either the disturbance was reclaimed or the Notice or Plan modified to account for the new activity.*]

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have questions concerning this order, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Director*]
[*Regional Solicitor*]
[*Other agencies, claimants*]

Template 9.2-6 - Order Requiring Plans

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

ORDER REQUIRING PLANS OF OPERATIONS

Due to ABC Mining Inc.'s (ABC) number of unresolved Noncompliance Orders and repeated compliance problems, pursuant to 43 CFR 3809.604(b), the Bureau of Land Management (BLM) now requires ABC to submit a Plan of Operations under 43 CFR 3809.401 for all current and future Notice-level operations on a nationwide basis for surface disturbing activity on lands administered by the BLM. Following the date of this order, you may not conduct activities greater than casual use without first filing a Plan of Operations and receiving approval from the applicable BLM field office.

The BLM is issuing this order for the following reasons: [*List those specific instances that clearly demonstrate that the operator/claimant failed to comply with a noncompliance order and remains in noncompliance. Not that both conditions must be met. A pattern of repeated noncompliance may be considered in determining when to issue this order. Likewise a period of compliance may be cause to terminate this order. Be sure to inform other field offices regarding the operator's status. An email containing the signed order should be forwarded via email to all state program leads for their consideration.*]

Issuance of this Order does not relieve ABC from complying with any other outstanding enforcement orders issued by the BLM. This Order will remain in effect until such time as ABC resolves any and all outstanding enforcement orders issued by the BLM.

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

If you have questions concerning this order, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

2 Enclosures
1 - 43 CFR 3809 [*optional*]
2 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals

cc: [*State Office*]
[*Regional Solicitor*]

Template 9.2-7 - Notification of Intent to Nullify Notice/Revoke Plan

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NOTIFICATION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

INTENT TO NULLIFY NOTICE *[or]* **INTENT TO REVOKE PLAN OF OPERATIONS**

The Bureau of Land Management (BLM) is considering [*revoking ABC's Plan of Operations or nullifying ABC's Notice*] pursuant to 43 CFR 3809.602 due to ABC's ongoing failure to correct the violations detailed in the enforcement orders issued on [*date*], and [*date of second order*].

This notification provided in accordance with 43 CFR 3809.602(b) and is based upon preliminary findings that: [*Explain under one or more of the following categories: 1) A violation exists of any provision of the Notice or Plan of Operation). 2) A violation exists of this subpart, and how the operator has failed to correct the violation within the time specified in an enforcement order issued under* 43 CFR *3809.601. 3) Describe if and how a pattern of violations exists at the operation.*]

These findings are based on the following pertinent facts: [*List specifically the facts upon which the above findings were made. Cite specific instances where an enforcement order was violated, etc.*]

Pursuant to 43 CFR 3809.602(b) you are entitled to an informal hearing before the BLM [*state*] State Director before the BLM takes further action against you under 43 CFR 3809.601(a). To request an informal State Director hearing you must submit the request in writing to the [*State Office address*] - Attention SD3809 Hearing, within 30 days of receiving this notification. If you do not make such a request within 30 days, you will have waived your right to an informal hearing with the State Director and the BLM will proceed to make its determination regarding whether to revoke your Plan of Operations [*or nullify your Notice*].

If you choose an informal hearing with the BLM State Director, the BLM will not provide a court reporter, and will follow certain procedures, including [*Identify any procedural requirements that will govern the informal hearing. For example, the State Director may limit the time that will be allotted for the hearing.*].

Within 30 calendar days from the date of your hearing, you will receive written notification from the State Director of the final determination of your case.

Template 9.2-7 - Notification of Intent to Nullify Notice/Revoke Plan
(continued)

Be advised that a request for a hearing with the BLM [*state*] State Director does not relieve ABC from its obligation to comply with any previously issued enforcement orders including the Noncompliance Order issued to ABC on [*date*], and the Suspension Order issued on [*date*]. The BLM may pursue or continue to pursue those remedies available under 43 CFR 3809.604 and/or 43 CFR 3809.700 before your hearing with the State Director [*include a description of those remedies relevant to the circumstances]*.

If you have any questions concerning this notification, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

cc: [*State Director*]
[*Regional Solicitor*]

Template 9.2-8 - Nullification of Notice/Revocation of Plan

3809 [*office code*]
[*serial number*]

[*date*]

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DECISION

ABC Mining, Inc.	:	
Attn: Kevin Smith, General Manager	:	Surface Management
P.O. Box 3013	:	
Frostbit Falls, Montana 59555	:	

PLAN OF OPERATIONS REVOKED *[or]* **NULLIFICATION OF NOTICE**

As of this date, ABC Mining, Inc. (ABC) Plan of Operations [*serial number*] [*project location*] is hereby revoked due to repeated failure to comply with enforcement orders issued by the Bureau of Land Management (BLM) under the BLM's regulations at 43 CFR 3809.

The BLM has determined to revoke the ABC Plan of Operations [*or nullify a Notice*] pursuant to 43 CFR 3809.602. This determination is based on a finding that: [*Choose one or more of the following: 1) violations of the Plan of Operation (or notice); 2) failure to correct the violation within the time specified in the enforcement orders issued under* 43 CFR *3809.601; 3) pattern of violations*].

These finding are based on the following pertinent facts: *[List specifically the facts and cite to the record upon which the findings were made. Cite specific instances where enforcement orders were violated. Include results of the informal hearings with the State Director, if any.*]

Revocation of the ABC Plan of Operations does not relieve ABC from its obligation to comply with any outstanding enforcement orders or orders to reclaim [*list these here*]. In addition, the Department of the Interior may request the United States Attorney to institute a civil action in United States District Court for an injunction or order to enforce this order to prevent you from conducting operations on the public lands in violations of this subpart, and to collect damages resulting from unlawful acts (see 43 CFR 3809.604*)*. Additionally, if you fail to adhere to the terms of this order, you may face arrest and trial under Section 303(a) of the Federal Land Policy Management Act (43 U.S.C. 1733(a)). If convicted, you will be subject to a fine of not more than $100,000 or the alternate fine provided for in the applicable provisions of 18 U.S.C. 3571, or imprisonment not to exceed 12 months, or both, for each offense (see 43 CFR 3809.700).

Appeal of the Decision

[*See Template 10.1-1, Field Office Decision – Appeal Language and Template 10.1-3, Request for a Stay*]

Should you elect to have an informal hearing before the State Director (pursuant to 43 CFR 3809.602(b)), your period to file an appeal with the Interior Board of Land Appeals would be 30 calendar days following your receipt of the State Director's decision.

If you have any questions concerning this notification, please contact [*program specialist name and contact information*].

Sincerely,

[*Signature*]
Field Manager

1 Enclosure
1 - Form 1842-1, Information on Taking Appeals to the Interior Board of Land Appeals
cc: [*State Director*]
[*Regional Solicitor*]

Template 10.1-1 - Field Office Decision – Appeal Language

Appeal of a Decision under 43 CFR 3809

If you are adversely affected by this decision, you may request that the BLM [*enter appropriate state*] State Director review this decision. If you request a State Director Review, the request must be received in the BLM [*enter appropriate State*] State Office at [*insert State Office mailing address*], no later than 30 calendar days after you receive or have been notified of this decision. The request for State Director Review must be filed in accordance with the provisions in 43 CFR 3809.805. This decision will remain in effect while the State Director Review is pending, unless a stay is granted by the State Director. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

If the State Director does not make a decision on your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the Interior Board of Land Appeals (IBLA). You may contact the BLM [*enter appropriate State*] State Office to determine when the BLM received the request for State Director Review. You have 30 days from the end of the 21-day period in which to file your Notice of Appeal with this office at [*insert address of field office issuing the decision*] which we will forward to IBLA.

If you wish to bypass a State Director Review, this decision may be appealed directly to the IBLA in accordance with the regulations at 43 CFR 3809.801(a)(1). Your Notice of Appeal must be filed in this office at [*insert address of field office issuing the decision*] within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 that contains information on taking appeals to the IBLA.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Appeal of a Decision under 43 CFR 3715

If you are adversely affected by this decision, you may appeal to the IBLA under 43 CFR part 4. If you appeal this decision, you must file a Notice of Appeal to this office at [*insert address of field office issuing the decision*] within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 that contains information on taking appeals to the IBLA.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Template 10.1-2 - State Director Decision – Appeal Language

Appeal of the Decision

This decision may be appealed to the Interior Board of Land Appeals (IBLA) in accordance with the regulations contained in 43 CFR, part 4 and the enclosed Form 1842-1. If an appeal is taken, your Notice of Appeal must be filed in this office [*insert state office address*] within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Template 10.1-3 - Request for a Stay

Request for a Stay

If you wish to file a petition pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by Interior Board of Land Appeals (IBLA), the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision and to the IBLA and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal must show sufficient justification based on the following standards:

1. The relative harm to parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

Appendix B - Present Value Determination

This appendix contains the steps to follow in calculating the present value of future costs. To establish the amount of money that needs to be invested in a long-term funding mechanism, the future costs need to be stated as a present value for the year the account will be established and start growing in value. To do this calculation, a standard present value analysis needs to be performed.

The discount rates, interest rates, and other figures used in this document are for example purposes only. In conducting a present value analysis the user must determine the appropriate inputs given the specifics of the long-term funding mechanism being established. The inputs and assumptions applied in a present value calculation will significantly affect the results. It is imperative that defensible inputs and assumptions are used in generating these calculations. Unless the individual performing the present value calculations has the knowledge and expertise in developing and applying these inputs and assumptions, a knowledgeable source should be called upon.

Discount Rate

A critical component to a present value calculation is determining the appropriate discount rate. For this type of analysis, the appropriate discount rate should reflect the anticipated net return on investment. To estimate the anticipated net return on investment, the BLM State Director must first determine what financial instruments are appropriate and acceptable for such a funding mechanism.

The choice of the discount rate to use in the analysis is critical and can be confusing; the responsible BLM office should consult the BLM State Office economist if there are concerns about the appropriate discount rate to use.

Interest Rates - Of the acceptable financial instruments under 43 CFR 3809.555, U.S. Treasury, Municipal, and corporate bonds are the most appropriate for this type of investment. The interest rates U.S. Treasury, Municipal, or corporate bonds carry depends on several factors, including default risk, tax status, and maturity. Generally, the higher the default risk associated with the bond, the higher the interest rate; tax exempt instruments generally come with a lower interest rate; and the longer the term of the bond, the higher the interest rate. Table 1, Reported Bond Interest Rates, provides examples of the interest rates for U.S. Treasury, Municipal, and corporate bonds reported for two time periods (May 28, 2002 and May 6, 2002).

The rates in Table 1 are examples of actual market rates that are typically reported in the financial section of most large newspapers. These rates reflect the anticipated return on investment associated with each investment. They are reported market rates and, as such, the interest rates include the anticipated effect of inflation that is expected to occur over the term of the financial instrument, i.e., they are nominal rates. As with any figures provided in this document, they are examples of the type of information that is available in print and online.

A number of sources exist that provide assumptions on discount rates and future inflation rates. One such source is the U.S. Government's Office of Management and Budget (OMB). Among other functions, OMB provides guidance to Federal agencies on what discount rates to use when conducting benefit-cost and cost-effectiveness analyses. Although the analysis required in establishing the amount of a trust fund is not identical to a cost-effectiveness analysis, the OMB guidance is still useful and relevant.

Table 1
Reported Bond Interest Rates

Debt Securities	Interest Rate May 28, 2002	Interest Rate May 6, 2002
10-Year U.S. Treasury	5.12	5.05
10-Year AAA Municipal Bond	4.03	4.01
10-Year AA Municipal Bond	4.00	3.98
10-Year AAA Corporate Bond	5.62	5.62
10-Year AA Corporate Bond	5.91	5.99
30-Year U.S. Treasury	5.66	5.53
20-Year AAA Municipal Bond	4.88	4.83
20-Year AA Municipal Bond	4.89	4.85
20-Year AAA Corporate Bond	6.28	6.20
20-Year AA Corporate Bond	6.58	6.61

Annually OMB issues its guidance on discount rates in Circular A-94, Appendix C, Discount Rates for Cost-Effectiveness, Lease Purchase, and Related Analyses (*http://www.whitehouse.gov/omb/circulars/a094/a094.html*). Appendix C is updated annually and presents nominal and real discount rates for both public and private funded projects. For federally funded projects, the discount rate is based on the Government's current cost of borrowing, or current interest rates from U.S. Treasury notes and bonds. For example, Appendix C, revised January 2006, set the 30-year real interest rate at 3.0 percent and the 30-year nominal rate at 5.2 percent. The OMB Circular also provides discount rate guidance for privately funded projects. For these projects the recommended rate is based on an estimate of the marginal pretax rate of return on an average investment in the private sector in recent years.

Fees and Taxes - Trust account management fees and income taxes potentially reduce the return on an investment. Any funding mechanism required under 43 CFR 3809.552(c) must be self-sustaining, including an approach to allow for the payment of these costs from the fund. One way to account for these costs is to adjust the discount rate to reflect these costs.

To account for a trust account management fee that is stated as a percentage of the account balance, the rate of the applicable annual management fee should be subtracted from the anticipated return on investment for the account. For example, if the annual return on investment is projected as 5.2 percent and the management fee is 1 percent of the total annual account balance, then the discount rate should reflect that reduction in the net return, i.e., 4.2 percent (5.2 - 1.0 = 4.2).

To the extent taxes reduce the effective return on investment for funds in the trust fund, they must be accounted for. However, determining the effect of taxes on the return on investment is not as straightforward as it is for the trust account management fees. The type of financial instruments that the funds are invested in will effect what taxes are due. For example, Municipal bonds are generally exempt from Federal, state, and local taxes. U.S. Treasuries are exempt from state taxes, but not Federal taxes. Corporate bonds are subject to both Federal and state taxes.

In assessing the effect of taxes, the rate at which the tax will be applied needs to be considered. One way to address this question is to consider the different market interest rates on tax exempt and non-exempt investment instruments. At the time this guidance was being prepared the average annual return on long-term AAA Municipal bonds was about 15 percent lower than those offered for comparable maturity U.S. Treasuries. Since the security, maturity, and state and local tax status for these two instruments are relatively similar, that average 15 percent difference reflects the effect of Federal taxes on the return on investment. For example, using a 5.2 percent nominal rate and an anticipated trust account management fee of 1 percent, the return on investment in the fund is projected as 4.2 percent. That return is then reduced by 15 percent to account for Federal taxes. Fifteen percent of 4.2 percent is approximately 0.6 percent, resulting in a net return on investment for funds in the account of about 3.6 percent. **Note, this calculation is provided only as an example.** Consult with the Solicitor's Office to determine whether the mechanism may be considered to be a non-profit mechanism which would be exempt from Federal income tax.

Real Rates - Where the cost inputs used in the analysis are real or constant-dollar inputs, the discount rate must also be a real rate; the inflation expectation needs to be removed from the reported market rate. A real discount rate is the difference between the nominal interest rate and the assumed inflation rate. It is recommended where adjustments are necessary to eliminate the inflation assumptions from observed market rates, the BLM should consider using an established source such as OMB's inflation assumptions found in Circular A-94, Appendix C. For example, the inflation rate used by OMB in Appendix C (January 2006) was 2.2 percent per year. Using the example above, where the net return on investment, stated in nominal terms, is 3.6 percent, the real net return on investment would be 1.4 percent (3.6 - 2.2 = 1.4).

Determining the Present Value

Present Value Calculation - Once an appropriate discount rate that reflects the net return on investment has been determined, the present value of the future costs can be calculated. Table 2, Present Value Calculations, provides an example of how future costs can be discounted to determine their present value. For this example, the anticipated post-reclamation obligations run from year 30 through year 42, the hypothetical costs are presented as real (constant-dollar) costs (C), and the discount factor (DF) is based on OMB's (February 2006) 30-year published real interest rate (5.2 percent), less a 1 percent annual trust fund management fee, 0.6 percent for Federal taxes (marginal tax rate of 15 percent) and an inflation assumption of 2.2 percent. DF is calculated as $1/(1+i)^t$, where "i" is the discount rate (1.4 percent) and "t" is the year. The present value (PV) for each year's costs is the product of those estimated costs and the discount factor.

The present value of the estimated costs for year 30 is calculated as:

$DF=1/(1+i)^t$

$DF=1/(1+0.014)^{30}$

DF=0.6590

PV=C(DF)

PV=$10,000(0.6590)

PV=$6,590

Table 2
Present Value Calculations

Year	Estimated Constant-Dollar Costs	Discount Factor	Present Value Of Costs
30	10,000	0.6590	6,590
31	10,000	0.6499	6,499
32	10,000	0.6409	6,409
33	10,000	0.6320	6,320
34	10,000	0.6233	6,233
35	150,000	0.6147	92,207
36	10,000	0.6062	6,062
37	10,000	0.5979	5,979
38	10,000	0.5896	5,896
39	10,000	0.5815	5,815
40	150,000	0.5734	86,015
41	10,000	0.5655	5,655
42	10,000	0.5577	5,577
Total			245,257

In this example, the operator would need to deposit $245,357 into the trust fund at the beginning of year one, in order to meet those estimated post-reclamation obligations in years 30 through 42.

In conducting a discount analysis it is important to keep in mind the uncertainties of the inputs and the sensitivity of the analysis to certain inputs. Specifically, a slight change in the discount rate can significantly change the amount of money the operator will need to commit to the fund. To demonstrate this sensitivity, by using a higher discount rate (2.5 percent versus 1.4 percent) in the example shown in Table 2 above, the operator would need to deposit $164,802.

Period of Analysis - For trust funds or other funding mechanisms that cover post-reclamation obligations over a very long period of time, or may even need to be perpetual, determining the appropriate period of the analysis becomes problematic. Mathematically the calculations, similar to that performed in Table 2, can be made for any time period. However, the present value of the

cost of any post-reclamation obligations becomes smaller and smaller the further in the future those obligations are expected to occur. For example, the present value of a $10,000 obligation in year 30, using a 2.5 percent real discount rate, is $4,767. If that same obligation is in year 100, the present value is $846. For year 200, that $10,000 obligation has a present value of $72. At some point the calculations of the present value of obligations into the distant future are not very meaningful.

Variability in the inputs, especially in the discount rate, due to uncertainties far outweighs the added value due to extending the calculations. To demonstrate this point, instead of using a 2.5 percent discount rate, a 3.5 percent discount rate is used. For that calculation, the present value of $10,000 obligation in year 200 is $10. If the discount rate applied is 1.5 percent, the present value for that future obligation is $509.

Unfortunately, there are no economic standards or rules defining when the point is exceeded when additional present value calculations do not contribute in any meaningful way to the ultimate answer. When defining the parameters for the analysis for a particular project, it is recommended the responsible BLM office consult the BLM State Office economist concerning the appropriate time period to be analyzed.

Permanent or Perpetual Fund - Where the cost of meeting the post-reclamation obligations are projected to be reoccurring costs and those costs are expected to continue indefinitely, it may be appropriate to calculate the reoccurring costs based on permanent funding needs. In such a situation, there is an alternative to conduct a discount analysis as described above. A simpler method to estimating the amount of money that will need to be deposited is to divide the estimated average annual real cost (C) by the selected real discount rate (i). For example, if the average cost to cover the operator's post-reclamation obligations is estimated to be $10,000 per year, in constant dollars, and a 3.9 percent real discount rate is used, $256,410 (10,000/0.039) would need to be deposited into the funding mechanism to establish a permanent or perpetual fund. This amount would cover the cost of those annual obligations into perpetuity without ever touching the principal.

$$PV=C/i$$

$$PV=\$10,000/0.039$$

$$PV=\$256,410$$

The example above provides for the annual dispersal of funds to begin at the end of year one. Instead the annual payments from the fund may not start until sometime in the future, e.g., year 10. In such a case, the fund would not need to be established with the full amount but rather an amount that would grow to $256,410 by year 10. To determine the amount that would need to be deposited; the present value will need to be estimated using the discount analysis process. The present value of $256,410 in year 10 is $174,896 using a 3.9 percent discount rate.

$$DF=1/(1+i)^t$$

$DF=1/(1+0.039)^{10}$

DF=0.6821

PV=C(DF)

PV=$256,410(0.6821)

PV=$174,896

Phased Funding of the Account - Where the District/Field Manager determines the public's interests are adequately protected, a trust fund or other funding mechanism may be established as an escrow account with the operator depositing funds needed to ensure the post-reclamation obligations over time. If this approach is used, growth of the fund will be from the interest gained and increase in value of the assets plus the additional funds being deposited. As such, a simple present value analysis, as discussed above, cannot be used to determine the amount of money that will need to be deposited when establishing the fund. That analysis needs to be based on the point in time when all deposits have been made.

In the example provided in Table 2 above, if the District/Field Manager allows the operator to establish the trust fund by depositing the needed funds over a period of time, then $245,357 would not be the initial deposit as suggested by the above present value analysis. For example, the operator is allowed to make equal deposits over a 5-year period in establishing the fund. In effect, year one of the present value analysis would actually be year five of the operation; the year the trust fund is fully funded. Table 3 – Phased Funding Calculations presents this concept.

Table 3
Phased Funding Calculations

Year Of Operation	Year Since Fully Funded	Estimated Constant-Dollar Costs	Discount Factor	Present Value Of Costs
30	25	10,000	0.7064	7,064
31	26	10,000	0.6966	6,966
32	27	10,000	0.6870	6,870
33	28	10,000	0.6775	6,775
34	29	10,000	0.6682	6,682
35	30	150,000	0.6590	98,845
36	31	10,000	0.6499	6,499
37	32	10,000	0.6409	6,409
38	33	10,000	0.6320	6,320
39	34	10,000	0.6233	6,233
40	35	150,000	0.6147	92,207
41	36	10,000	0.6062	6,062
42	37	10,000	0.5979	5,979
Total				262,911

In this example, the operator will need to have $262,911 in the trust fund by year five of the operation to ensure adequate funds will be available to meet the estimated post-reclamation obligations.

To determine the required operator deposits for years one though five, a sinking-fund deposit analysis will need to be conducted. This analysis is used to calculate a uniform series of equal end-of-period payments to accumulate the required amount of money by a future year. The sinking-fund deposit factor is calculated as $[i/((1+i)^n-1)]$ where "i" is the discount rate and "n" are the number of years. To solve for the required annual payments (AP), the future value (FV) at the end of year five is $262,911 as calculated in Table 3, the discount rate is 1.4 percent and period of analysis is 5 years.

$$AP=FV[i/((1+i)^n-1)]$$

$$AP=\$262,911[0.014/((1+0.014)^5-1)]$$

$$AP=\$51,130$$

For this example, the operator will need to deposit $51,130 into the trust fund each year for the first 5 years of operation. The combination of these deposits and an increase in the value of the funds in the account will grow to the desired amount by year five. From year five to when the funds will be needed, the account will continue to grow based on the gain in value of the funds in the account.

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Appendix C – Example Formats

This appendix contains example formats for Notices and Plans of Operations submitted under the surface management program. The example formats are labeled according to the handbook section number where first referenced. It is recognized that not one size fits all when an operator prepares its Notice and Plan submissions. The example formats are intended to provide a consistent starting point with the recognition that the operator will need to modify the language to accommodate the particular circumstances or practices in the State or District/Field Office. These formats are provided to assist the operator in documenting the information the BLM will need to review the proposed Notice or Plan. Use of these formats is at the operator's discretion; the BLM does not require the operator use these formats.

Format 3.2-1 - Notice

– Notice –

for

Exploration Activity under the Surface Management Regulations at 43 CFR 3809

You may submit a Notice for surface disturbing activity greater than casual use instead of a Plan of Operations. To qualify for a Notice the activity must: 1) constitute exploration, 2) not involve bulk sampling of more than 1,000 tons of presumed ore, 3) must not exceed 5 acres of surface disturbance, and 4) must not occur in one of the special category lands listed in 43 CFR 3809.11(c). The regulations at 43 CFR 3809.301(b) describe the information that you, the operator, are required to provide in order for the Notice to be complete. The Notice is to be filed in the BLM field office with jurisdiction over the land involved. The Notice does not need to be on a particular form but must contain the information required by 43 CFR 3809.301(b), as outlined below. This format has been prepared to assist small or medium scale operators address the content requirements for a Notice. Use of this worksheet is voluntary.

Part 1 - Operator Information

You must identify the operator responsible for conducting the proposed activity. If the operator is a corporation or other business entity, then a corporate business entity point of contact must be identified. You must notify the BLM in writing within 30 days of any change of operator or business entity point of contact or in the mailing address of either.

Name(s):	Point of Contact (*if operator is a business entity*):
Mailing Address:	Mailing Address:
Phone Number: Fax Number:	Phone Number: Fax Number:
Email address (*optional*):	Email address (*optional*):
Taxpayer Identification Number (*for an individual this is your social security number*):	
Unpatented Mining Claims (*list the name and BLM serial number(s) of any unpatented mining claim(s) where disturbance would occur*):	
Other Federal, State, or Local Authorizations (*list any other permits or licenses you have either applied for or been issued for this project*):	

Part 2 – Description of Exploration Activity and Reclamation

You must provide a complete description of all equipment, devices, or practices you propose to use during operations with a level of detail appropriate to the type, size, and location of the activity. The type of information required is listed below. You only need to address those items applicable to your operations.

Project Area Maps (*Attach map(s) that show the location of your project in sufficient detail for BLM to find it and the location of access routes that will be used or constructed. Show all relevant project features on the maps or drawings*):	___ Exploration location ___ Access routes, new and existing construction ___ Drill site/drill hole location(s) ___ Trenching location/depth ___ Underground workings ___ Support facilities/buildings/utility service/etc. ___ Other:
Activity Description (*Address each applicable project feature, describe the equipment you intend to use and measures you will take to prevent unnecessary or undue degradation.*	___ Access route construction and use ___ Drill site construction ___ Drilling operations/drill fluids & cuttings handling ___ Trenching or surface sampling ___ Underground sampling or excavation ___ Bulk sample or waste stockpile placement ___ Support facilities construction and operation ___ Other:
Activity Description (*Describe your proposed exploration activity. Attach additional sheets/maps where needed*)	

Reclamation Plan (*provide a reclamation plan to meet the standards in 43 CFR 3809.420. Include a description of the equipment, devices and practices you will use. Address the applicable components in the right column*)	___ Drill hole plugging procedures ___ Disposal of drill cuttings or other waste material ___ Drill site/drill road regrading and reshaping plans ___ Closure of mine openings and test pits ___ Topsoil salvage, handling, and replacement ___ Vegetation reestablishment/weed control ___ Removal/stabilization of buildings & support facilities ___ Other:
Reclamation Plan (*Describe how you will complete reclamation plan of the project area. Attach additional sheets/maps where needed*)	
Schedule of Activities (*provide a schedule with the date you expect to begin operations and the date you expect to complete reclamation. Notices expire in 2 years, after which, only reclamation may be conducted unless the Notice is extended.*)	

Part 3 – Reclamation Cost Estimate

A reclamation cost estimate (RCE) is required for your Notice to be complete. The following are general RCE requirements. The BLM is available to assist you in developing your reclamation cost estimate.

Reclamation Cost Estimate Elements (*Account for each of these cost elements*)	___ The RCE must cover the Reclamation Plan at any point in the project life ___ Calculate the RCE based on the BLM's cost to contract for the reclamation ___ Include all equipment use, supplies, labor, and power in direct costs ___ Allow for a contingency cost (10% of direct costs) ___ Allow for contractor profit (10% of direct costs) ___ Include contractor liability insurance (1.5% of total labor cost) ___ For direct costs over $100,000 add 3% for payment & performance bonds ___ Add 12% of direct costs for BLM contract administration & indirect costs
Reclamation Cost Estimate (*Attach additional sheets/maps where needed*)	

The Notice is submitted this date by:

_____
(Signature of operator or agent) Date

_____
(Signature of co-operator or agent) Date

Additional Processing Information

Within 15 calendar days of receiving your Notice, the BLM will review the Notice material and notify you of one of the following:

1) Your Notice is complete and the amount of the financial guarantee that must be provided before operations may begin.
2) Your Notice is not complete, specifying what information is missing or incomplete.
3) Your Notice is complete but that BLM requires additional time for consultation, field visits, or review before it can evaluate the Notice.
4) Your Notice must be modified in order to prevent unnecessary or undue degradation.
5) Your operations do not qualify for a Notice.

Once a complete Notice is received, and the BLM determines that it will not cause unnecessary or undue degradation, the BLM will notify you that your Notice has been accepted and issue a decision on the amount of the financial guarantee. However, you must not begin surface disturbing activity until you have provided a financial guarantee in the approved amount to the BLM State Office, and received a decision from that office that the financial guarantee instrument has been accepted.

All Notices expire 2 years from the date of the letter establishing the financial guarantee amount. If you wish to conduct operations for 2 additional years after the expiration date of your Notice, you must notify the BLM in writing on or before the expiration date and meet the financial guarantee requirements. You may extend your Notice more than once.

It should be noted that acceptance of a Notice by the BLM does not constitute a determination regarding the validity or ownership of any unpatented mining claim involved in the operation. In addition, you are responsible for obtaining any use rights or local, state, or Federal permits, licenses, or reviews that may be required for your operation.

A Notice proposing use and occupancy of the public lands, such as full- or part-time residence or the construction, presence, or maintenance of temporary or permanent structures, must also obtain concurrence under the regulations at 43 CFR 3715 that the use or occupancy is reasonably incident to the prospecting or exploration activity.

Format 4.3-1 - Plan of Operations

– Plan of Operations – for Activity under the Surface Management Regulations at 43 CFR 3809

The regulations at 43 CFR 3809.401(b) requires you, the operator, to describe the proposed operations at a level of detail sufficient for the BLM to determine that your operation would prevent unnecessary or undue degradation. The Plan of Operations is to be filed in the BLM field office with jurisdiction over the land involved. The Plan of Operations does not need to be on a particular form but must address the information required by 43 CFR 3809.401(b), as outlined below. This format has been prepared to assist small or medium scale operators in addressing the content requirements for a Plan of Operations. Use of this worksheet is voluntary.

Part 1 - Operator Information

You must identify the operator responsible for conducting the proposed activity. If the operator is a corporation or other business entity, then a business entity point of contact must be identified. You must notify the BLM in writing within 30 days of any change of operator or business entity point of contact or in the mailing address of either.

Name(s):	Point of Contact (*if operator is a business entity*):
Mailing Address:	Mailing Address:
Phone Number: Fax Number:	Phone Number: Fax Number:
Email address (*optional*):	Email address (*optional*):
Taxpayer Identification Number (*for an individual this is your social security number*):	
Unpatented Mining Claims (*list the name and BLM serial number(s) of any unpatented mining claim(s) where disturbance would occur*):	
Other Federal, State, or Local Authorizations (*list any other permits or licenses you have either applied for or been issued for this project*):	

Part 2 – Description of Operations and Reclamation

You must provide a complete description of all equipment, devices, or practices you propose to use during operations. The type of information required is listed below. You only need to address those items applicable to your operations. Attach maps and additional sheets as needed.

Project Area Maps (*check project feature and show on attached maps or drawings*):	___ Exploration location ___ Drillsite/drill hole location(s) ___ Access routes, new and existing ___ Mineral process facility layout ___ Mining areas/underground workings ___ Waste rock/tailing location ___ Support facilities/building location/utility service ___ Other:
Operating Plans, including preliminary or conceptual designs and cross sections (*address applicable project feature, attach design information, and provide a narrative explaining how operations are to be conducted*)	___ Mining areas/underground workings ___ Mineral processing facilities ___ Waste rock/tailing disposal ___ Water management plans ___ Rock characterization and handling plans ___ Quality assurance plans ___ Access route construction and use ___ Pipelines, power lines or utility services ___ Other:
Operating Plan (*Describe your operating plan. Attach additional sheets/maps where needed.*)	

Reclamation Plan (*provide a reclamation plan to meet the standards in 43 CFR 3809.420. Include a description of the equipment, practices, and devices you will use. Address the applicable components in the right column.*)	___ Drill hole plugging procedures ___ Closure of mine openings and reclamation ___ Regrading and reshaping plans ___ Isolation & control of acid-forming/toxic materials ___ Topsoil salvage, handling and replacement ___ Vegetation reestablishment/weed control ___ Wildlife habitat/riparian area rehabilitation ___ Removal/stabilization of buildings & support facilities ___ Post-closure management ___ Pit backfilling feasibility where pits are to be left open (*Address economic, environmental, and safety factors.*)
Reclamation Plan (*Describe your reclamation plan. Attach additional sheets/maps where needed.*)	
Schedule of Operations (*Provide a schedule from project start-up through final closure. Identify major phases such a development, mining, processing, and reclamation. Operations with open-ended or undefined schedules cannot be accepted.*)	

Part 3 – Monitoring Plan

You must provide a plan to monitor the effects of your operation. The monitoring plan should be designed to do the following: (1) demonstrate compliance with the Plan of Operations and other environmental regulations, (2) provide early detection of potential problems, and (3) supply information that will assist with any needed corrective actions. The scope of monitoring depends on the location and complexity of the operation. Generally, exploration activity requires little or no monitoring, while certain mining activity may need comprehensive monitoring plans. Monitoring plans should avoid duplication by incorporating other state or federal monitoring requirements.

Resource Conditions to Monitor (*Indicate the conditions you propose to monitor.*)	___ Surface or groundwater quality/quantity ___ Air quality ___ Vegetation or reclamation conditions ___ Process facility containment performance ___ Stability conditions ___ Wildlife mortality ___ Noise or light levels ___ Other (include state requirements):
Monitoring Plan Elements (*For each resource or condition monitored address these elements.*)	___ Type and location of monitoring devices ___ Sampling parameters and frequency ___ Analytical methods ___ Reporting procedures ___ Adverse monitoring result thresholds & procedures ___ Other:
Monitoring Plans (*Describe your monitoring plan(s). Attach additional sheets/maps where needed.*)	

Part 4 – Interim Management Plan

All Plans of Operations must include an Interim Management Plan that describes how the project area will be managed during periods of temporary closure (including periods of seasonal closure).

Interim Management Plan Elements (*Address each of these elements.*)	___ Schedule of anticipated periods of closure ___ Provisions to notify the BLM of unplanned or extended closures ___ Measures to stabilize excavations and workings ___ Measures to isolate or control toxic materials ___ Provisions to store or remove equipment, supplies, or structures ___ Measures to maintain the project area in a safe and clean condition ___ Plans for monitoring site conditions during non-operation ___ Other:
Interim Management Plan (*Describe your Interim Management Plan. Attach additional sheets/maps where needed.*)	

Part 5 – Reclamation Cost Estimate

A reclamation cost estimate (RCE) is required to process your Plan of Operations (43 CFR 3809.401(d)). The RCE may be submitted with the Plan of Operations, or later at a time to be determined between you and the BLM. The following are general RCE requirements. The BLM is available to assist you in developing the cost estimate.

Reclamation Cost Estimate Elements (*Account for each of these cost elements.*)	___ The RCE must cover the Reclamation Plan at any point in the project life ___ Calculate the RCE based on the BLM's cost to contract for the reclamation ___ Include all equipment use, supplies, labor, and power in direct costs ___ Include fluid management of any mill process solutions in direct costs ___ Allow for a contingency cost (10% of direct costs) ___ Allow for contractor profit (10% of direct costs) ___ Include contractor liability insurance (1.5% of total labor cost) ___ For direct costs over $100,000 add 3% for payment & performance bonds ___ Add 12% of direct costs for BLM contract administration & indirect costs
Reclamation Cost Estimate (*Attach additional sheets/maps where needed.*)	

The proposed Plan of Operations is submitted this date by:

_____

(Signature of operator or agent) Date

_____

(Signature of co-operator or agent) Date

Additional Processing Information

Within 30 calendar days of receiving your proposed Plan of Operations, the BLM will review the submitted material and notify you: 1) that your Plan of Operations is complete, that is, it meets the content requirements under 43 CFR 3809.401(b); or 2) that your Plan does not contain a complete description of the proposed operations, specifying what information is missing or incomplete; or 3) that your Plan of Operations is complete, but the BLM cannot process the Plan until certain additional steps are taken which could include you providing adequate baseline data, the BLM conducting an environmental review, or the BLM consulting with various entities such as the State or Indian tribes.

Once a Plan of Operations is determined to be complete, an environmental analysis is prepared. The environmental analysis and/or complete Plan of Operations is available for public comment for not less than 30 days. The processing of a Plan of Operations that requires preparation of an environmental impact statement (EIS) is subject to the cost recovery provisions of the regulations. The BLM will notify you immediately if it is determined your Plan of Operations falls within the cost recovery requirements.

Upon completing review of your Plan of Operations, including environmental analysis, consultation, and consideration of public comments, the BLM will issue a decision that: 1) approves the Plan of Operations basically as submitted; or 2) approves the Plan of Operations subject to changes or conditions needed to prevent unnecessary or undue degradation; or 3) disapproves or withholds approval of the Plan of Operations, listing the reason for not approving the Plan. The decision to approve or deny a Plan of Operations can be appealed to the BLM State Director or directly to the Interior Board of Land Appeals (IBLA).

Even after receiving a decision approving your Plan of Operations, you must not begin surface disturbing activity until you have provided a financial guarantee in the amount of the approved reclamation cost estimate to the BLM State Office, and received a decision from that office that the financial guarantee instrument has been accepted.

It should be noted that approval of a Plan of Operations by the BLM does not constitute a determination regarding the validity or ownership of any unpatented mining claim involved in the operation. In addition, you are responsible for obtaining any use rights or local, state, or Federal permits, licenses, or reviews that may be required for your operation.

A Plan of Operations proposing use and occupancy of the public lands, such as full- or part-time residence or the construction, presence, or maintenance of temporary or permanent structures, must also obtain concurrence under the regulations at 43 CFR 3715 that the use or occupancy is reasonably incident to the prospecting, mining, or processing operations.

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Appendix D - Compiling an Administrative Record

United States Department of the Interior

OFFICE OF THE SOLICITOR
Washington, D.C. 20240

IN REPLY REFER TO:

Memorandum

JUN 2 7 2006

To: Assistant Secretaries
Directors of Bureaus and Offices

From: David L. Bernhardt
Deputy Solicitor

Subject: Standardized Guidance on Compiling a Decision File and an Administrative Record

The Office of the Solicitor has developed guidance to assist you and your employees when compiling Decision Files and administrative records. This information should be useful to Bureaus and Offices when handling electronic materials and drafts encountered in the decision-making process. In the future, this guidance will be incorporated into the Departmental Manual.

As many of you are aware, decision files and administrative records document the Department's decision-making process and record the basis and rationale for making the decision. Decision Files should be created contemporaneously with development of agency decisions, while administrative records evidence the Department's basis for defending agency decisions.

If you have any questions about the contents of this guidance, please contact Art Gary, Associate Solicitor, Division of General Law.

cc: Regional and Field Solicitors

Attachment

Department of the Interior
Standardized Guidance on Compiling a Decision File and an Administrative Record

PART A – INTRODUCTION

I. Purpose of This Guidance

The purpose of this guidance is to provide Bureaus and Offices within the Department of the Interior standardized procedures for compiling a Decision File for the records that contemporaneously document any decision and, if necessary, an administrative record ("AR") for judicial review. These procedures apply to the preparation of Decision Files and ARs of agency decisions other than formal rulemaking[1] and administrative adjudication, such as matters before the Office of Hearings and Appeals. Agency personnel should promptly consult the Office of the Solicitor when questions arise concerning the composition of a Decision File and throughout the process of preparing an AR to ensure that they are properly compiled. This guidance establishes internal Department guidelines only.[2]

II. Importance of Compiling an Accurate and Thorough Decision File and AR

Under the Administrative Procedure Act ("APA"), a court reviews an agency's action (*e.g.*, any decision) to determine if it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706 (2)(A). In making this determination, a court evaluates the agency's complete AR. Consequently, the agency must take great care in compiling a complete AR. Courts will generally defer to agency decisions, although the degree of deference often varies. For example, if the Department made a thorough and informed decision, but documentation supporting the decision is not contained in the AR, any deference a court may have given to the agency decision could be lost or diminished.

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[1] Agency rulemaking proceedings primarily take two forms – formal and informal rulemaking. In general, formal rulemaking results when a statute specifically requires an agency to conduct a trial-like "on the record" hearing and provides interested parties an opportunity to testify and cross-examine adverse witnesses before issuing a particular rule. *See* Administrative Procedure Act ("APA"), 5 U.S.C. §§ 556-557. In contrast, informal or "notice and comment" rulemaking only requires an agency to perform certain notice-and-comment procedural requirements prior to issuing a rule. *See* APA, 5 U.S.C. § 553. For purposes of this guidance use of the term "rulemaking" will include only informal rulemaking unless otherwise specified.

[2] This document does not create any rights, substantive or procedural, that are enforceable at law by any party.

In general, an AR is a compilation of documents[3] that includes the decision-making documents, as well as relevant agency documents generated or received in the course of the decision-making process. The AR should document the process the agency used in reaching its final decision to demonstrate it followed the required procedures, as provided by statute, regulation, and any applicable agency policies, and must explain and rationally support the agency's decisions. Moreover, the AR must demonstrate that the agency considered opposing viewpoints, if any, and provide a thorough explanation as to why the preferred course of action was adopted.

For this and other reasons, it is important that all Bureaus and Offices maintain organized, accurate, and thorough Decision Files that document work on their decisions. A complete Decision File ensures that the decision-maker, typically the individual signing the decision document, has access to information sufficient to render a well-reasoned decision. An agency must also protect the public's interest in government documents, and preserve its own interests, including compliance with the Federal Records Act and related requirements. Finally, if an agency decision is challenged in court, a thorough Decision File will enable the agency to compile an AR sufficient to defend the decision.

The Decision File, and any subsequent AR presented to the court, should:

- Contain the complete "story" of the agency decision-making process, including options considered and rejected by the agency;
- Include important substantive information that was presented to, relied on, or reasonably available to the decision-maker;
- Establish that the agency complied with relevant statutory, regulatory, and agency requirements; and
- Demonstrate that the agency followed a reasoned decision-making process.

The Decision File should be compiled as documents are generated or received during the decision-making process, making it a contemporaneous record of the decision. This practice will also increase agency efficiency and performance should it become necessary to create an AR.

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[3] The general term for all agency documents is records, which are defined in 44 U.S.C. § 3301 as:

> all books, papers, maps, photographs, machine readable materials [e.g., e-mails, videos, etc.], or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business.

To avoid confusing "records" with "administrative record" and the Department's general records management requirements, this guidance generally refers to individual records as "documents," except where otherwise appropriate.

III. Relation of Decision File or AR Compilation to Other Agency Record Management and Disclosure Requirements

The Department has multiple responsibilities for the maintenance and disclosure of federal records. For purposes of this guidance, these responsibilities fall into three general categories that often intersect: 1) records management,[4] which includes maintaining a Decision File; 2) the Freedom of Information Act ("FOIA"), 5 U.S.C. § 552; and 3) AR compilation.

Documents contained in a Decision File and an AR are not necessarily identical to those that might be released in response to a FOIA request. Although some documents previously released to the public through FOIA may be relevant to the decision and should properly be included in a Decision File and an AR, all documents released in response to a FOIA request may not need to be included in a Decision File and an AR because they are not relevant to the decision or the decision-making process. Conversely, an agency may not be able to disclose all documents in a Decision File or an AR to the public, for example, because they may be covered by a protective order.

This guidance relates only to agency documents identified for inclusion in a Decision File and an AR. Questions concerning general records management, FOIA, and how these statutes and rules relate to an AR should be brought to the attention of the Office of the Solicitor.

PART B – CREATING A CONTEMPORANEOUS DECISION FILE

I. The Decision File

A Decision File is the contemporaneous record of the agency's decision-making process. Practically, the Decision File is a collection of documents maintained by a designated employee, generally the employee, the program manager, the project manager, or their staff who has access to relevant documents, that details the development of an agency decision. If the decision is subjected to judicial review, the Decision File will be used as the primary basis for compilation of the AR. Other terms often used by Bureaus and Offices to describe a Decision File include "case file," "action file," "agency file," "official file," or "issue file."

II. Guidelines For Use in Generating a Decision File

Bureaus and Offices have wide latitude to create and maintain Decision Files, but the following general guidelines should be followed:

- The Office of the Solicitor should be consulted throughout the process as necessary;

[4] Federal records management requirements are governed by 44 U.S.C. Chapter 29, which is administered by the National Archives and Records Administration.

- A Decision File should be created once consideration of a decision begins, which will vary based on the situation;
- All documents necessary to create a single organized source of information that records the agency decision and decision-making process should be collected;
- The Decision File should be kept in an accessible location and should be organized in a logical manner, such as chronologically or by topic, so that documents can be added to the Decision File as they are generated or received;
- All documents placed in the Decision File should be appropriately labeled and dated;
- Substantive meetings that are relevant to the decision-making process should be sufficiently documented;
- Drafts that help substantiate the agency's decision-making process should be included in the Decision File;
- Documentation of electronic information (such as that found on websites) and communications (such as emails) should be maintained in the Decision File only if relevant, substantive, and if they document the decision-making process;
- When information contained on websites is relied on, the Decision File should contain a contemporaneous copy of the website, including the address and date that it was downloaded, to ensure that the information relied on is preserved before the web site content changes;
- Contemporaneous memoranda that document relevant oral communications, confusing emails, and other matters that demonstrate the agency's decision-making process should be written or collected and placed in the Decision File; and
- Once the decision-maker has made a final decision, the Decision File should be closed.

PART C – COMPILING AN ADMINISTRATIVE RECORD

1. Sources To Consult Before Compiling an AR

The APA governs judicial review of challenged agency decisions but does not specifically describe what is to be included in an AR. Under certain circumstances, other

statutes and regulations provide specific guidance on compiling ARs. At the outset, the agency, in consultation with the Office of the Solicitor, must determine whether a statute other than the APA applies. Additionally, regulations and implementing guidance may govern how to assemble an AR. In such circumstances, this guidance should be used in conjunction with any specific statutes and regulations.

As a procedural matter, Bureaus or Offices should determine whether they will seek the logistical assistance of the Department's Document Management Unit, in the Office of the Executive Secretariat.

II. Documents That Should Initially Be Collected for an AR

During the initial search phase, a designated employee (the "AR Coordinator") should begin by examining the Decision File, if any, because most, if not all, of the documents that go into an AR should be in a properly maintained Decision File. The AR Coordinator should also direct an additional and thorough search in order to collect other relevant documents, including all primary and supporting documents, which may not be included in the Decision File. Such documents should include substantive documents:

- That were relied upon or considered by the agency, regardless of whether they support or oppose the agency's position;
- That were available to the decision-maker at the time the decision was made (i.e., considered by staff involved in the decision process as it proceeded through the agency), regardless of whether they were specifically reviewed by the decision-maker; and
- Even if the AR Coordinator believes the relevant documents are privileged.

Keep in mind that, while the APA does not specifically describe what is to be included in an AR, a court's review of a decision by an administrative agency is generally based on the reasons given by the agency and the information considered by the agency in the course of making the decision. not on the internal decision making process or on documents that reflect that process.

The AR Coordinator should maintain a written record detailing where he or she searched for documents and who was consulted in the process of compiling the AR. When questions about either the documents that should be included or the scope of any additional search arise, the AR Coordinator should consult with the Office of the Solicitor.

III. Steps To Take After Collecting Documents Related to the Challenged Decision

The AR Coordinator should contact the appropriate Office of the Solicitor reviewer after all documents have been gathered. The Office of the Solicitor will work with the Department of Justice and the AR Coordinator to determine the scope of the AR, such as

what types of documents that have been gathered are relevant to the particular issues in the litigation and should be included in the AR. In addition, the Office of the Solicitor will work with the Department of Justice to provide the AR Coordinator with any specific instructions for formatting, organizing, sorting, or providing the documents for review for assertion of privileges or for determination of relevancy.

The AR Coordinator should ensure that each document to be included in an AR is clean, legible, and complete, even if the document is believed to contain protected or privileged information. The AR Coordinator must ensure that the documents to be included in the AR have not been redacted, edited, or altered in any manner, unless such alterations are part of the original document.

IV. Documents That Should Be Included in an AR

After the documents have been collected, the AR Coordinator should begin to compile the AR. At this point, the AR Coordinator should consult with the Office of the Solicitor to determine if there is any additional guidance to be followed for the specific AR. Specific guidance may include particular issues that should be focused on or types of documents that should be flagged.

The following documents are typically included in an AR when they are relevant, without regard to whether they support or oppose the agency decision or whether the AR Coordinator believes they contain privileged information:

1) All *primary documents*. Primary documents record the agency action that is or may be challenged. They are typically signed or approved by a decision-maker, and commonly include National Environmental Policy Act ("NEPA") documents, such as Environmental Impact Statements or Environmental Assessments; Records of Decision; Endangered Species Act documents, such as a biological opinion; Resource Management Plans; and final rulemaking documents; and

2) All *relevant, supporting documents* that were followed, relied upon, or considered by the agency during the decision-making process. For purposes of this guidance, relevant documents are documents that bear a logical connection to the matter considered and that contain information related to the agency decision at issue. Documents are always relevant if they are procedurally required by statute or regulation as part of the decision-making process.

   Additionally, all supporting documents, which include those documents that affect the substance of the primary documents or the decision, are relevant because they explain the agency decision-making process, were before or available to the decision-maker at the time the decision was made, and were relied upon or considered by the agency during the decision-making process. They include documents that both support and are contrary to the agency decision.

Determinations of relevance may be complicated, affecting the content of the AR and the defense of the agency decision, and should be made in consultation with the Office of the Solicitor. The Office of the Solicitor will consult with the Department of Justice as appropriate. Examples of relevant, supporting documents include:

- Departmental, Office, and Bureau policies, guidelines, directives and manuals;
- Documents contained in previous ARs that were relied upon or considered in the decision-making process (even if not being challenged by the current litigation);
- Documents that have been released to the public, such as through a FOIA request, or are available to the public, including on the Internet;
- Communications and other information received from the public and other agencies and any responses to those communications. These communications can be unsolicited, the result of informal communications (such as between agencies), or part of a formal process such as comments received during NEPA public scoping or during rulemaking. If a consultant or contractor received or compiled public or agency comments, those comments and any reports or summaries should also be included in the AR;
- Articles, books and other publications. If a copy is made, be sure to cite the appropriate sources and follow applicable copyright laws;
- Technical information, monitoring data, sampling results, survey information, engineering reports or studies, and other factual information or data;
- Documents cited as a reference of a primary document, such as a bibliography of an Environmental Impact Statement;
- Reports and other information compiled by consultants and contractors;
- Memoranda to the file, created contemporaneously to the creation of the document, that further explain the content of relevant electronic communications and their attachments, meetings, and phone conversations;
- Electronic communications or other internal communications, such as emails and their attachments, which contain factual information, substantive analysis or discussion, or that document the decision-making process. (See section C.VI for detailed discussions of electronic communications);
- Minutes, transcripts of meetings, and other memorializations of telephone conversations and meetings, including personal memoranda or handwritten

notes that were circulated to colleagues or added to the Decision File. (See section C.VII for detailed discussions of personal memorializations); and

- Drafts of primary or relevant documents indicating substantive deliberations or discussions. (See section C.VIII for a detailed discussion of drafts).

When questions arise about which documents to include, the AR Coordinator should initially include the documents in the AR and then consult with the Office of the Solicitor. In addition, some documents, such as books and published reports, may be particularly lengthy, making them difficult to copy. When a document is particularly large, the Office of the Solicitor should be contacted for instructions on how to proceed. The Office of the Solicitor may be able to work with the Department of Justice and opposing counsel to come to a mutually acceptable agreement concerning how such documents will be produced.

V. Types of Documents That Should Not Be Included in an AR

The following types of documents, although they may be appropriate for inclusion in the Decision File, typically should not be included in the AR:

- Documents that are not relevant to the decision-making process;
- Documents that were not in the agency's possession at the time the decision was made;
- Electronic communications, including emails, which do not contain factual information, a substantive analysis or discussion, or information documenting the agency decision-making process. (See section C.VI for detailed discussions of electronic communications);
- Personal notes, journals, appointment calendars or memorializations maintained by an individual solely for personal use and not circulated to colleagues or added to the agency file. (See section C.VII for detailed discussions of personal memorializations); and
- Drafts of documents that simply agree with previous drafts or represent mere grammatical edits and do not contain significant additional substantive comments. (See section C.VIII for a detailed discussion of drafts).

When questions arise about the documents to be included, the AR Coordinator should initially include the documents in the AR and consult with the Office of the Solicitor.

VI. Electronic Communications

General Guidelines for Electronic Communications: Only electronic information and electronic communications, such as emails, that contain relevant factual information, a

substantive analysis or discussion that formed a material part of the decision-making process, or that actually document the agency decision-making process should be included in the AR. As a general rule of thumb, the great majority of email "chatter" about a decision need not be included in the AR. For example, emails should be included in the AR if they propose or discuss substantive changes to a draft primary document, or if they document substantive supervisory instructions to staff relating to the decision-making process. Such emails that are exchanged between the agency decision-maker, other agencies, stakeholders or representatives from outside parties should also generally be included if they substantively document the decision process. On the other hand, emails that merely set up a meeting or transmit an attached document, or that do not contain substantive relevant information generally do not need to be included in the AR.

The AR Coordinator should ensure that information related to the decision-making process is included in the AR in a manner that is clear and easy for a reviewer unfamiliar with the process to understand. For example, when included in the AR emails must include attachments and identifying information, such as author, recipient and date. In addition, while duplicate copies of emails should typically not be included in an AR, if a duplicate helps to explain the context of a related email, it should be included. Additionally, the AR Coordinator should ensure that the AR includes any memoranda that were inserted into the Decision File prior to the decision to clarify unclear or confusing emails. The AR Coordinator should consult with the Office of the Solicitor to determine if a particular email should be included in the AR.

Personal information: While emails that contain a commingling of personal and official information generally need not be included in the AR, such communications may need to be included in an AR without redaction if the official information substantiates the decision-making process.

Confusing chain messages: Ideally, employees should use care in drafting and sending emails to avoid later confusion in interpreting the chain of communication. Emails with numerous attachments or that contain a commingling of personal and agency information and email chains with multiple parties and topics can lead to confusion and misinterpretation of the intended communication, especially when a long period of time has passed and the reader is less familiar with the subject matter. It may be difficult for an outside party, such as a court, to determine the actual context of an email or portion of an email without relevant attachments or all the emails in a chain. When several separate responses are sent in reply to one original message, the original message should remain attached to each of the responses.

VII. Personal Memorializations

In general, documents that were created solely for an employee's personal convenience, even if they help that employee perform his or her official duties, should not be included in the AR. As a result, diaries, journals, "to-do" lists, personal notes and personal calendars that were created for the author's personal use and that were not distributed to other employees typically should not be included in the AR. However, documents that an

employee was required to create or maintain or that were distributed to or relied on by colleagues and/or the decision-maker and contain information related to the decision-making process should typically be included in an AR. If an employee takes relevant handwritten notes at a meeting and later gives copies of his or her notes to colleagues who were unable to attend the meeting, the notes should be included in an AR if there is no other documentation of the meeting.

However, in those situations where a personal memorialization is the only evidence that a relevant meeting occurred or contains substantive evidence relevant to the decision-making process, it may be necessary to include a personal memoralization in an AR. The AR Coordinator should consult with the Office of the Solicitor to determine if a personal memorialization should be included in a specific AR.

VIII. Draft Documents

Only drafts that help substantiate and evidence the decision-making process should be included in the AR. Drafts of documents that simply agree with previous drafts or represent primarily grammatical edits or were not circulated outside the author's immediate office or working group typically should not be included in an AR. For example, drafts may contain unique information such as an explanation of a substantive change in the text of an earlier draft, or substantive notes that represent suggestions or analysis tracing the decision making process.

The AR Coordinator should ensure that all drafts are labeled with identifying information, including the date and author or editor of the draft who made suggestions. When changes or suggestions are made to only one section of a large draft, the AR Coordinator may include just those sections in the AR, provided that the context is clear and that identifying information is included, such as the version of the draft reviewed, the date, and the name of the employee making the changes or suggestions.

IX. Preparing Documents for Office of the Solicitor Review

The AR Coordinator should notify the Office of the Solicitor upon completion of preliminary sorting and organizing of the documents found in the Decision File or the initial search and creation of a draft AR. The AR Coordinator should request any further instructions regarding formatting, organizing, sorting, or providing the documents prior to review. Unless requested by the Office of the Solicitor, the AR Coordinator should not simply provide the Office of the Solicitor the Decision File or all the documents collected after the initial search for documents. When the AR Coordinator provides the draft AR to the reviewing attorney, every document should be complete, regardless of whether the AR Coordinator believes it contains privileged or protected information.

X. Office of the Solicitor Review

The Office of the Solicitor will review the documents in the draft AR for relevancy and completeness and review and mark documents that contain protected or privileged information.

Completeness and Relevance: The Office of the Solicitor reviews the AR for completeness and provides advice to the AR Coordinator regarding any documents identified as questionable for relevance. While this review does not necessarily include a thorough examination of each document, the review should generally check for obvious logical deficiencies by evaluating whether the AR, as presented, adequately and accurately demonstrates the agency decision-making process. The Office of the Solicitor may review the steps taken by the AR Coordinator in compiling the AR to ensure that all primary and relevant supporting documents have been included.

Protected Information: The Office of the Solicitor will review the documents to determine if they contain specific information that the agency is prohibited from disclosing to non-federal parties, such as by court order, statute (e.g., the Privacy Act), or regulation. Disclosure of such information to any party, other than in accordance with specified procedures, could lead to lawsuits, penalties, or sanctions. The Office of the Solicitor will work with the Department of Justice to determine whether the protected information may be disclosed under seal or other protective order.

Privileged Information: The Office of the Solicitor will review the documents to ensure that any privileged information the agency wants to withhold is removed or redacted and adequately documented. Privileges attach to information under law to protect them from discovery. An agency generally cannot claim that information is privileged if the information has been lawfully released to a non-federal party in the past, perhaps in response to a FOIA request. Unlike protected information, privileged information may be disclosed at the agency's discretion. However, disclosure of privileged information forever waives the privileges in that information.

Relevant privileges that may be asserted by the Office of the Solicitor and the Department of Justice include: the attorney-client privilege, the attorney work product privilege, the confidential business information or trade secret privilege, the deliberative process privilege, and the executive and governmental privileges.

Due to the number of legal issues involved in asserting privileges, it is particularly important for the AR Coordinator and the Office of the Solicitor, in consultation with the Department of Justice, to work closely on any issues that involve privileged information.

XI. Office of the Solicitor Actions After Review

The Office of the Solicitor will recommend additions, removals, or redactions of documents from the AR as a result of the review described in section C.X. A privilege index will be created to describe the protected and privileged documents. (See section

C.XIV for a detailed discussion of the privilege index). The protected and privileged documents shall be stored separately from the non-protected and non-privileged documents. The Office of the Solicitor may keep the protected and privileged documents while the non-protected and non-privileged documents will be returned to the AR Coordinator.

XII. Organization of the AR

The AR should be organized in a logical and accessible way so that someone unfamiliar with the issue can find specific documents quickly. Documents in an AR can be compiled by chronological order, topic, or by agency in a multi-agency decision. Similarly, ARs may be divided into several topics, perhaps based on the topics of various primary documents at issue, and chronologically organized within each topic. This technique is particularly common if several agency actions are contested. Other logical organizations of ARs are permitted.

The AR Coordinator should be aware that there might also be organizational requirements created by court rules or accommodation of requests by the opposing party. The AR Coordinator should work closely with the Office of the Solicitor for instructions before determining the best method for organizing an AR.

XIII. Numbering of Documents in the AR

Each document in the AR should be assigned a unique number so that it may be uniformly referred to by the parties. All documents, including those that contain protected or privileged information, should be numbered using the same system. For ease of reference, documents may be tabbed or provisionally numbered, but the documents should never be permanently marked, numbered or altered in any way prior to completion and review of the index. Final, permanent document numbers should not be assigned until after the AR index is complete and has been reviewed by the Office of the Solicitor. In addition to assigning each document a unique number, every page of the AR should be numbered in such a way to allow the page numbers of particular documents to be identified and cited in a brief to the court, such as AR [document number], [page number]; AR [Volume number], [page number]; or AR [page number].

In some cases, Bates stamping or a similar electronic process can be used to individually number every page. Alternately, multi-paged documents with internal pagination may only need unique document numbers. Numbering typically should be done so that the documents and pages begin with the smallest numbers and end with the largest number. Please consult with the Office of the Solicitor to determine the best numbering technique.

XIV. Preparation of an AR Index and a Privilege Index

After the AR has been organized, the AR Coordinator should create both a complete AR index and a privilege index. Typically, an AR index is in chart form and includes the following categories of information: the unique document number; a brief (one- or two-

sentence) description of the document's nature and topic; date; identification of sender and recipient; number of pages; nature of any privilege or protection to be asserted. (See Appendix 1 for a sample AR index.)

In addition to the AR index, a separate privilege index must be generated if the agency is withholding any protected or privileged information. A privilege index (also referred to as a privilege "log") should include only those documents where a privilege or protection is being asserted. The content of a privilege index is similar to the content of an AR index, and includes an explanation of the privilege asserted. Once complete, a copy of the privilege index should be physically kept with the privileged and protected documents. (See Appendix 2 for a sample privilege index.) The AR Coordinator should not include any of the underlying privileged information in the AR index or the privilege index.

Prior to filing the AR index and privilege index with the court and releasing them to opposing parties, the AR Coordinator should consult with the Office of the Solicitor for specific requirements or instructions.

XV. Certification of AR to the Court

The AR must be certified to the court by the AR Coordinator, or in rare cases, another federal employee who is familiar with the manner in which the AR has been compiled. The certification is signed under penalty of perjury, and the AR Coordinator should work closely with the Office of the Solicitor to develop appropriate language. The certificate typically explains that the AR Coordinator was responsible for compiling the AR, has personal knowledge of its assembly, and states that the AR is full and complete. The certification also may describe the AR, such as the number of documents or the number of privileged or protected documents, or it may clarify that certain categories of documents are not included in the AR (such as transmittal memoranda, fax cover sheets, privileged and protected documents, internal working drafts, voluminous publicly available scientific reports, copyright protected books, etc.) In unique cases where the decision being challenged is not final, a clause may be inserted explaining that the agency expects to generate additional documents on the challenged issue. The certification is often sworn and notarized or in the form of a declaration with a Departmental and/or Bureau or Office seal. (See Appendix 3 for a sample certification.)

XVI. Filing the AR with the Court

Different courts have different rules for filing an AR. The Office of the Solicitor will work with the Department of Justice, the court, and the opposing party and will provide specific filing instructions to the AR Coordinator.

All-American Canal Lining Project
Administrative Record
DOCUMENT INDEX
(Volumes 1-4)

Date	Document	Vol.	Tab No.	Page No.	Filename on CD
	NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTS				
07/29/1994	Record of Decision of May 1994 for the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) on the All-American Canal (AAC) Lining Project, attached to letter of transmittal from Regional Director, Lower Colorado Region, Bureau of Reclamation (LC Region)	1	1	1	0001
March 1994	FEIS/FEIR on the AAC Lining Project, issued by Reclamation and Imperial Irrigation District	1	2	23	0002
March 1994	Engineering Appendix to the FEIS/FEIR	1	3	321	0002-01
March 1994	Environmental Appendix to the FEIS/FEIR	2	4	455	0002-02
March 1994	Geohydrology Appendix to the FEIS/FEIR	3	5	936	0002-03
March 1994	Public Involvement Appendix to the FEIS/FEIR	3	6	1269	0002-04
March 1994	Social Appendix to the FEIS/FEIR	4	7	1481	0002-05
11/22/1999	Memorandum to Yuma Area Office Manager, Reclamation, from Regional Director, LC Region, regarding reexamination and analysis of the 1994 FEIS/FEIR and Record of Decision for the AAC Lining Project	4	8	1574	0003
05/19/2003	Letter to Director, California Department of Water Resources, from Regional Director, LC Region, regarding adequacy of the 1994 FEIS/FEIR and Record of Decision for the AAC Lining Project (Project) and Finding of Ecological Equivalency	4	9	1588	0004
	ENDANGERED SPECIES ACT DOCUMENTS				
01/25/2005	Letter to Field Supervisor, Fish and Wildlife Service (FWS), Carlsbad, California, from Regional Director, LC Region, regarding request for confirmation of Conference Opinion (1-6-96-F-12) as a Biological Opinion for Peirson's milk vetch for the AAC Lining Project	4	10	1591	0005
11/15/2004	Memorandum to Regional Director, LC Region, from Assistant Field Supervisor, FWS, Carlsbad California, regarding LC Region's request for confirmation of Conference Opinion as a Biological Opinion for Peirson's milk vetch for the AAC Lining Project	4	11	1593	0006
09/9/2004	Letter to Field Supervisor, FWS, Carlsbad, California, from Deputy Regional Director, LC Region, requesting confirmation of Conference Opinion (1-6-96-F-12) as a Biological Opinion for Peirson's milk vetch for the AAC Lining Project	4	12	1596	0007
02/08/1996	Memorandum to Environmental Compliance Group Manager, LC Region, from Ecological Services Field Supervisor, FWS, Carlsbad, California regarding the Biological and Conference Opinion for the AAC Lining Project	4	13	1612	0008
September 1993	Final Fish and Wildlife Coordination Act Report, AAC Lining Project, Imperial County, California	4	14	1636	0009

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Appendix 1

All-American Canal Lining Project
Administrative Record
DOCUMENT INDEX
(Volumes 1-4)

Date	Document	Vol.	Tab No.	Page No.	Filename on CD
	SECRETARIAL CORRESPONDENCE				
9/13/2005	Letter to Secretary of Environment and Natural Resources of Mexico from Secretary of the Interior regarding lining of the AAC	4	15	1709	0010
11/19/2004	Letter to Secretary of Environment and Natural Resources of Mexico, from Secretary of the Interior regarding lining of the AAC	4	16	1712	0011
	INTERNATIONAL BOUNDARY AND WATER COMMISSION CORRESPONDENCE				
09/20/2004	Letter to Commissioner of Reclamation from Commissioner of the U.S. Section of the International Boundary and Water Commission (USIBWC) regarding status of consultation with Mexico	4	17	1724	0012
02/24/1992	Letter to Commissioner of USIBWC from Commissioner of Reclamation responding to letter summarizing Mexican consultation over AAC Lining	4	18	1726	0013
02/22/1989	Letter to Regional Director, LC Region, from Commissioner of USIBWC regarding USIBWC's position on seepage from the AAC	4	20	1728	0014
08/12/1986	Letter to Regional Director, LC Region, from Acting Commissioner of USIBWC responding to Reclamation's request for views on recovery of AAC seepage	4	21	1730	0015

Acronyms and Abbreviations	
AAC	All-American Canal
FEIS/FEIR	Final Environmental Impact Statement/Final Environmental Impact Report
FWS	Fish & Wildlife Service
LC Region	Bureau of Reclamation's Lower Colorado Regional Office
Reclamation	Bureau of Reclamation
USIBWC	United States Section of the International Boundary & Water Commission

For Your Info.

Page 2 of 2

All-American Canal Lining Project Administrative Record
DOCUMENT INDEX

Date	Document
	PRIVILEGED DOCUMENT LOG
6/24/1999	Fax to LC Regional Director from YAO Area Manager transmitting the comments of the DOI Solicitor's Office, which were requested by Reclamation on the AAC memorandum regarding Reexamination and Analysis of the 1994 FEIS/EIR and ROD for the AAC Lining Project
4/23/1999	Memorandum to DOI Solicitor's Office from YAO Area Manager requesting Solicitor's Office legal opinion regarding the Environmental Impact Statement and Record of Decision for the AAC Lining Project
4/21/1999	Email from LC Regional biologist transmitting comments on a draft memorandum that requests the legal advice of the DOI Solicitor's Office regarding AAC Lining Project
4/9/1993	Response from DOI Solicitor's Office to LC Regional Director's request for a basis of negotiation regarding the AAC Lining Project

For Your Info.

Appendix 2

Page 1 of 1

United States of America

DEPARTMENT OF THE INTERIOR
Washington, D.C.

I certify that the official records of the Department of the Interior identified below are in my legal custody and attest that each annexed paper is a true copy of a document comprising part of the official records of the Department of the Interior:

- Administrative Record, as reflected in the attached index, supporting the [Department, Bureau, or Office]'s [Date] Record of Decision for the [Decision Being Litigiated]. The Administrative Record does not contain fax cover sheets, privileged and protected documents, or voluminous publicly available scientific reports.
- Additional documents related to Plaintiffs' claims in this litigation.
- The [Department, Bureau, or Office] is presently implementing the [Date] Record of Decision for the [Decision Being Litigated] and anticipates generating additional documents with respect to such implementation before [Relevant Action] begins.

IN TESTIMONY WHEREOF, I swear under penalty of perjury that the foregoing is true and correct. Signed this ___ day of [Month, Year].

SIGNATURE: _____

TITLE: _____

OFFICE: _____

APPROPRIATE SEAL

For Your Info.

Appendix 3

Appendix E – Surface Management Action Codes

MANDATORY AND REQUIRED ACTION CODES
371511, 380210, 380910, 380913, and 381402 Case Types
Mandatory (M) = Action code must always be entered.
Required (R) = Action code must be entered if the situation exists.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
002	Enter date Environmental Analysis is initiated.	**EA Initiated (R)** Use with 380913 only if Occupancy is involved	380210 380910 381402 380913 371511		Replaces AC 004. Populate the document number field with the first available number, for AC 002. When additional AC 002s are entered, you must populate the document number field with the next number. Paired w/AC 008. Pending entity required.
003	Enter date Environmental Impact Statement (EIS) is initiated.	**EIS Initiated (R)**	380210 380910 381402 371511		Replaces AC 004. Populate the document number field with the first available number, for AC 003. When additional AC 003s are entered, you must populate the document number field with the next number. Paired w/AC 009. Pending entity required.
006	Enter date categorical exclusion (CX) analysis is initiated.	**CX Initiated (R)** Use pursuant to 516 DM 11.9.	380210 380910 381402		Replaces AC 004. Populate the document number field with the first available number, for AC 006. When additional AC 006's are entered, you must populate the document number field with the next number. Paired w/AC 007. Pending entity required.
007	Enter date Categorical Exclusion (CX) Determination is	**CX Determined (R)**	380210 380910 381402	Enter applicable document number in action remarks.	Replaces AC 005. Populate the document number field with the number that corresponds with the

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	made.				initiating AC 006 (document). Remove pending entity from AC 006.
008	Enter date Environmental Analysis (EA)/FONSI Decision Record is signed.	**EA Approved (R)** Use with 380913 only if Occupancy is involved	380210 380910 381402 380913 371511		Replaces AC 005. Populate the document number field with number that corresponds with the initiating AC 002 (EA document). Remove pending entity from AC 002.
009	Enter date Environmental Impact Statement (EIS) is signed.	**EIS Approved (R)**	380210 380910 381402 371511	Enter EIS number in action remarks.	Replaces AC 005. Populate the document number field with number that corresponds with the initiating AC 003 (EA document). Remove pending entity from AC 003.
018	Enter date trespass is resolved or date it is determined no trespass occurred	**Trespass Resolved (R)**	371511		Use in conjunction with AC 244 **Terminated** and AC 970 **Case Closed.**
022	Enter date reclamation costs are determined by BLM.	**Recl Cost Det (M)**	380210 380910 381402 380913 371511	Enter total reclamation costs determined followed by semicolon. Following the semicolon, enter year review (YRR) period: 1YRR for phased bonding regardless of case type: 2YRR for 380913 notice level case type; and 3 YRR for 380210, 380910 and 381402 Plan of Operations case types. EX: $5000;1YRR For Reclamation Cost Estimate Review for Amendments/ Modifications: When AC 022 is entered, populate the "Action Remarks" field with the reclamation cost estimate followed by a semicolon and "PARTIAL".. EX: $5000;PARTIAL The Action Remarks field should only contain the bond amount, semicolon, and 1YRR, 2YRR, 3YRR, or	Replaces AC 477. Use date of decision requiring increase/decrease in bond amount or date of memo to the file verifying cost estimate is adequate. Use every time reclamation costs are reviewed. Use of the YRR portion of the field sets or resets the policy time review period.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
				PARTIAL. If it is necessary to conduct an entire (total) review of the reclamation cost estimate then the appropriate YRR period should be entered to reset the policy review time line.	
025	Enter date determination of NEPA adequacy (DNA) analysis is initiated.	**DNA Initiated (R)** Use with 380913 only if Occupancy is involved	380210 380910 381402 380913 371511		To be used when tiering from an existing EX, EIS or CX. Paired with AC 026.
026	Enter date determination of NEPA adequacy (DNA) is made	**DNA Concluded (R)** Use with 380913 only if Occupancy is involved	380210 380910 381402 380913 371511	Enter prior analysis (E.G. EA or EIS) used in making determination followed by a semicolon in action remarks.	
040	Enter date compliance exam/report is requested/initiated	**Compliance Exam/Rpt Rqt/Init (R)**	380210 380910 381402 380913 371511		
041	Enter date compliance inspection was done	**Compl Exam/Rpt Completed (R)**	380210 380910 381402 380913 371511		
042	Enter date case is sent to another office.	**Case Sent To (R)**	380210 380910 381402 380913 371511	Enter where case file has been sent, e.g., ASO, IBLA, etc.	
043	Enter date of issuance of a Suspension order (3809.601(b) or an Immediate temporary suspension order (3715.7-1(a).	**Suspension Order (R)**	380210 380910 381402 380913 371511	Enter SO; for Suspension Order and ITSO; for Immediate Temporary Suspension Order.	
044	Enter date of issuance	**Cessation Order (R)**	380210	Enter TCO; for temporary cessation	

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	of a Cessation order (3715.1(b)).		380910 380913 371511	order or PCO; for permanent cessation order.	
066	Enter date of petition of MMS advisory memo.	**Bankruptcy Filed (R)**	380210 380910 381402 380913 371511	Enter entity name.	This code must be removed when entity no longer appears on MMS bankruptcy list.
103	Enter date additional information is requested.	**Addtl Info Recd (R)**	380210 380910 381402 380913 371511	Enter type of information received and from whom in action or general remarks.	
104	Enter date additional information is received.	**Addtl Info Reqd (R)**	380210 380910 381402 380913 371511	Enter type of information requested and from whom, in action or general remarks.	
114	Enter date amended Notice is received.	**Amend/Corr Apln Recd (R)**	380913		Change land description and case acres as appropriate.
116	Enter date Notice amendment is approved	**Amendment Appv (R)**	380913		
106	Enter date monies requested.	**Monies Requested (R)**	380210 380910 381402 380913 371511	Enter amount requested. Enter purpose for which money requested. For amount entry format: Beginning in 1st position of action remarks enter $ (Dollar symbol) 1 to9 positions for whole figure, decimal to 2 positions for cents (00 to 99) end with semicolon, EX; $10000;	Pending action required. May include monies for cost recovery, occupancy clean-ups, reclamation costs, etc.
119	Enter date appeal is dismissed by appropriate authority.	**Appeal Dismissed (R)**	380210 380910 381402 380913 371511	Enter decision citation. If in part, note in action remarks.	Populate the document number field with the number that corresponds with the initiating AC 120 (document).
120	Enter date notice of appeal is filed.	**Appeal Filed (R)**	380210 380910 381402	Enter who will review the appeal, e.g., SD; or IBLA;	Populate the document number field with the first available number, for AC 120.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
			380913 371511		When additional AC 120's are entered, you must populate the document number field with the next number. Paired w/ AC 119, AC 361, and AC 365. Pending entity required.
122	Enter date request is made for additional time.	**Ext of Time Rqstd (R)**	380210 380910 381402 380913 371511	Enter reason followed by a semicolon and duration for the extension; EX: WEATHER; MM/DD/YY.	Pending entity required.
125	Enter date of decision totally rejecting notice.	**Apln Rej/Denied (R)**	380913	Enter reason notice was rejected in action remarks.	Alters case disposition to REJECTED. If no appeal filed, enter "970" **CASE CLOSED.**
127	Enter date action is suspended by decision, notice or other action, e.g., processing an application.	**Action Suspended (R)**	380210 380910 381402 380913 371511	If suspended in part, enter "IN PART" and identify suspended land in land description. Enter reason for suspension.	
130	Enter date notice is withdrawn.	**Apln Withdrawn (R)**	380913		Alters case disposition to **WITHDRAWN**. Enter "970" **CASE CLOSED.**
136	Enter date request for a stay is filed in conjunction with an appeal to IBLA.	**Stay Requested (R)**	380210 380910 381402 380913 371511		
137	Enter date of order issued by IBLA granting the request for stay.	**Stay Granted (R)**	380210 380910 381402 380913 371511		EX: The effect of the decision appealed from is suspended pending the outcome of the appeal in IBLA.
138	Enter date of order issued by IBLA	**Stay Denied (R)**	380210 380910		EX: The decision on appeal is in effect during the pendency of the appeal in

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	denying a stay.		381402 380913 371511		IBLA.
148	Enter date litigation is filed in court.	**Litigation Filed (R)**	380210 380910 381402 380913 371511	Enter civil action number.	Pending entity required.
188	Enter date decision vacating a prior decision in whole or in part	**Dec Vacated/Rescinded(R)**	380210 380910 381402 380913 371511	If applicable, enter decision citation and/or "in part" in action remarks.	Alters case disposition to Recorded.
203	Enter date extension of time is approved	**Ext of Time Granted (R)**	380210 380910 381402 380913 371511	Enter date by which operator needs to resolve issue resulting from AC-122.	
222	Enter date hearing is held.	**Hearing Held (R)**	380210 380910 381402 380913 371511	Enter place of hearing in action remarks.	Remove pending action from AC-223 – **HEARING ORDERED**.
223	Enter date hearing is ordered by Hearings Officer or Administrative Law Judge.	**Hearing Ordered (R)**	380210 380910 381402 380913 371511	If BLM, note in action remarks.	Optional to enter date and location of scheduled hearing in action/general remarks. Pending entity required.
234	Enter date Notice ceased by its own terms.	**Expired (R)**	380913		Use for all expired cases. Alters case disposition to Expired. Enter "970" **Case Closed**, except for Notices where reclamation is not completed.
235	Enter effective date Notice is extended	**Extended (R)**	380913	Enter date the Notice has been extended to.	Use in conjunction with AC 763 **EXPIRES.**
244	Enter date authorization terminated due to	**Terminated (R)**	380210 380910 381402		Alters case disposition to Canceled. Use in conjunction with AC 970 **CASE**

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	failure to comply with terms of authorization.		380913 371511		**CLOSED.**
247	Enter date on which the file needs to be reviewed for further action.	**Future Action Suspense**	380210 380910 381402 380913 371511		Pending action required.
260	Enter date acknowledgement or identification is made where case lands have been identified to be in whole or in part, in a BLM Wilderness Study Area.	**Lands Located in WSA (R)**	380210 371511	Enter name of WSA followed by a semicolon. EX: OYWHEE CANYON; If in part, use alpha tie /A/ to remarks.	Enter legal description of lands WSA in remarks.
261	Enter date acknowledgement or identification is made where case lands have been identified to be, in whole or in part, in a Designated Wilderness Area.	**Lands Located in DWA (R)**	380910 380913 371511	Enter name of DQ followed by a semicolon. EX: BIG ROCKS; If in part, use alpha tie /A/.	Enter legal description of lands in DWA in remarks.
263	Enter date acknowledgement or identification is made where lands have been identified to be, in whole or in part, in a designated Area of Critical Environmental Concern (ACEC).	**Lands Located in ACEC (R)**	380910 380913 371511	Enter name and/or number of "ACEC" followed by semicolon. If in part, use alpha tie/A/.	Enter legal description of lands in ACEC in remarks.
295	Enter date request for Notice extension is received.	**Extension Filed(R)**	380913 380910		
300	Enter date operator/claimant is formally requested to furnish a bond.	**Bond Required (M)**	380210 380910 381402 380913	Enter bond amount followed by a semicolon. EX: $100000;	AC 300 is used to, 1. Establish the anniversary dates for 380913 case types and 2. Generate the Bond Review Report.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
					Pending entity required.
303	Enter date when noncompliance situation is resolved	**Notice to Proceed Issued (R)**	380210 380910 381402 380913 371511		
333	Enter date amended or corrected plan of operations is requested by BLM.	**Amend/Corr NTC/Plan Rqst (R)**	380210 380910 381402	Optional to enter what is to be amended followed by a semicolon, i.e., LAND DESCRIPTION;	
342	Enter date modification to mine plan is received	**Mine Plan Mod Received (R)**	380210 380910 381402	Enter Number of acres proposed disturbance, EX: 15; AC PROP DISTURB. Enter number 1 for first modification in DocID and 2 for the second one, etc.	Pairs with AC 343 **Mine Plan Modification Approved**.
343	Enter date modification to mine plan is approved	**Mine Plan Mod Approved (R)**	380210 380910 381402	For plans with a number of plan modifications, number them consecutively. EX: PLAN MODIFICATION 1, 2, 3… Enter number 1 for first modification in DocID and 2 for the second one, etc.	Pairs Action Code "342" Mine **Plan Modification Received**.
361	Enter date decision is affirmed, affirmed in part or affirmed as modified.	**Decision Affirmed (R)**	380210 380910 381402 380913 371511	If applicable, enter decision citation and/or "IN PART" in action remarks. Optional to tie to original decision in action remarks. EX: /A/	Populate the document number field with the number that corresponds with the initiating AC 120 (document). Enter AC 970 **Case Closed** if applicable.
365	Enter date of decision remanding the case for further action.	**Dec Remanded (R)**	380210 380910 381402 380913 371511	If applicable, enter decision citation in action remarks. Optional to tie to original decision in action remarks. EX: /A/	Populate the document number field with the number that corresponds with the initiating AC 120 (document).
366	Enter date a decision is reversed or reversed	**Dec-Revrsd & Remanded (R)**	380210 380910	If applicable, enter decision citation and/or "in part" in action remarks. Tie	Pending entity required.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	in part and remanded for further actions.		381402 380913 371511	to original decision with alpha tie in actions remarks. EX: /A/	
376	Enter date bond is filed.	**Bond Filed (M)**	380210 380910 381402 380913	Enter bond amount, semicolon, BLM bond number operator or claimant in action remarks. EX: $10000;AZB0043 Freeport. If characters exceed 21 spaces, complete entry in general remarks using an alpha tie in action remarks. EX: /A/ Enter bond-holder, e.g., BLM or state in general remarks.	Populate the document number field with the first available alpha code, for AC 376. When additional AC 376's are entered you must populate the document number field with the next alpha code. AC 376 is paired with AC 410 or AC 909. In cases where a Plan is to be bonded by multiple bonds and those bonds are filed the same day, or within close proximity, there will be more than one AC 376 pending (open time line) at a time. Each AC 376 must be assigned a different alpha code which will be paired with the appropriate AC 410 or AC 909 decision.
377	Enter date document requesting partial or total bond termination is received.	**Bond Termination Rqstd (R)**	380210 380910 381402 380913	Enter BLM bond number, semicolon and "partial" or "total". EX: NV0055; PARTIAL.	Optional to add "BY PRINCIPLE" OR "BY SURETY."
378	Enter date period of liability on bond is terminated.	**Bond Period Terminated (R)**	380210 380910 381402 380913	Enter BLM bond number and semicolon. EX: AZB000679;	
387	Enter date unauthorized occupancy is discovered. This code sets disposition to Pending.	**Case Established (M)**	371511 380210 380910 381402 380913 371511	Responsible offices code (DE 1428) required under Pending Action. EX: AZ-100;	
388	Enter date closed case reopened.	**Case Reopened (R)**	380210 380910 381402 380913 371511		Returns case to pending disposition.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
389	Enter date hearing is requested pursuant to Title 43 CFR 4, subpart E.	**Hearing Requested (R)**	380210 380910 381402 380913 371511	Enter reason for hearing in Action/General remarks, if applicable.	
392	Enter date monies received.	**Monies Received (R)**	380210 380910 381402 380913	Enter amount and type of monies received. For amount entry format: Beginning in 1st position of action remarks enter $ (dollar symbol) 1 to 9 positions for whole figure, decimal to 2 positions for cents (00 to 99) end with semicolon, EX: $100000;	
399	Enter date bond is no longer required on case.	**Bond No Longer Required (R)**	380210 380910 381402 380913		
405	Enter date Notice is filed.	**Notice of Intent/Disturb (R)**	380913	Enter total, cumulative, proposed acres disturbed (by regulation, 5 acres or less) followed by a semicolon, EX: 3.5; AC PROP DISTURB.	For actual acres disturbed, use "528" **Acres Disturbed**.
410	Enter date of decision declaring bond unacceptable.	**Bond Unacceptable (R)**	380210 380910 381402 380913	Enter effective date followed by semicolon. EX: EFF MM/DD/YY;	Populate the document number field with the alpha code that corresponds with the initiating AC 376 (document). AC 376 and 410 are paired if applicable.
421	Enter date plan of operations filed.	**Plan Oper/Expl/Dev Filed (M)**	380210 380910 381402	Enter total, cumulative, proposed acres disturbed followed by semicolon. EX: 17; AC PROP DISTURBED	Begins Time Line. Paired w/AC 422. Only one AC 421 per case.
422	Enter date of decision approving plan of operation	**Plan Oper/Expl/Dev Appv (R)**	380210 380910 381402		
423	Enter date a plan was rejected	**Plan Oper/Expl/Dev Rej (R)**	380210 380910 381402	Enter reason plan was rejected in action/general remarks.	Replaces AC 125 for Plans. Sets case disposition to **REJECTED**.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
					Use in conjunction with AC 970 **CASE CLOSED**.
424	Enter date plan was withdrawn.	**Plan Oper/Expl/Dev Wdn (R)**	380210 380910 381402		
429	Enter date application acknowledged.	**Apln Acknowledged (R)**	380913		We have a 15 day window to respond if information is complete.
434	Enter date of Authorized Officer's decision revoking a plan of operations.	**Plan of Oper-Revoked (R)**	380210 380910 381402		
437	Enter date that the form notifying the BLM of an existing occupancy is received.	**Occupancy Form Filed (R)**	380210 380910 380913		This one time form had to have been used prior to 10/16/96.
438	Enter date that the Authorized Officer issues a decision that locatable mineral use and occupancy has been determined to be reasonably incident and meets the standards of 43 CFR 3715.	**Occupancy Concu (R)**	380210 380910 380913		
439	Enter date Authorized Officer issues a decision that locatable minerals use and occupancy has been determined to not meet the standards of 43 CFR 3715	**Occupancy Non-Concu (R)**	380210 380910 380913 371511		
440	Enter date that information was received in BLM office related to use	**Occupancy Proposed (R)**	380210 380910 380913	If not included as part of AC 405 or AC 421 then enter acres followed by a semicolon. EX: 2 AC PROP DISTURB;	

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	and occupancy in conjunction with filing of Plan or Notice				
441	Enter date reconsideration is requested (by appellant or BLM).	**Reconsideration Rqstd (R)**	380210 380910 381402 380913 371511		Pending entity required.
451	Enter date default in performance is determined.	**Default Determined (R)**	380210 380910 381402 380913	Enter nature of default, i.e., SURFACE DAMAGE; or PERFORMANCE; etc.	Pending action required.
452	Enter date surety/principal notified to correct default.	**Default Correction Reqd (R)**	380210 380910 381402 380913		Pending action required.
453	Enter date default in performance is corrected.	**Default Corrected (R)**	380210 380910 381402 380913		Used when operator or surety/principal corrects default. If payment made under bond to resolve default, also enter "486" **Payment by Surety /Principal**.
460	Enter date BLM Office issued decision obligating funds under accepted bond(s) to satisfy estimated reclamation costs	**Bond Amount Obligated (M)**	380210 380910 381402 380913	Enter bond amount followed by a semicolon. EX $170000; enter bond amount obligated to this project in whole dollars	Used to indicate that a bond was approved and the amount obligated. The amount here should be greater or equal to the amount determined by BLM to satisfy the estimated reclamation costs of a notice or plan of operations (AC/022).
463	Enter date of decision denying request for partial or total bond termination.	**Bond Termination Denied (R)**	380210 380910 381402 380913	Enter effective date, semicolon and BLM bond number. EX: EFF MM/DD/YY;NV0029	Bond termination can be denied for various reasons, e.g., well not properly plugged reclamation not completed, etc.
465	Enter date review of bond amount is completed.	**Bond Reviewed (R)**	380210 380910 380913 381402		
474	Enter date of issuance	**Notice of**	380210		

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	of Notice of noncompliance (3715-1(c)) or Noncompliance order (3809.601(a)).	**Noncompliance (R)**	380910 381402 380913 371511		
475	Enter date it is determined that operator/claimant cannot be found.	**Operations Abandoned (R)**	380210 380910 381402 380913 371511		
476	Enter date case established	**Notice/Plan Activity (R)**	380210 380910 381402 380913	Enter type of activity (drilling, trenching, mining, etc.)	
477	Enter date BLM notifies operator that bond needs to be increased/decreased or operator requests BLM to decrease bond.	**Bond Adjustment Required (R)**	380210 380910 381402 380913	Enter BLM bond number, semicolon and "increased to" or "decreased to" total bond amount. EX: NVWYOOO0; INCREASED TO $2000.	
486	Enter date default payment made by surety/principal.	**Pmt by Surety/Principal (R)**	380210 380910 381402 380913 371511	Enter amount. For amount entry format: Beginning in 1st position of action remarks enter # (dollar symbol) 1 to 9 positions for whole figure, end with semicolon, EX: $10000;	
487	Enter date of Memorandum requesting remand of case from IBLA.	**Remand Requested (R)**	380210 380910 381402 380913 371511		Pending action required.
491	Enter date judicial action on the case is completed.	**Litigation Completed (R)**	380210 380910 381402 380913 371511	Enter results. May need to use General Remarks, if so tie with alpha character.	Remove pending action from AC 148 **Litigation Filed**.
500	Enter date that plan of operation was filed or case established.	**Geographic Name (R)**	380210 380910 381402	Enter name (up to 20 characters) beginning in 1st position of action remarks and end with semicolon.	Use for geographic name of project and/or to list mining claim name(s).

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
			380913 371511		EX: Gold Strike;
501	Enter date plan of operation was filed or case was established.	**Reference Number (R)**	380210 380910 381402 380913 371511	Enter type of number (DE 2537) and reference number: beginning in 1st position the entry format is: 1 to 4 positions for type (DE 2537) hyphen 1 to 14 positions for number; end with semicolon. EX: DOSN-N16-81-012P;	Use for reference number and/or MC number(s). Use as a cross reference to other cases.
528	Enter date of inspection that determined number actual acres disturbed.	**Acres Disturbed (R)**	380210 380910 381402 380913 371511	Enter number of acres disturbed followed by a semicolon. EX:7;	
529	Enter date notification of reclamation completed.	**Acres Reclaimed (R)**	380210 380910 381402 380913 371511	Enter the total number of acres within the project area that have been reclaimed to the satisfaction of the BLM followed by a semicolon. EX: 150;	Use in conjunction with code "528" Acres Disturbed. Pending entity required.
541	Enter date notice of completion of reclamation is received from operator	**Reclamation Notice (R)**	380210 380910 381402 380913 371511	Enter INTERIM or FINAL followed by semicolon.	Includes on-going reclamation, site stabilization and final reclamation efforts. Requires compliance inspection. Pending entity required.
669	Enter date status of land is checked to verify mineral or surface ownership, etc.	**Land Status Checked (M)**	380210 380910 381402 380913 371511		
672	Enter date the successor operator is approved or accepted.	**Successor Operator (R)**	380210 380910 381402 380913	Enter previous operator followed by a semicolon, EX: ATLAS GOLD;	
678	Enter effective date suspension is	**Sus Lifted (R)**	380210 380910		May be used in conjunction with "127" **Action Suspended**.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	terminated.		381402 380913 371511		
763	Enter date Notice expires.	**Expires (R)**	380913		Delete this code if case is closed before expiration date.
817	Enter date of decision recognizing the merger of two or more corporations/partnersh ips.	**Merger Recognized (R)**	380210 380910 381402 380913	Enter old name followed by a semicolon (EX: GOLDSPIKE;), and new name in the proprietor field.	
853	Enter date compliance review is due.	**Compl/Review Due Date (R)**	380210 380910 381402 380913 371511	Note whether inspections are completed biannually or quarterly followed by a semicolon. EX: Biannual;	Pending action required. Once the inspection has been completed and recorded with AC 041-**Compliance Exam/Rpt.** Completed, change the date of this AC to next required inspection date.
874	Enter date cultural and T&E clearances are completed.	**Resource Clearances (R)**	380210 380910 381402 380913 371511	Note type of review completed (e.g., T&E, CULT) followed by Semicolon. If T&E plant and animal clearances are completed separately, note which one was completed. EX: T&E PLANT;	
875	Enter date completed plan is filed or date operation began utilizing leachate.	**Oper Utilizing Leachate (R)**	380210 380910 381402	Note type of leachate followed by a semicolon, EX: SODIUM BROMIDE, CYANIDE HEAP, CYANIDE VAT, etc.	
891	Enter date of actual onset of activities in association with plan of operations.	**Beginning Date (R)**	380210 380910 381402		For proposed beginning date use cone "247" **Future Action Suspense** & enter "PROPOSED BEGIN DATE" IN ACTION REMARKS. Use in conjunction with code "393" Completion Date.
893	Enter actual completion date in association with plan of operations.	**Completion Date (R)**	380210 380910 381402		For proposed completion date use code "247" **Future Action Suspense** & enter "PROP COMPLETION DATE" in action remarks.

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
					Use in conjunction with code "891" **Beginning Date**.
896	Enter date conflict identified on same lands.	**Conflict Identified (R)**	380210 380910 381402 380913	Cross-reference serial numbers of cases involved in action or general remarks.	Pending entity required.
897	Enter date conflict on same lands resolved.	**Conflict Resolved (R)**	380210 380910 381402 380913		Use in conjunction with AC 896 **Conflict Identified** or AC 127 **Action Suspended**.
909	Enter date bond is accepted.	**Bond Accepted (R)**	380210 380910 381402 380913	Enter effective date, semicolon, and BLM bond number. EX: EFF MM/DD/YY;AZB0043 If characters exceed 21 spaces, complete entry in general remarks using an alpha tie in action remarks. EX: /A/	Recommend entering bond amount in General Remarks. Populate the document number field with the alpha code that corresponds with the initiating AC 376 (document). All cases that contain AC 909 must contain AC 376.
915	Enter date BLM notifies operator bond is accepted and operations may commence.	**Operations Authorized (M)**	380210 380910 381402 380913		Replaces AC 868 for case type 380913. For case type 380913 use AC 915 after AC 909 and AC 460 have been entered. For 380210, 380910 and 381402 case types, use AC 915 after AC 422, AC 909 and AC 460 have been entered. AC 915 is entered only once on a case and sets the disposition to AUTHORIZED.
930	Enter date appeal is withdrawn.	**Appeal Withdrawn (R)**	380210 380910 381402 380913 371511	If applicable, enter decision citation in action remarks. Tike to original decision with alpha tie in action remarks. EX:/A/	Populate the document number field with the number that corresponds with the initiating AC 120 (document).
940	Enter date of decision	**Name Change**	380210	Enter old name followed by a	Usually refers to a corporate name

Action Code	Action Code Date	Action Text	Case Type	Action Remarks	Other Remarks
	recognizing name change.	**Recognized (R)**	380910 381402 380913 371511	semicolon (EX: GOLDSTRIKE;), and new name in proprietor field.	change; includes dissolution of corporation or partnership, marriage or divorce.
967	Enter date case is closed.	**Closed Without Action (R)**	380210 380910 381402 380913 371511	Enter particulars of closure.	Use in instances where no Bureau action or decision was required. **Note** do not use this code in place of "970" when decision has been issued and the case authorized, etc. Alters case disposition to Closed.
970	Enter date all case processing is finished and case is closed	**Case Closed (M)**	380210 380910 381402 380913 371511		Requires the entry of a prior status setting actions code, i.e., AC 125, Apln **Rej/Denied**, AC 130 Apln **Withdrawn**, AC 234-**Expired** or AC 244-**Terminated**. Sets disposition to CLOSED.

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Appendix F – Arrest Warrant or Summons upon Complaint

FEDERAL RULES OF CRIMINAL PROCEDURE

II. PRELIMINARY PROCEEDINGS

Rule 4. Arrest Warrant or Summons Upon Complaint

(a) Issuance. If it appears from the complaint, or from an affidavit or affidavits filed with the complaint, that there is probable cause to believe that an offense has been committed and that the defendant has committed it, a warrant for the arrest of the defendant shall issue to any officer authorized by law to execute it. Upon the request of the attorney for the government a summons instead of a warrant shall issue. More than one warrant or summons may issue on the same complaint. If a defendant fails to appear in response to the summons, a warrant shall issue.

(b) Probable cause. The finding of probable cause may be based upon hearsay evidence in whole or in part.

(c) Form.

(1) Warrant. The warrant shall be signed by the magistrate judge and shall contain the name of the defendant or, if the defendant's name is unknown, any name or description by which the defendant can be identified with reasonable certainty. It shall describe the offense charged in the complaint. It shall command that the defendant be arrested and brought before the nearest available magistrate judge.

(2) Summons. The summons shall be in the same form as the warrant except that it shall summon the defendant to appear before a magistrate at a stated time and place.

(d) Execution or service; and return.

(1) By whom. The warrant shall be executed by a marshal or by some other officer authorized by law. The summons may be served by any person authorized to serve a summons in a civil action.

(2) Territorial limits. The warrant may be executed or the summons may be served at any place within the jurisdiction of the United States.

(3) Manner. The warrant shall be executed by the arrest of the defendant. The officer need not have the warrant at the time of the arrest but upon request shall show the warrant to the defendant as soon as possible. If the officer does not have the warrant at the time of the arrest, the officer shall then inform the defendant of the offense charged and of the fact that a warrant has been issued. The summons shall be served upon a defendant by delivering a copy to the defendant personally, or by leaving it at the defendant's dwelling house or usual place of abode with some person of suitable age and discretion then residing therein and by mailing a copy of the summons to the defendant's last known address.

(4) Return. The officer executing a warrant shall make return thereof to the magistrate judge or other officer before whom the defendant is brought pursuant to Rule 5. At the request of the attorney for the government any unexecuted warrant shall be returned to and canceled by the magistrate judge by whom it was issued. On or before the return day the person to whom a summons was delivered for service shall make return thereof to the magistrate judge before whom the summons is returnable. At the request of the attorney for the government made at any time while the complaint is pending, a warrant returned unexecuted and not canceled or a summons returned unserved or a duplicate thereof may be delivered by the magistrate judge to the marshal or other authorized person for execution or service.

[Amended July 1, 1966; Oct. 1, 1972; July 31, 1975, P. L. 94-64, §§ 2, 3(l)-(3), 89 Stat. 370; Dec. 1, 1975; Aug. 1, 1987; Dec. 1, 1993.]

Appendix G – Visitor Pass

To be included on a Visitor Pass to be worn by the member of the public visiting the mining operation with BLM staff:

VISITOR PASS. This Pass is subject to the conditions on the back. You must sign this Pass for it to be valid. Your signature on the back of this Pass confirms that you have read and understood the conditions on this Pass and that you agree to comply with those conditions.

On the reverse side of the Pass:

ACKNOWLEDGMENT OF COMPLIANCE WITH BLM
INSTRUCTIONS AND ASSUMED RISKS

Conditions:

The U.S. Bureau of Land Management (BLM) gave you this Pass upon your request to visit the mining operations located on public lands. With this Pass, you may accompany employees of the BLM on a visit to _____ mine(s). This Pass is valid for your use only on _____,20___, and may not be transferred to any other person.

You must promptly comply with all instructions given to you by BLM employees during the course of your visit to the mining operation. If the BLM provides you with transportation to and from the mining operation, you must also comply with any instructions given to you during the course of that transportation. You must attend any safety training offered to you by the mining operator or by the BLM before you enter the mining operation, and properly use all safety equipment provided to you by the operator and/or by the BLM during your visit.

You understand and acknowledge that there are risks of physical injury, death, and property damage inherent in entering any mining operation. Injuries, death, or damage can occur at any time. ACCORDINGLY, YOU UNDERSTAND AND ACKNOWLEDGE THAT YOUR VISIT TO THIS MINING OPERATION IS AT YOUR OWN RISK. IF YOU ARE INJURED, KILLED, OR SUFFER ANY DAMAGE OR LOSS OF ANY KIND TO YOUR PERSON OR PROPERTY, YOU AGREE THAT THE BLM SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES EVEN IF THE INJURY, DEATH, DAMAGE, OR LOSS ARE CAUSED BY THE NEGLIGENCE OF THE BLM OR ANY OF ITS EMPLOYEES.

Your signature below means that you accept all of the terms above.

Signed: Dated:

Print Name:_____

Denison Mines (USA) Corp.
1050 17th Street, Suite 950
Denver, CO 80265
USA

Tel : 303 628-7798
Fax : 303 389-4125

www.denisonmines.com

NOTICE OF CONFIDENTIAL BUSINESS INFORMATION SUBMITTED UNDER 7 C.F.R. PART 1, SUBPART A AND PURSUANT TO EXEMPTION 4 OF THE FREEDOM OF INFORMATION ACT

March 28, 2012

VIA EMAIL

Mr. Mike Linden
United States Department of Agriculture
Forest Service
333 Broadway S.E.
Albuquerque, NM 87102

Re: Canyon Mine Mineral Examination – Economic Analysis

Dear Mike:

As discussed, attached is an excel spreadsheet that contains an economic analysis of the Canyon Mine prepared by Denison Mines (USA) Corp. ("Denison"), which may be useful to you in completing your mineral examination for the Canyon Mine.

As you know, Denison is currently mining at the Arizona 1 mine and is rehabilitating its Pinenut Mine in preparation for the resumption of mining at that mine. Denison is also in the process of permitting the EZ1/EZ2 mine. All of these mines are breccia pipe mines similar to the Canyon Mine. Denison's predecessor, Energy Fuels Nuclear, Inc., for which I and a number of our senior mine management personnel worked for many years, also permitted, developed, mined and reclaimed all of the other breccia pipe uranium mines on the Arizona Strip (other than the historic Orphan mine). Denison also operates the White Mesa uranium mill, which is the only operating uranium mill in the United States, and which has processed all of the Energy Fuels and Denison mined ore from the Arizona Strip to date, including recently all of the ore from the Arizona 1 mine.

As a result of this experience, Denison is able to provide you with accurate information on the actual and expected costs of mining, transporting, milling, marketing and all other aspects of operations at the Canyon Mine. All of this information is included in the attached spreadsheet, which contains the type of Net Present Value (NPV) analysis used by Denison and industry generally in evaluating such projects.

The information contained in this letter and in the spreadsheets, market report and price memorandum attached is being provided to the United States Forest Service ("USFS") for its exclusive use on the express understanding that it will be treated as confidential. Denison is submitting the confidential information to USFS pursuant to the confidentiality provisions of 7

C.F.R. Part 1, Subpart A, and the rules and procedures promulgated thereunder, and Exemption 4 of the Freedom of Information Act, 5 U.S.C. § 552.

Under the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and Exemption 4 of the Freedom of Information Act, USFS is obligated to hold the documents as confidential and prevent public review until a determination is made as to whether the information is confidential. In the event USFS is inclined to deny the request to keep the information contained herein confidential, USFS must notify Denison so that it may have a reasonable time in which to object to its disclosure, or seek an injunction preventing disclosure. This information should not be reproduced in whole or in part for any purpose or furnished to any other person until Denison has had a reasonable time in which to object to the disclosure of any specified portion of the information or seek an injunction to prevent disclosure.

The following key assumptions were used in the NPV analysis and should be noted:

- Expected sales price for uranium was determined for each of the future years of expected production. These prices were based on the forecasted "mid price scenario" spot uranium prices as published by Ux Consulting in its *Uranium Market Outlook, Quarterly Market Report, Q1 2012*, an electronic copy of which is included with this letter. These forecasted spot prices are considered by Denison to be the best available indicators of future spot prices. These forecasted spot prices were then discounted to today's dollars, based on an expected 2% inflation rate. The deflated forecasted spot prices were then adjusted to reflect premiums over spot prices expected for long term contract prices, based on the current premiums in Denison's existing long term contracts. In performing this analysis, Denison conservatively assumed that the proportion of its future sales under long term contract would be the same as its current proportion of long term sales under contract to spot sales. Denison did not assume that all of its future production from the Canyon Mine would be sold at long term contract prices, although this is a possibility. Such a method of forecasting future uranium sales price is typical of industry practice, and is considered by Denison to be a more reliable predictor in most circumstances of future prices than the methods used in the BLM policy for estimating market prices for mineral commodities (65 Fed. Reg. 41,724 (July 6, 2000) (the "BLM Policy")), which relies on past prices and any available futures contract prices to predict future prices. The futures market for uranium is not well developed, and, in any event, by its own terms, the BLM Policy is not applicable to uranium mines because there is no organized market for uranium. A spreadsheet detailing the calculation of the prices used for the attached NPV analysis is included with this letter.

- Because forecasted uranium sales prices were discounted to today's dollars, all costs in the spreadsheet are in today's dollars, and have not been adjusted for inflation.

- Mining costs per ton are based on current mining costs per ton at the Arizona 1 mine.

- Transportation costs per ton are based on current transportation costs from the Arizona 1 mine to the White Mesa Mill, adjusted for the slight difference in mileage from the two mines to the mill.

- Milling costs per ton are based on the current costs per ton for milling Arizona 1 ore at the White Mesa Mill. These costs are more complete and updated from the costs previously sent to the Forest Service.

- All cost estimates represent the incremental costs to Denison of adding development and production of the Canyon Mine to Denison's current operations. Where current information is not available, estimates have been based on historic information, adjusted to current cost conditions based on Denison's best judgment.

- The Canyon deposit has only been drilled from surface. However, almost all other uranium breccia pipes mined to date on the Arizona Strip have demonstrated a significant increase in reserves from underground drilling that were not observed from surface drilling. The following table provides historic information on the pounds of U_3O_8 mined relative to the number of pounds delineated from surface drilling only, for the other breccia pipe mines mined by Energy Fuels in the past:

Mine	Surface Calculated Reserve (lbs U_3O_8)	Actual Mine Production (lbs U_3O_8)	Difference (lbs U_3O_8)	Ratio
Hack 1	980,000	1,400,000	420,000	1.43
Hack 2	1,430,000	7,000,000	5,570,000	4.90
Hack 3	170,000	1,100,000	930,000	6.47
Pigeon	2,470,000	5,700,000	3,230,000	2.31
Kanab North	750,000	3,100,000	2,350,000	4.13
Hermit	600,000	600,000	0	1.00

An increase in resources is therefore expected, and has been observed to date in over 80% of the historic mines of this type, and in those mines has ranged from a 43% to a 647% increase. However, no allowance has been made in the financial analysis for this expected addition of resources.

- The [redacted] in sunk costs at the Canyon Mine are excluded from the NPV analysis. Sunk costs are not relevant to the decision process for determining the economic viability of the Canyon Mine at this time.

- The discount rate used in the NPV analysis is 7%, which is almost 4 percentage points higher than prime and consistent with recently published NPV analyses for other uranium mines (see Hathor Exploration Limited, Roughrider Uranium Deposit, and Titan Uranium Inc., Sheep Mountain Uranium Project, Fremont County, Wyoming).

- A contingency of 10% of capital costs has been included. The estimated capital costs were based on Denison's recent project development activities on the Arizona Strip and the historical cost experience.

- No royalties have been included as cost items, because royalties do not represent costs intrinsic to developing and mining a property. Rather, they merely represent how the ownership of the value of the property is divided. They should therefore not be included in a mineral examination of the intrinsic value of the claim itself.

- Reclamation costs used in the NPV analysis are the approved cost estimates used for the currently approved financial surety bonds for the Canyon Mine.

Based on the foregoing assumptions, the Canyon Mine has an NPV of $31.3 million and an internal rate of return of 72%. The project is expected to generate cash flow of $44.3 million. As seen from the NPV analysis, the Canyon Mine is expected to provide a positive return on Denison's investment.

In reviewing the attached spreadsheet, it should also be noted that the NPV analysis is considered by Denison to be conservative and to understate the economic viability of the Canyon Mine for the following additional reasons:

- Deep ore intersections from existing surface drilling confirm that the Canyon Mine has the greatest vertical extent of mineralization yet encountered in any breccia pipe deposit that has been mined to date, which suggests that the Canyon Mine has an increased potential for additional reserve delineation from underground drilling.

- If minable resources are expanded, as expected at the Canyon Mine, the incremental capital to access the expanded resources will consist mainly of mine development only, as the planned infrastructure will support extraction of a larger resource than assumed for the attached NPV analysis.

- Although the most reliable and viable logging methods and equipment have been used to estimate the eU_3O_8 grade of the Canyon Mine resources, the abundant high grade mineralization at the Canyon Mine is likely under-estimated due to inherent limitations of the logging equipment. Preliminary analysis of core samples compared to gamma logging data suggests that the resource grade could be under-estimated by up to 40%.

- Current White Mesa mill processing costs for breccia pipe ores have been used in the attached NPV analysis. Limited historical test metallurgical data from the Canyon Mine indicate that it might have more favorable milling properties (lower reagent consumption) than North Rim pipes, such as Arizona 1, due to the local stratigraphy, which includes a greater portion of sand and less limestone.

- Current operations at Denison's Arizona 1 and Pinenut mines will contribute mining expertise and essential experience, which are directly applicable at the Canyon Mine, and may afford cost improvements over current projections.

- The current processing timing for the Canyon Mine production coincides with projections of increasing uranium market prices as excess uranium inventories are absorbed and development of new mines lags worldwide. If prices exceed the levels used in Denison's financial analyses, the Canyon Mine will be extremely well positioned to realize upside opportunities from increasing prices.

We hope this information will be of use to you in completing your economic analysis for the mineral examination. If you have any questions, or we can provide any further information, please call me.

Yours very truly,

DENISON MINES (USA) CORP.

Harold R. Roberts
Executive Vice President, US Operations

cc: David C. Frydenlund
Ron F. Hochstein
Terry V. Wetz
Philip G. Buck
Mike Doran, USFS

Denison Mines Corp.
885 West Georgia St., Suite 2000
Vancouver, B.C. V6C 3E8
Canada

Tel: 604 689-7842
Fax: 604 689-4250

www.denisonmines.com

Memorandum

To: Steve Downs and David Frydenlund

cc: Harold Roberts
Terry Wetz

From: Ron Hochstein

Date: March 15, 2012

Re: Determination of Mineral Exam Uranium Price

As per our discussions late last week, we determined that the most appropriate price assumption for the purposes of a Mineral Examination is to assume that we would sign a uranium contract for 100% of the EZ or Canyon mine production. [redacted]

For purposes of determining the premium, I have assumed delivery in March and therefore have used the following database for determining the various contract prices.

	Long Term Price (US$/lb U_3O_8)		Spot Price (US$/lb U_3O_8)	
	UxCo	Trade Tech	UxCo	TradeTech
December, 2011	$63,00	$61.00	$51.75	$52.00
January, 2012	$61.00	$61.00	$52.00	$52.25
February, 2012	$60.00	$60.00	$52.00	$52.00
Average	**$61.00**		**$52.00**	

[redacted]

Recommendation:

For the purposes of the Mineral Examination, I would recommend using a uranium price equivalent to the spot price at the time of production plus a premium of $8.60 per lb U_3O_8.

	$/t	$/lb	%	$	$	t	lb	mths	t/mth	$/yr
Summary										
Geology and Mineral Resources										
Inferred Resource			1.0705			69,122	1,479,846			
Mine Development and Mining										
Mine Plan and Project Schedule										
Mobilization & Site Prep										
Shaft Sinking & Level Development										
Start										
End										
Vent Raise										
Start										
End										
Declines & Sublevels										
Start										
End										
Ore production										
Start										
Full										
Duration						5,300				
Manpower										
Pre-Level-Development										
Peak										
Life of Mine								47		
Ore Processing										
Milling Campaign			95%			69,122	1,409,866		17,000	
Geology and Mineral Resources										
Resource Estimation										
Inferred Resource			1.0705			69,122	1,479,846			
Mine Development & Mining										
Project Schedule										
Ore production									5,338	
Milling Campaign									17,000	
Life of Mine								47		
Ore Haulage										
Ore Processing										
Recovery, Fed, Recovered			95%			69,122	1,409,866			
Capital Cost	$269.95	$13.23		$18,659,161						
Capitalized Development				$13,458,324						
Permitting & Engineering				$ 218,000						
Mobilization										
Surface facilities rehab, Impoundment, ore pad										
Pre-sink Setup										
Shaft Sinking										
Station Excavation										
Drift Development										
Raises and Vent Shaft										
Final Development to the Bore Hole										
Pre-production Incline / Decline / Sublevel Development										
Pre-production Utilities										
Capital Equipment				$ 3,504,550						
Surface Mobile Fleet										
Surface Fixed Plant										
Underground Mobile Fleet										
Underground Fixed Plant										
Salvage Value										
Contingency on Total Capital Cost				$ 1,696,287						
Operating Cost	$354.01	$17.36								
Direct										
Mining & Site G&A										
Ore Haulage										
Milling										
Processing										
Reagents										
Indirect										
Office Overheads										
Permitting & Land	$ 0.08	$ 0.00								
Marketing & Sales										
Reclamation				$ 450,000						
Financial Analysis										
Realized Sales Price at 2015 Sales		$62.31								
NPV at Discount Rate			7%	$ 31.3 M						
IRR			72%							
Cashflow				$ 44,277,867						

SER-778

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

APR 06 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The answering brief submitted on April 5, 2021 is filed.

Within 7 days of this order, appellees are ordered to file 6 copies of the brief in paper format with red covers, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website, at http://www.ca9.uscourts.gov/forms.

The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Liora Anis
Deputy Clerk
Ninth Circuit Rule 27-7

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

APR 06 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The answering brief submitted by federal appellees on April 5, 2021 is filed.

Within 7 days of this order, appellees are ordered to file 6 copies of the brief in paper format with red covers, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website at http://www.ca9.uscourts.gov/forms/.

The supplemental excerpts of record submitted on April 5, 2021 are filed. Within 7 days of this order, appellees are ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers.

The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Liora Anis
Deputy Clerk
Ninth Circuit Rule 27-7

No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,
Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,
Defendants-Appellees,

ENERGY FUELS RESOURCES (USA) INC., *et al.*,
Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-CV-8045 (Hon. David G. Campbell)

INTERVENOR-DEFENDANTS-APPELLEES' MOTION TO FILE CORRECTED BRIEF

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Intervenor-Defendants-Appellees Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (together, "EFR") respectfully move to file a corrected Answering Brief. EFR coordinated with the Federal Defendants-Appellees in the filing of the Supplemental Excerpts of Record ("SER"). After EFR filed its Answering Brief on April 5, 2021, the Federal Defendants-Appellees filed an updated SER with different pagination at the Court's direction on April 6, 2021. As a result, EFR's citations to the SER in its Answering Brief are incorrect and off by one to three pages depending on the SER volume cited. EFR has updated its SER citations in the attached, corrected Answering Brief. Aside from the corrected SER citations, the attached Answering Brief is the same in all other aspects as its Answering Brief filed on April 5, 2021. EFR respectfully seeks leave to file its corrected Answering Brief. Appellees do not oppose this relief.

RESPECTFULLY SUBMITTED this 8th day of April, 2021.

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on April 8, 2021.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

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No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,
Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,
Defendants-Appellees,

ENERGY FUELS RESOURCES (USA) INC., *et al.*,
Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-CV-8045 (Hon. David G. Campbell)

INTERVENOR-DEFENDANTS-APPELLEES' ANSWERING BRIEF

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1(b), Intervenor-Defendants-Appellees Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC state that they both are wholly-owned by Energy Fuels Holdings Corp., which is wholly-owned by Energy Fuels Inc., a publicly-held corporation.

RESPECTFULLY SUBMITTED this 8th day of April, 2021.

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STATEMENT OF THE ISSUES[1]

1. The U.S. Forest Service ("USFS") considered all relevant costs in analyzing whether the Pinyon Plain Mine ("Mine") satisfied the Mining Law's prudent person test and EFR had valid existing rights ("VER").[2] As a result, the VER Determination[3] complied with federal authority, case law, and guidance for mineral examiners and should be upheld.

2. USFS properly excluded sunk costs when analyzing the Mine in the VER Determination consistent with the Mining Law's prudent person test, Supreme Court and federal case law interpreting that test, and federal guidance for mineral examiners.

3. The District Court entered an appropriate order protecting EFR's confidential business information from public disclosure.

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[1] Pursuant to FRAP 28(b), EFR coordinated briefing with USFS, and incorporates its statements of the issues, case, standard of review, summary of arguments, and arguments by reference.

[2] EFR changed the name of the Mine from the "Canyon Mine" to the "Pinyon Plain Mine" to clarify that the Mine is not located in the Grand Canyon. The Mine is located in a naturally cleared plain that is approximately nine miles from the South Rim of the Grand Canyon and six miles from the boundary of the Grand Canyon National Park.

[3] A mineral examiner performs a mineral examination and documents her findings in a mineral report. The VER Determination at issue is a mineral report. EFR will refer to that mineral report as the VER Determination consistent with the District Court's use of that term.

STATEMENT ABOUT THE ADDENDUM

An addendum containing pertinent statutes, treatises, and legal authorities is attached.

INTRODUCTION

EFR files this response to the Appellants Grand Canyon Trust, Sierra Club, and Center for Biological Diversity's (together, the "Trust's") Opening Brief.

The Trust alleges the VER Determination was not performed consistent with the General Mining Law of 1872, 30 U.S.C. §§ 22-54 (2020) ("Mining Law"). As a result, it is important to understand the Mining Law's intent and framework; the role of a mineral examination within that framework; the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701-87 (1976) ("FLPMA") and its impacts on the Mining Law; and the VER Determination at issue before turning to the Trust's specific arguments.

The law regarding mining by private parties on public lands is well-established. The Mining Law recognizes two types of self-initiated rights: (1) free access to federal lands, and (2) the right to establish property rights to that land. Mining rights are statutorily conferred after the miner goes onto public lands, explores for minerals, and stakes and records a claim (*i.e.*, locating (or establishing) an unpatented mining claim). Mining rights give the miner exclusive possession and enjoyment to mine the land. An approved plan of operations

authorizes the use of mining rights on public lands. By 1986, EFR's predecessor had mining rights and a USFS-approved Plan of Operations for the Mine ("Plan"). The Mine has been authorized to mine ever since.

The Trust originally asserted that, after the U.S. Department of the Interior ("Interior") withdrew certain public lands from location and entry under the Mining Law in 2012 ("Withdrawal"), EFR could not continue mining until USFS validated EFR's existing mining rights through a mineral examination. From this, it contends USFS's decision to conduct an internal review of the validity of EFR's claims constituted a required approval for EFR to mine that triggered compliance with the National Environmental Policy Act ("NEPA") and National Historic Preservation Act ("NHPA"). The Court rejected these claims.

The Trust now contends that the VER Determination is invalid because USFS allegedly failed to consider all relevant costs in conducting its analysis of the Mine. It claims USFS failed to consider certain environmental monitoring, wildlife conservation, future environmental mitigation costs, and sunk costs. This claim is not supported by the plain language, purpose, and intent of the Mining Law, Interior's interpretation and implementation of the Mining Law, the findings within the VER Determination and the record, or the federal case law, regulations, and guidance for mineral examiners.

As detailed below, established unpatented mining claims are presumed to be valid until proven invalid. The Bureau of Land Management ("BLM") has plenary authority to administer the Mining Law, and is the only agency authorized to declare mining claims invalid.[4] To do so, BLM must initiate a claim contest (*i.e.*, a formal hearing challenging the claims). For a mining claim to withstand challenge, it must demonstrate validity: a properly located claim upon which a discovery of valuable minerals exists. BLM defines a discovery as when minerals are found that a prudent person likely could mine, mill, and market at a profit, and it developed the prudent person test to confirm a discovery. This interpretation and the test have been affirmed by the Supreme Court.

An unpatented mining claim provides a miner with the right of present and exclusive possession to mine, but fee title remains with the United States. As long as it does, BLM or USFS may check to see if the claim is valid. This process begins with a mineral examination, which is an internal assessment to see if the claim was properly located and if a discovery was made. The mineral examination does not confer or terminate any rights, or validate, invalidate, approve, or disapprove anything – it simply represents the examiner's opinion as to the merits of the claim at the time of the examination. Mineral examinations inform future

[4] USFS follows BLM's rules and guidance when it performs Mining Law-related tasks on land it administers.

actions by BLM or USFS regarding the claim (*e.g.*, whether to contest it), and may be evidence in a claim contest.

A withdrawal of public lands under FLPMA is subject to VER, and operates prospectively only to prevent the location (*i.e.*, establishment) of new mining claims in the withdrawn areas. It does not prevent mining on existing claims, or require existing claims to be validated. Under applicable guidance, BLM requires a mineral examination before approving a new plan of operations or a material amendment to an existing plan of operations for claims on withdrawn lands. BLM and USFS do *not* require a mineral examination for existing claims on withdrawn lands with an approved plan of operations, such as is the case for the Mine, unless a material amendment is sought or is necessary.

After the proposed Withdrawal, EFR informed USFS that it was resuming active mining at the Mine after being on standby status. To determine if changes to EFR's Plan were necessary since the Mine last operated actively, USFS performed an internal review of the Mine and the Plan ("Mine Review"). Simultaneously, it performed a mineral examination documented in a mineral report, which is referred to as the VER Determination, which would have been required under BLM and USFS guidance *if (and only if)* the Mine Review concluded that a material amendment to the Plan was necessary. EFR remained authorized to operate the Mine, and proceeded with activities to prepare for the

resumption of active mining. To accommodate USFS, EFR voluntarily agreed to defer shaft sinking until USFS performed its internal reviews.

In the Mine Review, USFS concluded that no amendments to the Plan were necessary, and mining could continue without further approvals. Because no amendments were necessary, the mineral examination proved unnecessary under applicable BLM and USFS regulations and guidance and had no legal effect. In any event, the VER Determination concluded that the Mining Law's discovery test had been met.

The VER Determination was completed by certified mineral examiners after they conducted a comprehensive review of the Mine. The VER Determination was completed consistent with all applicable regulations and guidance, including the U.S. Department of the Interior, Bureau of Land Management's H-3890-Handbook for Mineral Examiners (the "Handbook"), the standard and guidance for their work. The VER Determination used reasonable and conservative assumptions, included a $1.7 million contingency, and concluded the Mine would make a profit of $29,350,736. The VER Determination concluded EFR could mine, remove, transport, mill, and market uranium from the Mine at a profit; the Mining Law's discovery test had been met; and EFR had VER.

The Trust argues the VER Determination is invalid because USFS failed to consider all relevant costs in conducting its profitability analysis of the Mine. In

addition to explaining that the VER determination was unnecessary and had no legal effect, USFS and EFR demonstrated to the District Court that USFS considered and included in its cost estimates all relevant environmental monitoring and wildlife conservation costs and properly excluded future environmental mitigation measures and sunk costs when completing the VER Determination. To the extent any costs were not identified or considered, there was a $1.7 million contingency in EFR's cost estimates that would cover these costs. This contingency, along with the Mine's profitability of $29,350,736, are far greater than the collective costs identified by the Trust, rendering their alleged errors harmless.

The District Court analyzed the costs and alleged errors identified by the Trust and determined it could not confirm from the record whether certain environmental monitoring and wildlife conservation costs were considered, so it gave the Trust the benefit of the doubt and assumed they were not considered for the purpose of its analysis. To the extent costs were not considered, the District Court concluded that any such error was harmless because the costs would not have changed USFS's conclusions regarding the Mine's profitability. The District Court also held that speculative future environmental mitigation measures and costs were properly not considered by USFS, and it rejected the Trust's challenges to the price and ore assumptions used in the VER Determination. Regarding sunk

costs, the District Court determined the Trust did not apply the correct standard of review, its argument was not supported by federal authorities and case law, and, even if correct, the Trust did not show any error was harmful. The District Court granted EFR's motion to seal certain of its confidential cost information that is exempt from public disclosure under federal law.

For the reasons set forth in the District Court's thorough and well-reasoned decision and below, EFR requests the Court uphold the District Court's decision in its entirety and reject the Trust's challenge to the VER Determination.

SUMMARY OF THE ARGUMENT

The VER Determination at issue in this appeal was unnecessary, was not legally required, and had no legal effect because USFS's Mine Review determined no material changes to EFR's Plan were required. Pursuant to applicable BLM and USFS regulations and guidance, this alone should end the Trust's challenge to the VER Determination.

Notwithstanding this fact, USFS voluntarily completed the VER Determination consistent with the Mining Law and BLM's guidance for mineral examinations and reports. BLM guidance follows the Mining Law and its prudent person test. As set forth below, the test is rational, follows basic business and economic principles, and has been affirmed and applied by the Supreme Court and federal courts on numerous occasions.

The Trust complains USFS did not consider all relevant costs when evaluating the Mine. The Trust is wrong. EFR is uniquely situated as the only mining company that has successfully mined breccia pipe mines on the Colorado Plateau, including the recently mined Arizona 1 Mine, and owns the only domestic uranium mill. As a result, EFR provided USFS with comprehensive cost estimates that included all costs of mining, transporting, milling, and marketing uranium from the Mine. These cost estimates should have ended the Trust's challenge to the VER Determination. However, in light of the Trust's 35-year effort to shut down the Mine, it is not surprising they did not.

The Trust claims EFR should have itemized the Mine's costs in a level of detail and minutia not included in EFR's cost estimate. The Trust's argument is absurd and not supported by the record. EFR provided, and USFS considered and independently verified, all costs relevant to the VER Determination in the same level of detail EFR uses for its own mine development and production decisions for similar mines. EFR demonstrated to the District Court that all relevant costs were included in its cost estimates and considered in the VER Determination.

Notwithstanding that the VER Determination was not legally required, had no legal effect, and all costs were considered, the District Court reviewed the costs identified by the Trust and determined it could not conclusively determine whether they were considered because they were not specifically delineated in the VER

Determination. The District Court gave the Trust the benefit of the doubt and evaluated the costs identified by the Trust, ultimately concluding they were harmless and would not have impacted the outcome of the VER Determination. The District Court also rejected the Trust's arguments that speculative future costs regarding potential environmental harms should be considered.

The District Court next rejected the Trust's claim that USFS should have quantified and considered sunk costs in the VER Determination. It did so because the Mining Law, relevant Supreme Court and federal case law, and federal guidance confirm sunk costs should not be considered as part of the Mining Law's prudent person test, which is a forward-looking test consistent with prudent economic business decision-making.

EFR believes that, even though the VER Determination was not required, USFS completed it consistent with the Mining Law, Supreme Court and federal case law, and federal guidance for mineral examiners, and that the District Court properly affirmed the VER Determination. EFR requests the Court affirm the District Court.

ARGUMENT

I. Standard of Review

Pursuant to FRAP 28(b), EFR coordinated briefing with USFS and incorporates its statement of the standard of review and its arguments relating thereto.

II. Statement of the Case

Before turning to the Trust's argument, EFR believes it is important to understand the Mine; the Mining Law's intent and framework; the role of a mineral examination within that framework; FLPMA and its impacts on the Mining Law and mineral examinations; and the VER Determination.

A. Factual and Procedural Background

The Mine is a breccia pipe uranium mine located in a natural clearing on unpatented mining claims on USFS-managed lands in the Kaibab National Forest in northern Arizona. 2-ER-213.[5] The mining claims were located[6] in 1978 under the Mining Law, 30 U.S.C. §§ 22-54. 2-ER-213. Exploratory work from 1978 to 1985 discovered a major deposit of uranium. 2-ER-213, 231-32.

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[5] Unlike open pit mines, breccia pipe mines result in minimal surface disturbance with the Mine's surface footprint totaling 17 acres. 3-ER-395.

[6] Location involves staking the claim's boundaries and recording the claim. 43 C.F.R. §§ 3832.1, 3832.11 (2021); Dep't of Interior, Solicitor's Op. M-37010 at 4 n.5 (Oct. 7, 2003) ("2003 Op.").

In 1986, after a NEPA review of an Environmental Impact Statement ("EIS"), USFS approved EFR's Plan to operate under its mining regulations. 36 C.F.R. pt. 228A (2021); 3-ER-360-74, 386-457. The Havasupai Tribe ("Tribe") challenged the Plan, asserting religious, cultural, and environmental claims. All claims were rejected and the decision was affirmed. *Havasupai Tribe v. United States*, 752 F. Supp. 1471 (D. Ariz. 1990), *aff'd*, 943 F.2d 32 (9th Cir. 1991). The Plan remains valid and is not at issue here. 2-ER-172-201.

After *Havasupai*, EFR's predecessor constructed the Mine's surface facilities and sank the shaft fifty feet. 2-ER-213. In 1992, due to unfavorable market conditions, the Mine was placed on standby and operated under the Plan's interim management plan. 2-ER-213.[7]

In 2009, Interior proposed to withdraw public lands in northern Arizona managed by USFS and BLM from location and entry under the Mining Law. Notice of Proposed Withdrawal & Opportunity for Public Meeting, 74 Fed. Reg. 35,887, 2009 WL 2143370 (July 21, 2009) ("Segregation"). Interior finalized the Withdrawal in January 2012. Withdrawal of Public & National Forest System

[7] Mines may be placed on, and taken off, standby as the operator sees fit; interim management plans govern operations during standby. 36 C.F.R. §§ 228.4(c), 228.10.

Lands in the Grand Canyon Watershed, 77 Fed. Reg. 2563, 2012 WL 122658 (Jan. 18, 2012) ("Withdrawal"). The Withdrawal is "[s]ubject to [VER]." *Id.*

After the Segregation but before the Withdrawal, EFR notified USFS that it was returning the Mine to active operations under the Plan. 2-SER-351-52. USFS informed EFR that it intended to conduct a Mine Review to determine if any approvals or modifications to the Plan were necessary. 2-SER-358. USFS also conducted a mineral examination of EFR's mining claims. 2-ER-208-53. USFS informed EFR that its Plan was valid and EFR was authorized to operate the Mine, but requested that EFR voluntarily postpone shaft sinking (but not other operations) to provide USFS time to perform its internal reviews. 1-ER-6. EFR agreed. 1-ER-6. On April 18, 2012, USFS issued the VER Determination. 2-ER-208-53. On June 25, 2012, USFS issued the Mine Review and concluded no modification to the Plan was necessary. 2-SER-358-403.

The Trust asserted four claims challenging the VER Determination and seeking declaratory and injunctive relief under the Administrative Procedure Act, 5 U.S.C. § 706 ("APA"). 2-ER-172-201. In Claims 1 and 2, the Trust argued USFS violated NEPA and NHPA by not performing an environmental review or historic preservation consultation, when preparing the VER Determination. 2-ER-194-97. In Claim 3, the Tribe asserted USFS applied the wrong NHPA consultation requirement for previously approved and ongoing undertakings. 2-ER-197-98. In

Claim 4, the Trust alleged USFS violated several statutes by failing to consider certain costs when preparing the VER Determination. 2-ER-198-99. The District Court granted summary judgment to USFS and EFR in April 2015, and the Trust appealed.

This Court rejected Claims 1 and 2, finding the VER Determination did not trigger NEPA or NHPA review because, among other reasons, it was not a required approval. *Havasupai Tribe v. Provencio*, 906 F.3d 1155 (9th Cir. 2018). The Court rejected Claim 3, finding USFS's application of the NHPA consultation requirements was consistent with the plain terms of the governing regulation. *Id.* Regarding Claim 4, the District Court found the Trust did not state a cause of action because its interests were outside of the zone of interests of the Mining Law, and FLPMA had no relevant law to apply. 1-ER-8. The Court initially affirmed the District Court on Claim 4, *Havasupai Tribe v. Provencio*, 876 F.3d 1242 (9th Cir. 2017), but then vacated its decision and held the Trust had standing under FLPMA to bring Claim 4 and remanded that Claim to the District Court for consideration on the merits. *Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1166-67 (9th Cir. 2018). The District Court granted USFS and EFR summary judgment on the merits of Claim 4, which the Trust has appealed.

The Trust's challenge involves a mineral examination performed by USFS pursuant to the Mining Law and consistent with its own guidance. As a result, it is important to understand the Mining Law's intent and framework.

B. The Mining Law and VER

The Mining Law is rooted in the California Gold Rush, where miners staked claims to minerals within public lands and extracted them without permission from the government.[8] Miners developed their own rules and customs regarding rights to locate and develop claims. Facing pressure to sanction mining not legally authorized but deemed socially valuable, Congress enacted the Lode Law of 1866, which codified miners' "rules and customs of the mining districts and gave the congressional stamp of approval for self-initiated, protected mining rights on the public domain." 1 American Law of Mining, § 4.11 (2d Ed. 2020) ("Am. Mining"); *see High Country Citizens All. v. Clarke*, 454 F.3d 1177, 1184 (10th Cir. 2006). This law confirmed that public lands were open for mineral exploration and appropriation, and property rights obtained thereunder were cognizable and enforceable. Lindley on Mines, 3d Ed. §§ 54-56 (1914) ("Lindley"); Davis, *supra*, at 898-99. In 1872, Congress enacted the Mining Law, 30 U.S.C. §§ 22-54, to clarify aspects of the Lode Law of 1866. Am. Mining § 4.11.

[8] William E. Colby, *Mining Law in Recent Years*, 33 CAL. L. REV. 368, 370-71 (1945); *see also* Bancroft G. Davis, *Fifty Years of Mining Law*, 50 HARV. L. REV. 897, 897-98 (1937).

The Mining Law "is an exercise of Congress' power under the Property Clause of the Constitution to 'dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States.'" 2003 Op. at 12 (quoting U.S. Const. art. IV, § 3); Am. Mining § 9.02. Property disposal laws, or "general laws," "secure public advantages by inducing individuals to engage in costly operations on public lands." 2003 Op. at 12; Lindley §§ 202-03. The Mining Law's inducement is an acquisition of property rights in publicly owned lands and minerals if certain statutory requirements are met – namely, location and discovery of valuable minerals. 2003 Op. at 12. The Mining Law is a property rights transfer statute, with the United States as the grantor and miners as grantees. *High Country*, 454 F.3d at 1182-87; *Davis v. Nelson*, 329 F.2d 840, 843-46 (9th Cir. 1964); Dep't of Interior, Solicitor's Op. M-36584 at 2 (Oct. 20, 1959). The Mining Law incentivizes and encourages mining on public lands. *United States v. Coleman*, 390 U.S. 599, 602 (1968).

Property rights under the Mining Law are self-initiated and obtained: "If the land is open for location and the prospector is qualified, she may seek 'valuable minerals' and, if she finds them, may initiate a vested right without the approval of anyone else, including representatives of the government that own the land." Am. Mining § 4.11; *id.* § 30.01 ("The fundamental basis of the mineral location system

is the right of self-initiation."); *see McMaster v. United States*, 731 F.3d 881, 885 (9th Cir. 2013); *Davis*, 329 F.2d at 845-46; 2003 Op. at 12; Lindley § 204.

The Mining Law property disposal scheme follows the sequence of exploration, location, discovery, and patent. Am. Mining § 30.01. The miner's own actions unilaterally establish property rights. *Id.* Prior to discovery, a miner obtains possessory rights when that miner has possession of a defined portion of public land and is exploring for valuable minerals (called *pedis possessio*). These rights can be used to exclude third parties. *Id.* § 30.05; *see Davis*, 329 F.2d at 845. A location supplements *pedis possessio* by providing color of title to mining rights, and establishes the boundaries of the claim. *Davis*, 329 F.2d at 845; Am. Mining § 34.02. Location gives rise to the right of exclusive possession and enjoyment to mine and market the minerals. 30 U.S.C. § 26; *Wilbur v. United States ex rel. Krushnic*, 280 U.S. 306, 316-17 (1930). A discovery combined with location perfects the claim and creates "vested property rights in [it]." Am. Mining §§ 30.05, 36.01; *see Davis*, 329 F.2d at 845. Through perfection, the miner "has a [VER] by his actions under" the Mining Law. *Alaska v. Thorson*, 83 IBLA 237, 243 (1984) (*quoting* Dep't of Interior Solicitor's Op. M-36910 (Oct. 5, 1981) ("1981 Op.")). The Supreme Court noted that acquired property is "property in the fullest sense of that term; and may be sold, transferred, mortgaged, and inherited without infringing any right or title of the United States." *Wilbur*, 280 U.S. at 316-

17 (citations omitted); *O'Connell v. Pinnacle Gold Mines Co.*, 140 F. 854, 855 (9th Cir. 1905) (mining rights confer the "right to extract and convert to his own use all the ores and precious metals which may be found within the borders of his claim"). These rights are good against the United States and third parties. Am. Mining §§ 30.05, 36.01, 36.03; *see Davis*, 329 F.2d at 844-45.

The administration and enforcement of the Mining Law rests with Interior, which it has delegated to BLM. *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 336-37 (1963). Interior has "plenary authority" under the Mining Law. *Id.* (following *Cameron v. United States*, 252 U.S. 450, 459-60 (1920)). Until claims are patented, BLM, as the representative of the title owner, may evaluate whether unpatented claims are valid; and, if not, clear the title from an invalid claim. *Cameron*, 252 U.S. at 460; *Davis*, 329 F.2d at 846. To do so, BLM must initiate a claim contest; BLM "has no power to strike down any claim arbitrarily," and must provide notice and an opportunity to be heard before declaring a claim invalid. *Best*, 371 U.S. at 335-38; *Seldovia Native Ass'n Inc. v. Lujan*, 904 F.2d 1335, 1345 (9th Cir. 1990).

Under the Mining Law's system of conferring statutory rights based on the unilateral actions of miners and the requirement of notice and opportunity to be heard before a claim is invalidated under *Best* and *Seldovia*, a miner's unpatented claims and the rights attendant thereto must be recognized and honored until the

claims are invalidated (*i.e.*, unpatented mining claims are presumed valid until proven otherwise in a claim contest). *See, e.g.*, *United States v. Martinek*, 166 IBLA 347, 352-53 (2005). USFS's policy and guidance confirms that principle. 3-ER-336-39; *see also Davis*, 329 F.2d at 845-47. Until a claim contest "renders a final determination of invalidity, it is well established that the claimant will be permitted to engage in mining and processing operations." *In re Ctr. for Biological Diversity*, 162 IBLA 268, 281 (2004).

C. EFR established VER.

Consistent with the Mining Law, the Mine's Canyon 74 and 75 claims were located in 1978 and have been maintained ever since. 2-ER-213-17. Valuable minerals were discovered in a major deposit of uranium following exploratory drilling from 1978 to 1983 and delineation from 1983 to 1985. 2-ER-213. VER in the mining claims were established no later than 1985. USFS approved EFR's Plan in 1986. 3-ER-360-74. The Plan was upheld against administrative and judicial challenges, remains valid today, and authorizes EFR to exercise its mining rights on USFS-managed public lands. *Havasupai*, 752 F. Supp. at 1471; 36 C.F.R. §§ 228.4, 228.5. By 1986, EFR had established VER.

D. FLPMA did not change the Mining Law or VER.

FLPMA is BLM's organic act and guides its management of public lands. 43 U.S.C. §§ 1701(a)(1), 1712; *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 877

(1990). The bulk of FLPMA focuses on the administration of public lands, range management, grazing, rights-of-way, and designated management areas. 43 U.S.C. §§ 1731-85. With four exceptions, FLPMA does not alter the Mining Law or rights created thereunder. Those exceptions are not relevant here and FLPMA did not impact EFR's VER.

E. The Withdrawal is subject to VER.

A withdrawal is the setting aside of "certain lands from operation of particular public land laws" for the purpose of maintaining the *status quo* or reserving the land for a specific purpose. Am. Mining § 14.01. Withdrawals almost always "protect and preserve all [VER] or claims upon the public domain." *Id.* § 14.04. Under FLPMA § 701, all actions of Interior, including withdrawals, are "subject to [VER]." 43 U.S.C. § 1701; *see* Title VII Effect on Existing Rights, Pub. L. No. 94-579, § 701(h), 90 Stat. 273 (1976). Thus, the Withdrawal is "[s]ubject to [VER]." Withdrawal, 77 Fed. Reg. at 2563.

The phrase "subject to [VER]" shields VER from the withdrawal, and subjects the withdrawal to a superior right. *McMaster*, 731 F.3d at 889-90; *Aleknagik Natives, Ltd. v. United States*, 806 F.2d 924, 926-27 (9th Cir. 1986); *In re Goergen*, 144 IBLA 293, 297 (1998) (the withdrawal does not become effective on lands with valid mining claims until such claims are terminated); *Alaska*, 83 IBLA at 243, 250 ("subject to" means subordinate to; existing claims are not

extinguished); *In re Wilson*, 35 IBLA 349, 352-54 (1978) (existing rights are to be deferred to; "[a] valid location gives a claimant established rights"); *cf. Stockley v. United States*, 260 U.S. 532, 538, 544 (1923) (same); *Seldovia*, 904 F.2d at 1343-44 (same); Am. Mining § 14.04 (A "[VER] provision is an acknowledgment that property rights established at the time of a withdrawal will be recognized and honored.").

In January 2012, Interior, acting under FLPMA, withdrew for 20 years approximately one million acres of public land from mineral location and entry under the Mining Law. Withdrawal, 77 Fed. Reg. at 2563; *see* 43 U.S.C. § 1714; *Nat'l Mining Ass'n v. Zinke*, 877 F.3d 845 (9th Cir. 2017). The Withdrawal covered the location of the Mine. 2-ER-262. The Withdrawal operates prospectively. It did not extinguish VER to claims, or prohibit mining thereon; it only prohibited new "location and entry."[9] 2-ER-262-63. Before approving the Withdrawal, Interior prepared an EIS. 3-ER-386-457; Segregation, 74 Fed. Reg. at 35,887-01. The EIS noted the existence of the Mine and assumed it would resume operations in the future. 2-ER-262-63, 267-68.

[9] Location and entry refers to the acts of going on public land to establish a claim's boundaries and recording the claim. 43 C.F.R. §§ 3832.1, 3832.11; 2003 Op. at 4 n.5; *see Mt. Royal Joint Venture v. Kempthorne*, 477 F.3d 745, 750 n.3 (D.C. Cir. 2007).

F. Mineral Examinations and Reports

In light of the Mining Law, FLPMA, and the Withdrawal, it is important to understand the role of mineral examinations and reports. A mineral report documents the conclusions and recommendations of a mineral examiner following a mineral examination (*i.e.*, an investigation of whether a mining claim is valid under the Mining Law). 3-ER-314. A mineral report prepared by USFS may support a recommendation to BLM to initiate a claim contest to invalidate an unpatented mining claim.[10] It is an internal, investigatory document that reflects a mineral examiner's opinion on whether a discovery has been made under the Mining Law's discovery test, discussed below. The test is used to inform later agency decision-making. A mineral report is not a formal determination and has no legal effect. 3-SER-503-771 (mineral reports are "statements of belief and not formal determinations" that are used as a "basis for a decision on whether or not to contest the claim."). Mineral reports play an important role as evidence in a claim contest because BLM bears the burden of presenting a *prima facie* case that the claims are invalid. *Lara v. Sec'y of Interior of U.S.*, 820 F.2d 1535, 1542 (9th Cir.

[10] Because BLM has plenary power to administer the Mining Law, no adjudicative power has been given to USFS. 3-ER-337. USFS prepares mineral reports under a memorandum of understanding with BLM, and if it concludes, based on the mineral examination, that a claim contest is appropriate, it may refer the matter to BLM to determine whether to institute a claim contest. 3-ER-332-39.

1987). BLM must meet this burden to shift the burden to the claim holder to show that the claims are valid. *Id.*

G. The Mine Review and VER Determination

As noted above, a withdrawal under FLPMA is subject to VER, and operates prospectively to prevent the location of new mining claims in the withdrawn areas. It does not prevent mining on existing claims or require existing claims to be validated. Under 43 C.F.R. § 3809.100, BLM requires a mineral examination before it will approve a new plan of operations or an amendment to an existing plan of operations for claims on withdrawn lands. 2-ER-262-63. BLM does not require a mineral examination for existing claims on withdrawn lands with an approved plan of operations unless a material amendment is sought or is necessary. 1-SER-227. Therefore, unpatented mining claims that constitute VER under BLM regulations do not require a mineral examination. While it does not have a similar regulation, USFS's guidance also does not require a mineral examination in this scenario.

After the proposed Withdrawal, USFS performed the Mine Review and VER Determination. In the Mine Review, USFS concluded no material Plan amendments were necessary, and mining could continue without further approvals. 2-SER-358-403. Because no amendments were necessary, the VER Determination

proved unnecessary. In any event, it concluded the claims were valid. 2-ER-208-53.

The VER Determination was completed by certified USFS mineral examiners after a comprehensive analysis of the Mine. 2-ER-213-14. It was completed consistent with the Mining Law and the Handbook. 2-ER-209. It used reasonable and conservative assumptions and concluded the Mine's profitability is $29,350,736. 2-ER-231. It concluded EFR could mine, remove, transport, mill, and market uranium at a profit and the Mining Law's test for the discovery of a valuable mineral had been met and EFR had VER. 2-ER-232.

III. The VER Determination was not required; has no legal impact on the approved Plan; and therefore, the Trust is not entitled to injunctive relief.

The Court examined the legal effect of the Withdrawal and concluded it did not extinguish existing mining rights, including EFR's rights to its mining claims, and existing mines, such as the Mine, could continue to operate regardless of whether the VER Determination was completed. *Havasupai Tribe*, 906 F.3d at 1166-67. The Withdrawal's EIS acknowledged the Mine and assumed it would continue operations. 2-ER-262-63, 267-68.

The Court's reasoning remains sound because the Withdrawal is prospective and forbids only the future location and entry of *new* mining claims under the Mining Law. Withdrawal, 77 Fed. Reg. at 2563; *see In re Goergen*, 144 IBLA at

297 (withdrawals forbid only future locations and entries). The Withdrawal did not impact previously located mining claims, except to restate FLPMA's required language that it is subject to VER. The Withdrawal had no legal impact on EFR's mining rights or the approved Plan. *See* 3-SER-587 ("Plans of Operations that were in place prior to the withdrawal or segregation are not subject to the mandatory [VER] determination procedures at 43 C.F.R. § 3809.100(a)."). Instead, the Mine's "operations . . . *do not require a validity examination* unless there is a material change in the activity." *Id.* (emphasis added).

In addition to the VER Determination, USFS assembled a 13-member interdisciplinary team with expertise in minerals and geology, surface and groundwater, air quality, transportation, tribal consultation, heritage resources, vegetation, NEPA, and socioeconomic issues to conduct a Mine Review and determine if there was new information or material changes in circumstances. 2-SER-358-403. That team determined there were no material changes at the Mine; no amendment or modification of the Plan was required; and EFR could resume operations under the Plan without the need for any additional approvals, including a validity examination. 2-SER-358-403. Consequently, the VER Determination was not legally required, had no legal effect, and the Trust is not entitled to injunctive relief. *See Biological Diversity*, 162 IBLA at 281 (until a

claim contest "renders a final determination of invalidity, it is well established that the claimant will be permitted to engage in mining and processing operations").

Additionally, a mineral report does not provide authority to conduct mining operations; the relevant approval for those activities is a plan of operations. USFS and BLM routinely approve plans of operations without conducting VER determinations. *See, e.g.*, *In re W. Shoshone Def. Project*, 160 IBLA 32, 56-57 (2003). There is nothing in USFS's or BLM's regulations to prevent previously approved mining from occurring during a VER determination. To the contrary, BLM regulations and guidance says that it may occur, even in the context of a withdrawal. *See* 3-SER-587 (Handbook § 8.1.5). Thus, USFS's decision to perform the VER Determination did nothing to adversely impact the presumptively valid and ongoing rights of EFR to conduct its mining operations. It was undertaken as an internal procedure to provide USFS with additional comfort; and, at most, constituted a first step toward the possibility that USFS could potentially refer the matter to BLM to determine whether to bring a contest hearing. *See Best*, 371 U.S. at 335-37 (explaining BLM's role); 1-SER-201, Forest Service Manual ("FSM") § 2814.11 (explaining USFS's right to test the validity of mining claims); 1-SER-227-29, FSM § 2819 (explaining that "[n]o adjudicative power has been given to [USFS]" with respect to mining claims: "Thus, [USFS] statements about

validity are statements of belief and not formal determinations"); 1-SER-229, FSM § 2819.1-.2 (explaining USFS's and BLM's roles in validity contests).

In light of these authorities and the Court's prior decision, there is no legal basis to enjoin operations at the Mine even if the VER Determination was set aside. *Cf. Biological Diversity*, 162 IBLA at 281. Accordingly, EFR requests the Court affirm the District Court's ruling on this issue.

IV. USFS considered all relevant costs and completed the VER Determination consistent with the Mining Law, federal case law, and guidance for mineral examiners.

A. The VER Determination properly concluded the Mining Law's prudent person test was satisfied.

1. The Prudent Person Test

The administration and enforcement of the Mining Law, including determination of the validity of mining claims, rests in the discretion of Interior, which it has delegated to BLM. *Best*, 371 U.S. at 336-37; *Rawls v. Sec'y of Interior*, 460 F.2d 1200, 1200-01 (9th Cir. 1972). For more than 100 years, Interior has applied a "prudent person" test to assess claim validity. *See Castle v. Womble*, 19 L.D. 455, 457 (1894). Under the prudent person test, a mineral deposit is considered "valuable," and a discovery has been made as required by the Mining Law if the mineral deposit is "of such a character that 'a person of ordinary prudence would be justified in the *further* expenditure of *his labor and means*, with a *reasonable* prospect of success, in developing a valuable mine.'" *Coleman*, 390

U.S. at 602 (quoting *Castle*, 19 L.D. at 457) (emphasis added). The Supreme Court "has approved the prudent-man formulation and interpretation on numerous occasions." *Id.* (citing *Chrisman v. Miller*, 197 U.S. 313, 322 (1905)); *Cameron*, 252 U.S. at 459; *Best*, 371 U.S. at 335-36; *see also Watt v. W. Nuclear, Inc.*, 462 U.S. 36, 58 n.18 (1983).

In *Coleman*, the Supreme Court examined another Interior discovery test known as the "marketability test." 390 U.S. at 600. This test requires a mine claimant to show "that the mineral can be extracted, removed and marketed at a profit." *Id.* The Supreme Court confirmed "the marketability test [as] an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is "valuable." *Id.* at 602. It found that "the prudent-man test and the marketability test are not distinct standards, but are complementary in that the latter is a refinement of the former." *Id.* at 603.

2. <u>The VER Determination properly concluded the Mine satisfies the discovery test</u>.

The VER Determination was completed after a thorough investigation and analysis. 1-ER-13-18, 2-ER-208-53. It took a conservative approach, erring on the side of understating the Mine's potential profitability. 1-ER-19. Specifically, it used conservative assumptions for the amount of ore, uranium price, and a contingency of $1.7 million. 1-ER-19-20. It also included "several independent

discounted cash flow analyses" using APEX software, which is "well-accepted as a reliable evaluation tool by the mining industry for a variety of commodities and mine designs." 1-ER-20, 2-ER-230-31. This independently confirmed the detailed cost information provided by EFR.

USFS determined that after all costs and taxes were considered, the net sum of cash flow at the Mine (*i.e.*, the profit) was $29,350,736. 2-ER-231. That results in an internal rate of return ("IROR") of 78%, which is 6.5 times greater than the USFS conservatively estimated minimum mining industry IROR of 12%. 2-ER-231. This means the Mine is very profitable and, based on USFS's calculations, the Mine could withstand a drastic increase in costs or decrease in uranium price and remain profitable.

USFS concluded the Mine easily satisfied the prudent person test. 2-ER-232. The prudent person test provides that a mineral deposit is considered "valuable" as required by the Mining Law if it is "of such a character that 'a person of ordinary prudence would be justified in the *further expenditure* of *his labor and means*, with a reasonable prospect of success, in developing a valuable mine.'" *Coleman*, 390 U.S. at 600-03 (emphasis added); *Castle*, 19 L.D. at 457. The plain language of the test includes the phrases "further expenditure" and "his labor and means" making it clear that the test is a prospective, forward-looking analysis (*i.e.*, can the mineral be mined, milled, and marketed at a profit considering current

economic conditions). As noted above, the Supreme Court "has approved the prudent-[person] formulation and interpretation on numerous occasions." *Coleman,* 390 U.S. at 602. This confirms that the test is consistent with the Mining Law, which focuses on the mineral deposit and whether it is valuable – not on any past expenditures or decisions relating to that mineral deposit. Given the $29,350,736 profit, conservative assumptions, and contingency of $1.7 million, USFS properly concluded that the Mine satisfies the prudent person test.

It is worth noting the Mine also satisfied the marketability test, which requires a mine claimant to show "that the mineral can be *extracted, removed, and marketed* at a profit." *Id.* at 600 (emphasis added). Again, this language requires a forward-looking analysis and does not require the consideration of past exploration or development costs. It only requires the consideration of whether a mineral can be extracted, transported, milled, and marketed for a profit from the marketability date. Considering these costs, the VER Determination determined the Mine would generate a $29,350,736 profit and satisfied the test.

B. <u>The Trust's challenges to the VER Determination are without merit</u>.

The Trust argues the VER Determination is invalid because (1) USFS allegedly did not consider: environmental costs for monitoring radiation, surface water, and groundwater, costs of wildlife conservation, and costs of future

environmental mitigation measures;[11] and (2) USFS did not consider sunk costs. The Trust is wrong. The record demonstrated that EFR provided, and USFS independently verified, all costs to implement the Plan and operate the Mine. And as the District Court concluded, to the extent these costs were not considered or it could not determine if the costs were considered, any such error was harmless and did not change the conclusion that the Mine satisfied the Mining Law's discovery test.

1. EFR properly estimated, and USFS considered, all environmental costs.

a. USFS considered the costs of environmental safeguards.

The Trust alleges USFS failed to consider the costs of environmental monitoring, mitigation, and wildlife-conservation measures. It is wrong. USFS requested, and EFR submitted, comprehensive capital and operating cost information regarding the development and operation of the Mine under the Plan consistent with applicable laws. *See* 2-ER-215. USFS requested this information because EFR is the only uranium mining company that has mined breccia pipe uranium mines on the federal lands subject to the Withdrawal (*i.e.*, the Arizona 1, Pinenut, and Kanab North Mines). 2-ER-215. It also owns and operates the White

[11] While the Trust focuses largely on sunk costs, it alleges costs of any potential, unspecified, future environmental mitigation measures also were not considered, and if they were, the Mine would not satisfy the discovery test. Accordingly, EFR addresses all costs identified and addressed by the District Court.

Mesa Mill, the only operating uranium mill in the United States. 2-ER-224-25. As a result of these unique mining experiences and assets, EFR provided extremely reliable and detailed cost information that accounted for all costs of mining a breccia pipe uranium mine and of milling uranium-bearing ores in the level of detail and specificity typically used by EFR in making its development and production decisions for similar mines. Upon receipt of this information, USFS independently confirmed that EFR's costs were accurate and verified the costs against the costs EFR experienced at the Arizona 1 Mine. 2-ER-226-27. In light of this information, USFS and EFR considered all relevant costs in the VER Determination.

With respect to the costs identified by the Trust, USFS considered all of them in the following costs in the VER Determination: mining and site general and administrative ("G&A") costs (*i.e.*, the cost of operating under the Plan at $110.42/ton) of $9,298,136.94; indirect operating costs at $36.56/ton, which is $3,078,607.92 and includes costs for permitting and land-related issues; capital costs related to required surface facilities of $508,000.00; capital costs of permitting and engineering of $218,000.00; reclamation costs of $450,000.00; and a contingency of $1.7 million. 1-ER-22-23, 2-ER-226-28. The Mine's costs totaled $15,252,744.86. 2-ER-227. These estimates included all the costs identified by the Trust.

b. Monitoring costs were considered.

The Trust claims USFS and EFR did not consider the costs of a year of pre-operational sampling to establish baseline radioactivity values, a groundwater well, and subsequent monitoring. These claims are untrue. EFR provided the District Court with citations to the record demonstrating the costs had been considered. Regarding pre-operational sampling, the record includes several documents demonstrating that the required monitoring was completed before the VER Determination was completed. *See, e.g.*, 3-ER-373 ("Baseline measurements of radiation values in soil, air and water have been taken."); 2-SER-358-403 (Mine Review). Additionally, the cost information that EFR provided to USFS included costs associated with EFR's ongoing environmental monitoring obligations under the Plan and its federal and state permits and authorization, which were performed by EFR's employees. 2-ER-225-28. Finally, the Trust continues to complain about potential groundwater impacts at the Mine. There is absolutely no support for this allegation. The Mine Review thoroughly evaluated potential groundwater impacts associated with the Mine and concluded the Mine would not cause any adverse impact to groundwater. 2-SER-390. The Trust offered no citations to the record demonstrating otherwise, and the allegations were properly rejected.

Despite the record and the Trust having the burden of proof, the District Court concluded it could not resolve the dispute between the parties regarding

whether monitoring costs not specifically listed in the costs provided by EFR to USFS were considered. 1-ER-22. As a result, for the purpose of its analysis, the District Court gave the Trust the benefit of the doubt and assumed that monitoring costs were not considered in the VER Determination. 1-ER-20. The District Court then estimated the monitoring costs as $112,000 (*i.e.*, $70,000 for radiation monitoring of air, soil, and water and $42,000 for groundwater sampling). 1-ER-21. It then analyzed and concluded any error in failing to consider these costs was harmless.

c. Wildlife conservation measures were considered.

The Trust claims USFS failed to consider the costs of certain wildlife conservation measures. The Plan requires EFR to replace 32 acres of big-game-foraging habitat and a watering source. 3-ER-371. However, the Plan does not set a deadline for this work to be completed, and EFR has undertaken several wildlife mitigation measures including contributing $12,000 for the reconstruction and sealing of nine earthen wildlife and livestock tanks. 1-SER-188. Additionally, the costs of replacing foraging habitat were included in EFR's costs provided to USFS. 2-ER-226-27. EFR demonstrated that wildlife mitigation measures were included in EFR's cost estimates and considered by USFS.

Regarding the California condor, the Arizona population of that species is "nonessential and experimental." USFS received a recommendation from U.S.

Fish and Wildlife Service regarding measures to protect California condors. 2-SER-353. USFS decided only to make recommendations to EFR regarding the California condor, which are not required but which EFR has largely completed or included in its cost estimates. 2-SER-353-57, 2-ER-226 ("Surface facilities, rehab, impoundment, ore pad"). A net, which is one possible mitigation method, has not been installed over the impoundment because no California condor has been seen at the Mine, and there are concerns that netting can cause more harm than good. Should a net be required, the estimated cost is well within EFR's $1.7 million contingency. 2-ER-226-27.

The District Court also concluded it could not resolve the dispute regarding whether elk habitat restoration and a potential condor net or other mitigation were considered, based on the way the costs are delineated in the VER Determination. 1-ER-21. As a result, for the purpose of its analysis, the District Court gave the Trust the benefit of the doubt and assumed they were not considered. 1-ER-21. The District Court estimated the elk habitat restoration would cost $14,420 (*i.e.*, $8,250 for a new water tank and $6,170 for a new 32-acre foraging area). 1-ER-20, 3-ER-371. It could not determine the cost of the net. The District Court then analyzed and concluded any error in failing to consider these costs was harmless.

d. USFS is not required to consider speculative, potential future mitigation costs.

The Trust alleges USFS failed to consider several speculative, potential costs, including the cost of any additional future mitigation measures, potential remediation of groundwater, an additional potential impoundment, and unspecified wildlife mitigation measures. The Trust did not quantify or provide any cost estimates to the District Court. It could not because the costs are pure speculation, and it is well-established that USFS is not required to speculate as to unknown, potential future costs when preparing a mineral examination. *United States v. Dwyer*, 175 IBLA 100, 118 (2008); *United States v. Clouser*, 144 IBLA 110, 130 (1998) ("[W]e agree with [the ALJ] that . . . speculative cost reductions do not alter the Government's profitability determination."); *United States v. Highsmith*, 137 IBLA 262, 278 (1977). The District Court's ruling that USFS properly excluded speculative, unknown, future costs identified by the Trust should be affirmed.

e. Any error was harmless.

The District Court gave the Trust the benefit of the doubt by assuming, for purpose of its analysis, that the VER Determination omitted certain costs associated with environmental monitoring, elk habitat restoration, and a net to protect California condors. It analyzed those costs and properly concluded that, even if considered, they would not make the Mine unprofitable, and any error was harmless. 2-ER-26.

i. The District Court applied the harmless error rule correctly.

Section 706 of the APA requires that "the court shall review the whole record or those parts of it cited by a party, and *due account shall be taken of the rule of prejudicial error*." 5 U.S.C. § 706 (1966) (emphasis added). The Supreme Court interpreted this language to impose a harmless error rule like that adopted by courts in civil cases. *Shinseki v. Sanders*, 556 U.S. 396, 406 (2009) (describing § 706 as an administrative law harmless error rule); *see also Ludwig v. Astrue*, 682 F.3d 1047, 1054 (9th Cir. 2012) ("*Sanders* establishes that administrative adjudications are subject to the same harmless error rule as generally applies to civil cases."). The Trust had the burden of showing that any alleged errors were harmful. *Shinseki*, 556 U.S. at 409; *Organized Vill. of Kake v. U.S. Dep't of Agric.*, 795 F.3d 956, 969 (9th Cir. 2015) ("[N]ot every violation of the APA invalidates an agency action; rather, it is the burden of the opponent of the action to demonstrate that an error is prejudicial."); *Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631 F.3d 1072, 1092 (9th Cir. 2011) ("*Sanders* clarifies that the burden of showing an agency's deviation from the APA was not harmless rests with the petitioner[.]"). Applying this rule, the District Court correctly concluded that any error in omitting costs was harmless in USFS's overall analysis of the Mine.

ii. The VER Determination did not involve a procedural error.

To avoid the application of the harmless error rule, the Trust cites to Ninth Circuit cases holding an agency error is harmless where it "clearly had no bearing on the procedure used or the substance of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1091-92; *see Nw. Res. Info. Ctr., Inc. v. Nw. Power & Conservation Council*, 730 F.3d 1008, 1020 (9th Cir. 2013). The Trust argued that USFS's alleged failure to address the identified environmental costs was a procedural error sufficient to overcome the harmless error rule, regardless of the amount of costs omitted or their effect on the Mine's profitability. 2-ER-27. To support their argument, the Trust relied upon cases focusing on procedural errors in administrative rulemaking, an area of law where procedure matters greatly. 2-ER-27. The Ninth Circuit has held that the harmless error rule should be applied to congressionally-mandated rulemaking procedures only rarely. *See Cal. Wilderness Coal.*, 631 F.3d at 1020-21 (courts "must exercise great caution in applying the harmless error rule in the administrative rulemaking context" because "[h]armless error is more readily abused there than in the civil or criminal context"). The Trust's challenge does not involve administrative rulemaking. Instead, it involves the determination of whether USFS considered all relevant costs when evaluating the Mining Law's prudent person test. As a result, the District Court correctly rejected the Trust's argument regarding procedural error and turned to whether the

alleged omission had a harmful effect on the application of the Mining Law's prudent person test. The Trust has provided the Court with no reason to overturn the District Court's decision.

iii. Any error did not affect the conclusions in the VER Determination.

The second part of the Ninth Circuit's harmless error doctrine in APA cases asks whether the error affected "the substance of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1091-92. In this case, USFS concluded the Mine would be very profitable, making $29,350,736 in profit, a rate of return more than six times the industry minimum, after using conservative assumptions and including a $1.7 million contingency. 1-ER-29. Given this large profit, conservative assumptions, and contingency, it "makes sense to ask the party seeking reversal to provide an explanation [of why the errors were harmful], say, by marshaling the facts and evidence showing the contrary." *Shinseki*, 556 U.S. at 410. The District Court concluded the Trust made no attempt and did not quantify the costs that it alleged were errors. 1-ER-30. The Trust's failure was fatal, and it cannot cure it on appeal.

Notwithstanding the Trust's failure, the District Court reviewed the record and estimated the costs of environmental monitoring, assuming contrary to EFR's position that the costs were included in its cost estimates, at $112,000 and of wildlife habitat restoration at $14,420 for a total of $126,420. 1-ER-30. It then

took judicial notice to account for inflation and assumed that the total in 2012 would be $261,000. It then assumed a four-fold increase to $1,000,000 to account for uncertainties. Even with this assumption and the costs being within the $1.7 million contingency, the alleged error did not come close to making the Mine unprofitable. Similarly, the Trust provided no reason to believe a net for the California condor, should that ever be considered necessary or desirable, would come close to eliminating the Mine's profit. Ultimately, the Trust has not carried its burden to show the alleged errors were harmful. *See Tongass Conservation Soc'y v. U.S. Forest Serv.*, 455 F. App'x 774, 777 (9th Cir. 2011); *Ludwig*, 682 F.3d at 1054. EFR requests the Court affirm the District Court.

C. USFS considered sunk costs consistent with the Mining Law, federal case law and guidance for mineral examiners, and economic theory.

1. The Handbook excludes sunk costs.

The VER Determination is a mineral report, which documents the conclusions and recommendations of USFS mineral examiners following a mineral examination. A mineral report is an internal, investigatory document that reflects a mineral examiner's opinion on whether a discovery has been made under the prudent person test, which is used to inform later agency decision-making. It is not a formal determination and has no legal effect. However, mineral reports play an important role as evidence in a claim contest because BLM bears the burden of presenting a *prima facie* case that the claims are invalid. *Lara*, 820 F.2d at 1542.

BLM created the Handbook to ensure that mineral reports are completed uniformly, consistently, and in full compliance with the Mining Law and Supreme Court, federal, and IBLA case law. 2-SER-232-348. The Handbook sets forth the required methods and procedures for a mineral examination and the form and content of a mineral report. It has long served as guidance for mineral examiners. EFR is unaware of any challenges to the Handbook. And notably, the Trust does not challenge the Handbook here.

The Handbook confirms that a mineral examination is a forward-looking economic evaluation of whether mining on a claim or set of claims can reasonably be expected to make a profit going forward. The evaluation does not look back at or consider sunk costs by the claimant or other former owners of the mining claim.[12] As noted below, sunk costs do not relate to the question of whether mining from the date of the mineral examination or "marketability date" can reasonably be expected to make a profit going forward. Recognizing this, the Handbook explains how to treat sunk costs:

> Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date. Do not include as expenses in the operation's cash flow those capital costs that were sunk before the date of marketability.

[12] The question is simply whether the miner can make a profit going forward; not what the miner or other unrelated parties spent in the past developing the mine. If one could mine or sell for a profit or value today, a prudent person would mine or make the sale regardless of what originally went into creating that value.

3-ER-325 (footnotes omitted). This guidance is straight-forward and clear. Sunk costs incurred before the marketability date are irrelevant and not to be considered by mineral examiners when performing mineral examinations.

The Handbook also is consistent with the Mining Law's prudent person test. *See Clouser*, 144 IBLA at 131 ("To the extent that there are existing tracks and lighting, the costs attributable to them need not be considered.") (citation omitted); *United States v. Mannix*, 50 IBLA 110, 119 (1980) ("There is no case law of which we have knowledge, nor has the Government adduced any, that compels consideration of the above-mentioned development costs in determining if an ongoing operation is profitable." *Cf. Andrus v. Shell Oil Co.*, 446 U.S. 657 (1980)); *United States v. Garner*, 30 IBLA 42, 67 (1977). The Handbook accurately reflects these cases. Consistent with the Handbook and IBLA cases, sunk costs are not relevant and USFS properly excluded them from the VER Determination. USFS's reliance was reasonable and appropriate.

2. <u>Sunk costs are ignored in economic based decision-making</u>.

The Handbook's treatment of sunk costs is consistent with economic theory, in which a "sunk cost" is a cost that has already been incurred and cannot be recovered. *See Verizon Commc'ns, Inc. v. FCC*, 535 U.S. 467, 499 n.17 (2002) ("'Sunk Costs' are unrecoverable past costs; practically every other sort of economic 'cost' is forward looking, or can be either historical or forward

looking."). In economic based decision-making, a sunk cost is independent of any future event and should not be considered when deciding whether to invest in or continue a project. *See, e.g.*, *Alenco Commc'n, Inc. v. FCC*, 201 F.3d 608, 615-16 (5th Cir. 2000) (recognizing that historical investments in legacy infrastructure are "sunk costs" and have no relevance to contemporary business decisions); *MCI Commc'n Corp. v. Am. Tel. & Tel. Corp.*, 708 F.2d 1081, 1116-17 (7th Cir. 1983) ("The historical costs associated with the plant already in place are essentially irrelevant to this decision since those costs are 'sunk' and unavoidable and are unaffected by the new production decision.").

Economic theory prescribes a simple response to sunk costs: ignore them because businesses and economists evaluate costs on a wholly prospective basis and costs already incurred do not affect decisions on price and quantity. Judge Richard A. Posner explained this as follows:

> The distinction between opportunity costs and transfer payments, or in other words between economic and accounting costs, helps show that cost to an economist is a forward looking concept. "Sunk" (incurred) costs do not affect a rational actor's decisions on price and quantity. Suppose that a life-sized porcelain white elephant cost $1,000 to build ($1,000 being the alternative price of the inputs that went into making it) but that the most anyone will pay for it now that it is built is $10. The fact that $1,000 was sunk in making it will not affect the price at which it is sold, provided the seller is rational. For if he takes the position that he must not sell it for less than it cost him to make it, the only result will be that instead of losing $990 he will lose $1,000.

> The discussion of sunk costs should help explain the emphasis that economists place on the *ex ante* (before the fact) rather than *ex post* (after the fact) perspective. Rational people base their decisions on expectations of the future rather than on regrets about the past. They treat bygones as bygones. If regret is allowed to undo decisions, the ability of people to shape their destinies is impaired. If a party for whom a contract to which he freely agreed turns out badly is allowed to revise the terms of the contract ex post, few contracts will be made.

Richard A. Posner, Economics Analysis of Law § 1.1, at 7 (9th ed. 2014). These concepts are fundamental business concepts:

> A sunk cost is a cost that cannot be recovered or changed and is independent of any future cost a business might incur. Because a decision made today can only impact the future course of business, sunk costs stemming from earlier decisions should be irrelevant to the decision-making process. Instead, decision makers should base strategies on how to proceed with business or an investment based on future costs.

See Steven Nickolas, "Why You Should Ignore Sunk Costs in Decision Making," INVESTOPEDIA (Oct. 15, 2018), https://www.investopedia.com/ask/answers/042115/wh-should-sunk-costs-be-ignored-future-decision-making.asp.[13]

[13] The Trust argues that "profit" must include "all costs" and this is somehow an accounting concept. This is not true. Past capital expenditures are subject to impairment testing (*i.e.*, analysis to determine whether long-lived assets are recoverable and should continue to hold value on financial statements). The basis of impairment testing is a comparison of actual capital cost expended net of accumulated depreciation or amortization, or the asset group's carrying value compared to the value of future cash flows expected to result from the entity's continued use of the asset group. This approach is consistent with the economic position of ignoring sunk costs and focusing on future cash flows.

The following example further demonstrates why sunk costs are properly excluded. Assume that Company A spends $10 million on exploration and development costs on a mining claim. Despite its best efforts, Company A is unsuccessful and does not discover a valuable mineral deposit. However, its efforts created value (*i.e.*, drilling information, infrastructure, equipment, and buildings) so it sells the mining claim to Company B for $1 million. Company B then spends $1 million on additional exploration and discovers a valuable mineral deposit. USFS then conducts a mineral examination, which confirms the discovery and determines Company B can make a profit of $8 million.[14] Under the prudent person test, Company B can move forward with its mining. Under the Trust's argument, Company B cannot move forward with mining because of Company A's sunk costs incurred in failing to discover the mineral deposit.

This cannot be correct. Company B has a valuable discovery, which it paid a total of $2 million for (*i.e.*, $1 million in purchase price and $1 million in further development costs). It can mine the mining claim and make $8 million, or it can sell it to another party for $8 million, who can then mine it. Simply put, the project is worth $8 million at the time of the examination. To take the position that historical costs are somehow relevant and should be applied against this $8 million

[14] Generally, this means that if someone pays $8 million for a project, they will expect to earn a profit stream over the life of the project, and the profit stream will have a current value of $8 million.

value, such that the total value of the project is somehow worth only negative $3 million at the time of the examination (*i.e.*, $10 million spent by Company A plus $1 million spent by Company B for total development costs of $11 million compared to a current value of $8 million, for a negative value of $3 million) would be absurd. USFS would never tell Company B that its mining claim cannot be sold for $8 million today (*i.e.*, that it is not marketable) and that Company B would be imprudent to proceed to mine in these circumstances. To invalidate Company B's mining claim would amount to a taking from Company B in the amount of $8 million, which Congress surely intended to avoid by making any withdrawal subject to VER. A mining claim worth $8 million is a VER.

Further, it would not make any difference had Company A decided not to sell the mining claim to Company B, but instead to hold it and further develop and mine. Company A would have spent a total of $11 million (*i.e.,* its $10 million original expenditure plus an additional $1 million in further development expenses) creating a value at the time of the mineral examination of $8 million. Company A then could either continue to mine and make $8 million, or sell the mining claim to a third party to mine. A prudent person would mine or sell the mining claim. It would be irrational and imprudent of a person to abandon the mining claim on the basis that $11 million in sunk costs exceeds the current marketable value of $8 million. If Company A were to abandon the mining claim

(or if BLM were to invalidate it), Company A would suffer a total economic loss of $11 million. If Company A were to proceed with mining, it would earn $8 million from mining, which would partially offset Company A's total development costs, resulting in a total loss to Company A of $3 million, which would be much better than the $11 million loss Company A would suffer if it did not mine. A prudent person would always either expend the funds required to mine in these circumstances or sell the mining claim to a third party.

As for a third party, Company C, that would spend $8 million to purchase the developed mining claim from either Company A or B, should Company A or B choose to sell, the mining claim would still be worth $8 million to Company C. Company C could either mine and recover its $8 million purchase price and make a return, or sell the mining claim to another purchaser for $8 million. The purchase price is a sunk cost: once paid, it does not affect the decision whether or not to mine. If the purchase price were factored into the analysis of whether or not a valuable discovery has been made, as the Trust suggests, the mining claim would be worth $0 to Company C. That makes no sense, as Company C just spent $8 million to acquire the mining claim. USFS cannot determine the claim to be invalid when Company C just paid $8 million to acquire it and could sell it to another purchaser for $8 million. The inherent value of the mining claim is $8 million, which is always determined based on future cash flows. How that value

was arrived at, either through $2 or $20 million in prior development costs or purchase price paid, is irrelevant under the Mining Law's prudent person test and determining whether a person "would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine."

In an effort to make the Mine unprofitable, the Trust asks the Court to ignore rational, economic decision-making and to force USFS to track and consider every single expense incurred by every party on a mining claim when applying the prudent person test.[15] It further asserts these costs must be imposed on a subsequent mining claimant regardless of the business rationale and decisions behind expenses. This makes no sense and is fundamentally unfair. The language and examples above demonstrate the Trust's argument is not rational, and sunk costs are properly excluded under the Mining Law's prudent person test.

3. The District Court ruled correctly on sunk costs.

a. The VER Determination is consistent with federal case law and the Mining Law.

The Trust relies on several authorities to argue that USFS should have considered sunk costs in the VER Determination. The District Court considered

[15] The Trust's argument is not practical. Property rights under the Mining Law are self-initiated, and a miner's actions establish property rights. As a result, USFS has no way of knowing or tracking mining costs for individual mining claims.

these authorities and rejected the Trust's arguments. EFR asks the Court to do the same.

The Trust first relies on the Supreme Court's precedent in *Cameron*, 252 U.S. at 459, *Coleman*, 390 U.S. at 602, and *Ideal Basic Indus., Inc. v. Morton*, 542 F.2d 1364, 1369 (9th Cir. 1976). These authorities do not support the Trust's argument, and they do not address whether sunk costs must be considered as part of a mineral examination. The Trust argues the cases somehow imply a requirement that sunk costs be considered, but these cases do not say or require this. In fact, the cases support excluding sunk costs. As noted above, the cases considered and affirmed the Mining Law's prudent person test, which includes definitions and language referring to present marketability, not past or future prospects. None of the language and definitions in the test refer to past expenditures, only to present and future potential. As a result, in determining whether a discovery has been made, past expenditures are irrelevant. Since the future is speculative, the determination must be made on present facts and cost factors, which is exactly what USFS did.

This is further confirmed because the valuation of a mine is made on a marketability date. *See Coleman*, 390 U.S. at 602; Notice of Policy on Mineral Commodity Pricing & Opportunity for Comment, 65 Fed. Reg. 41,724, 2000 WL 877957 (July 6, 2000) ("MCP"). For mining claims on withdrawn lands,

marketability is addressed "both as of the date of the withdrawal and the date of the mineral examination." MCP, 65 Fed. Reg. at 41,725, 2000 WL 877957 (July 6, 2000). The language in the cases relied on by the Trust interpreting the Mining Law's discovery test suggests that the comparison of costs and revenue to determine profitability looks forward from the marketability date. *See Coleman*, 390 U.S. at 602 (a mineral deposit is valuable if it is "of such a character that a person of ordinary prudence would be justified in the *further expenditure* of *his labor and means*, with a reasonable prospect of success, in developing a valuable mine.")(emphasis added); *Cameron*, 252 U.S. at 459 ("[T]he discovery should be such as would justify a person of ordinary prudence in the *further expenditure* of *his time and means* in an effort to develop a paying mining")(emphasis added); *Ideal Basic*, 252 F.2d at 1369 (asking whether "deposits were of such a character as to justify a man of ordinary prudence in expending *further labor and means* with a reasonable prospect of success in developing a valuable mine")(emphasis added). None of the authorities cited by the Trust support considering sunk costs as part of a mineral examination.

The Trust next relies on the text and intent of the Mining Law to argue sunk costs must be considered. The Mining Law does not support this position. Regarding its purpose, the Mining Law encourages mining on public lands and rewards the discovery of valuable minerals with property rights. *Coleman*, 390

U.S at 602 ("The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense."). Forcing USFS to consider every sunk cost incurred would effectively encumber mining claims with past costs. This is not consistent with the Mining Law's intent as it would make it more difficult to explore and locate minerals on federal lands. It could also close off many public lands to mining due to costs incurred by prior owners, which is not consistent with the Mining Law's purpose. Regarding its text, the Mining Law's property disposal scheme was carefully crafted and follows the sequence of exploration, location, discovery, and patent. Mineral examinations evaluate the discovery phase of this framework. The Mining Law's discovery test and the policy of ignoring sunk costs is consistent with this framework. The Trust has cited no authority that says otherwise.

The Trust then cites to several IBLA cases in support of its argument. None support the consideration of sunk costs. In fact, IBLA cases have universally concluded that sunk costs should be excluded when evaluating whether a valuable mineral deposit has been discovered under the Mining Law. *See Clouser*, 144 IBLA at 131; *Mannix*, 50 IBLA at 119; *Garner*, 30 IBLA at 67. In light of these IBLA authorities, USFS properly excluded sunk costs.

To avoid these authorities, the Trust relies on *United States v. Collord*, 128 IBLA 266 (1994). The Trust's reliance on *Collord* is misplaced. The three-judge

majority opinion in *Collord* actually relied on the *Mannix* decision cited above and held the following when considering capital costs: "Not included are development and capital costs that have already been spent before the date on which a valuable mineral deposit must be shown to exist. *See United States v. Mannix*, supra at 119." *Collard*, 128 IBLA at 288 n.24. While the concurring opinion in *Collord* attempted to draw some distinctions with the *Mannix* decision, it was not the majority opinion in the case, so it does not support the Trust's argument. Additionally, the Trust's citation to *United States v. Armstrong*, 184 IBLA 180 (2013) also does not help it. In *Armstrong*, the claimant tried to argue that certain portable equipment and machinery that had already been purchased by the claimant was a "sunk cost" and need not be included in its capital costs and related operating costs for purposes of calculating profitability. The IBLA disagreed and determined that the claimant had failed to account for certain machinery in its capital costs. *Armstrong*, 184 IBLA at 219. This holding is entirely consistent with the definition of sunk costs identified in the Handbook. It is also distinguishable from EFR's sunk costs, which relate to sunk costs only at the Mine, not portable equipment which can be used elsewhere and for which a usage fee would be applied for use at the Mine going forward. EFR prepared and submitted detailed cost information to USFS, demonstrating EFR's sunk costs are distinguishable from those in *Armstrong*.

Finally, the Trust argues the term "absent a withdrawal" in *Mannix*, 50 IBLA at 119, somehow creates an exception for withdrawals requiring mineral examiners to consider sunk costs in those, but not other, cases. There is no such exception for several reasons. First, the sunk cost approach of *Mannix* has existed for over 40 years; has not been contradicted by any federal court decision addressing sunk costs; and is consistent with the forward-looking language in Supreme Court and federal cases. The Trust's alleged exception is discussed in no IBLA cases or the Handbook. Second, a review of *Mannix* reveals that the phrase was added because withdrawals present a unique situation for mineral examiners. The *Mannix* language simply reflects the practical effects of a permanent withdrawal: a claimant must have VER prior to the withdrawal to proceed under the Mining Law. Without VER, the claimant cannot proceed. The *Mannix* language simply reflects this and does not create any exception for withdrawals. Third, the Trust cites to the concurring opinion in *Collord*, 128 IBLA at n.24, to attempt to create an exception and distinguish *Mannix*. However, that decision was not the law in that case and has not been cited as the proposed approach in any other IBLA cases. However hard the Trust may try, *Mannix* did not create an exception. Fourth, the Trust attempts to draw a distinction between claims located on open and withdrawn public lands, noting that claims on open lands can be relocated if invalidated, whereas claims on withdrawn lands cannot. This

distinction does not exist for the Mine, as the Withdrawal only has a 20-year duration and expires in 2032. As a result, the lands within the Withdrawal area will reopen again to location under the Mining Law in 2032 unless a permanent withdrawal occurs. As a result, if EFR were to abandon or lose its rights to its mining claims, another claimant could relocate those claims in 2032. Even if it existed, the Trust's exception would not help it here. Finally, as discussed above, it would not be prudent for a person to base his or her mining decision on sunk costs, regardless of whether claims are subject to a withdrawal, so a requirement that sunk costs be included in withdrawal situations is inconsistent with the Mining Law's prudent person test. For these reasons, the Court should reject the Trust's arguments.

b. Any error was harmless.

The District Court concluded USFS properly excluded sunk costs from the VER Determination. Alternatively, it concluded the Trust failed to show that sunk costs would render the Mine unprofitable. The Trust did not suggest, argue, or provide any record citations showing EFR's sunk costs would come close to offsetting the Mine's profit of $29,350,736. The District Court correctly determined the Trust failed to meet its burden and any error was harmless.

In an attempt to create harm, the Trust cites to the Fourth Affidavit of Muril D. Vincelette submitted in response to a stay request in 1987 ("Affidavit").

3-ER-340-59. The Affidavit contains general cost estimates for the Mine's exploration, permitting, site preparation, shaft sinking, and underground development phases. The Affidavit does not support the Trust's claim for several reasons. First, the Affidavit is not information that a mineral examiner would rely upon or use in a mineral examination. It contains extremely general estimates – not close to the detailed estimates required by the Handbook. As a result, even if a mineral examiner reviewed the Affidavit, it could not be used to reach any conclusions. Similarly, the Court should not rely on the Affidavit to draw the Trust's requested conclusions. Second, the Affidavit identifies exploration and permitting costs that, as noted above, are clearly excluded by the plain language of the prudent person test. Third, the Affidavit's estimates include costs associated with future site preparation, shaft sinking, and underground development that were included in EFR's cost estimates provided to USFS. As a result, the Trust double counts these costs in its effort to eliminate the Mine's profitability. The Court should reject this running-up of costs to defeat the Mine's profitability. Fourth, the Affidavit references sunk costs that do not belong to EFR, but rather, to a prior owner of the Mine.[16] As a result, the District Court properly excluded these costs.

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[16] Gulf Mineral Resources and Energy Fuels Nuclear, Inc. were prior owners of the Mine and are not related to EFR. In 1997, International Uranium (USA) Corporation and IUC Arizona Strip, LLC (renamed Denison Mines (USA) Corp. and Denison Arizona Strip, LLC in 2007 following a merger) purchased the Mine. 2-ER-205. In 2012, after a merger, Denison Mines (USA) Corp. and Denison

Fifth, even if the Court were to consider the costs identified in the Affidavit, they do not exceed the Mine's profit of $29,350,736 even with adjustments for inflation. Finally, the Trust raised the Affidavit with the District Court, which properly evaluated it and concluded that it did not demonstrate harm. EFR asks the Court to do the same.

The Trust next cites to a 2013 Declaration of Harold Roberts in Support of Motion to Intervene ("Declaration") to claim that EFR has incurred $6 million in sunk costs. Again, the Declaration contained very general financial estimates and information to support EFR's intervention. Like the Affidavit, the Declaration included very general cost estimates, some of which duplicated the costs in the Affidavit, and some of which were covered by EFR's cost estimates submitted to USFS. The District Court concluded that the Declaration was not part of the record and properly did not consider it. The Court should similarly ignore it. But even if the Court considers the $6 million in sunk costs identified in the Declaration, that total does not offset the Mine's $29,350,736 profit.

The Trust next complains the record does not contain information allowing it to prove excluding sunk costs was harmful. This complaint rings hollow. This case has been pending since 2013. The parties have worked collaboratively

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Arizona Strip, LLC remained the owners and operators of the Mine, but were renamed the EFR entities before the Court. 2-ER-205.

together and with the District Court to assemble and complete the record. Other than a dispute about a single citation to EFR's confidential business information, the parties were able to resolve all issues. The Trust never complained about deficiencies in the record, sought to supplement the record, or asked the District Court to conduct discovery on the issue of sunk costs. The Trust's complaints are untimely and should be rejected. Further, it is worth noting the Trust's arguments regarding sunk costs arose very late in this litigation. Sunk costs are not identified in the Amended Complaint; they were not at issue in the first merits briefing; and they only become an issue after the Trust realized its allegations regarding its other identified costs were without merit and would not offset the Mine's profit.

Finally, EFR notes that the law "does not require a guaranteed profit to constitute a discovery" under the Mining Law. *Mannix*, 50 IBLA at 117-18. It requires only "a reasonable prospect of success in developing a valuable mine." *Id*. at 112; *see also Coleman*, 390 U.S. at 602 (requiring only a "reasonable prospect of success"); *Ideal Basic*, 542 F.2d at 1369 (requiring "reasonable prospect of success"). Despite its best efforts, the Trust has not identified omitted or sunk costs remotely close to the Mine's profit of $29,350,736. This demonstrates EFR has a reasonable prospect of success in developing a valuable mine.

THE DISTRICT COURT'S REDACTION AND SEALING ORDERS WERE PROPER.

Finally, the Trust argues the District Court's order allowing a single redaction of EFR's confidential business information was in error and warrants a remand. The Court should reject this argument for several reasons. First, the District Court properly protected EFR's confidential information that is exempt from public disclosure under the Freedom of Information Act, applicable USFS regulations, 5 U.S.C. § 552(b)(4) and 36 C.F.R. § 228.6, the Handbook, and *Food Mktg. Inst. v. Argus Leaders Media*, 139 S. Ct. 2356 (2019). 1-ER-38, 40. EFR laid out in detail why each of these authorities supported the District Court's redaction and sealing. *See* 1-SER-5-23. The District Court agreed and found there was a compelling reason to allow the redaction and seal the confidential information. *See Kamakana v. City & Cty. of Honolulu*, 447 F.3d 1172, 1179 (9th Cir. 2006). The Court should affirm this well-reasoned decision. Second, as noted above, the Trust's complaints regarding deficiencies in the record are untimely and there is no reason for a remand. This matter has been pending since 2013. The Trust had ample opportunity to conduct discovery or supplement the record; the Trust chose not to do so; and the Court should not give the Trust an additional opportunity. Finally, the Trust relies on the District Court's alternate ruling finding any failure to consider sunk costs was harmless in seeking a remand. If the Court agrees with the District Court regarding sunk costs, it need not disturb the

District Court's rulings regarding EFR's confidential information. And should the Court find that sunk costs should have been considered (or if it simply wants to see behind the redaction), EFR can lodge the unredacted document identifying EFR's sunk costs in camera for the Court to review and confirm the failure to consider the costs was harmless error. For these reasons, the Court should affirm the District Court's redaction and sealing orders.

CONCLUSION

EFR requests the Court affirm the District Court's decision, 1-ER-4-39, in its entirety and dismiss the Trust's appeal.

RESPECTFULLY SUBMITTED this 8th day of April, 2021.

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AMERICAN LAW OF MINING

Second Edition

VOLUME 1

Edited by

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2020

Filed Through:
RELEASE NO. 56, JULY 2020

GALLAGHER & KENNEDY
JUL 30 2020
RECEIVED

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convention was scheduled in 1849 and, by 1850, although California had been made a state, there was still no federal effort to control the miners. Early California state court assertions that all minerals passed to the state on admission[5] did not carry the day and the idea was eventually abandoned.[6]

§ 4.10 The Mining Laws of 1866 and 1870

There was little direct federal interference with the Western miners between 1848 and 1866. Generally speaking, Western interests were inclined to continue with as little federal interference as possible, so that the rights which miners had assumed they had acquired would not be disturbed and free acquisition of such rights could be continued. On the other hand, Eastern interests thought that there should be some financial return to the government for the mining activities and that such return might be accomplished by, for example, sale of mineral lands.[1]

No definitive federal legislative action was taken until 1866 when the Senate passed a bill favoring a free mining policy.[2] It was eloquently argued that the miners should have the right to buy their claims, that their product greatly enhanced the nation's wealth and even that of the world, that most miners never made the big strike although a few did, and that the product of the mines should not be taxed as such for this would be like taxing the product of farms and would not be conducive to further development.[3] Efforts to incorporate a permanent royalty or tax on the production of the mines died and the resulting legislation in 1866 is based on the notion that the mineral wealth of the public lands should be available to those who seek and find it and that the public lands should be free and open for such exploration and development.[4]

In the debate preceding passage of the Act, it had been argued that it was essential to the nation to continue development of its mineral resources and that for this continued development four conditions must exist: transportation, a scientific knowledge of mining, abundance of capital, and security of title.[5]

The 1866 statute, which was adopted after full debate, went a long way toward satisfying the need for security of title. It stated the policy of having the public domain open for exploration for minerals by citizens and citizens declarant, subject to local law not in conflict with the federal law. It incorporated in part existing mining district rules. It validated previously made claims on veins,

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[5] Hicks v. Bell, 3 Cal. 219, 226 (1853).

[6] Moore v. Smaw, 17 Cal. 199 (1861).

[1] *See* Swenson, "Legal Aspects of Mineral Resources Exploitation," in P. Gates, *History of Public Land Law Development* 711-19 (1968).

[2] *Cong. Globe,* 39th Cong., 1st Sess. 3224-37 (1866).

[3] *Id.*

[4] *Id.*

[5] *Id.* at 3228.

provided a patenting procedure for lode claims, and limited the length of lode claims to two hundred feet per locator with an additional such claim for the discoverer of the lode. It also contained a provision for extralateral rights under adjoining land, "which land adjoining shall be sold subject to this condition." Additionally, the statute provided for the recognition of water rights for "mining, agricultural, manufacturing, or other purposes," which had vested priority of possession under "local customs, laws, and the decisions of courts."[6]

It was a lode location law, ignoring placer claims, perhaps because by the time Congress got around to acting, placer claims had temporarily faded in importance. This omission of placer claims was rectified by an 1870 amendment which provided for the entry and patenting of "claims, usually called 'placers,' including all forms of deposit, excepting veins of quartz, or other rock in place, . . . under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims." The act provided that two or more persons could make joint claims and that association claims could not exceed 160 acres.[7]

§ 4.11 The Mining Law of 1872

[1] Statutory Provisions

The Lode Law of 1866[1] incorporated the basic rules and customs of the mining districts and gave the congressional stamp of approval for self-initiated, protected mining rights on the public domain, but the system was neither as complete nor as integrated as might have been desired. A rather complete rewriting resulted in the Mining Law of 1872.[2] Although there have been some substantial modifications, the 1872 law is today the basic starting point for the acquisition of hardrock minerals on public domain lands.

The Mining Law of 1872 provided for location of valuable mineral deposits, not merely minerals;[3] provided for a larger lode claim and an area of land, not simply the lode;[4] specifically reaffirmed the basic placer claim location provisions of 1870 and provided that no association placer claim could include more than 20 acres for each claimant;[5] provided for annual assessment work of $100 per claim per year, for lack of which the claim would be open to relocation by

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[6] Lode Law of 1866, ch. 262, § 9, 14 Stat. 251, 253.

[7] Act of July 9, 1870, ch. 235, 16 Stat. 217.

[1] Act of July 26, 1866, ch. 262, 14 Stat. 251 (codified at 30 U.S.C. §§ 43, 46, 51 (1976)).

[2] Act of May 10, 1872, ch. 152, 17 Stat. 91 (codified as amended at 30 U.S.C. §§ 22-47 (scattered sections) (1976)).

[3] Ch. 152, 17 Stat. 91, § 1 (codified as amended at 30 U.S.C. § 22 (1976)).

[4] *Id.* § 2, 30 U.S.C. § 23.

[5] *Id.* § 10, 30 U.S.C. § 35.

others;[6] provided for mill sites;[7] and provided for tunnel locations.[8] The Mining Law of 1872 continued the notion of extralateral rights for lode claims[9] and the validity of mining district rules not inconsistent with federal or state law.[10]

Additionally, the Mining Law of 1872 Act provided for forfeiting out co-owners who failed to contribute to annual assessment work,[11] for patenting of both lode and placer claims,[12] and for the situation in which a lode is found within a placer location.[13] The act carried forward the idea of self-initiated rights by the prospector. If the land is open for location and the prospector is qualified, he may seek "valuable minerals" and, if he finds them, may initiate a vested right without the approval of anyone else, including representatives of the government that owns the land.

The final establishment of rights under the Mining Law of 1872 was the procedure to obtain patent (or fee title) from the United States. The law establishes a procedure for notice, proof of title, establishment of the existence of "valuable mineral," and, finally, payment of a nominal purchase price.[13.1] Under the Department of the Interior and Related Agencies Appropriations Act, 1995,[13.2] the Department of the Interior was prohibited, as of September 30, 1994, from processing patent applications, except for those applications that had been filed "with the Secretary on or before the date of the enactment of this Act."[13.3] This moratorium remains in effect. The absence of this patenting procedure has raised the question of what rights might be considered as "valid existing rights" when the mining law is amended. The Solicitor of the Interior published a memorandum on November 12, 1997,[13.4] wherein it was expressed that "the right to a mineral patent does not vest in the applicant until the Secretary of the Interior determines that the applicant has met all the terms and conditions of the patent, including verification that the applicant has discovered a valuable mineral claim." This question will likely be a focus of future litigation.

The Mining Law of 1872 has received a considerable fleshing out by court decisions, administrative decisions, and administrative rules and regulations, all of

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[6] Ch. 152, 17 Stat. 91, § 5, 30 U.S.C. § 28.

[7] Ch. 152, 17 Stat. 91, § 15, 30 U.S.C. § 42 (a mill site is, generally speaking, nonmineral ground used for mining or milling purposes).

[8] Ch. 152, 17 Stat. 91, § 4, 30 U.S.C. § 27 (a tunnel location is a means of priority for one exploring via a tunnel).

[9] Ch. 152, 17 Stat. 91, § 3, 30 U.S.C. § 26.

[10] Ch. 152, 17 Stat. 91, § 1, 30 U.S.C. § 22.

[11] Ch. 152, 17 Stat. 91, § 5, 30 U.S.C. § 28.

[12] Ch. 152, 17 Stat. 91, § 6, 30 U.S.C. § 29.

[13] Ch. 152, 17 Stat. 91, § 11, 30 U.S.C. § 37.

[13.1] Ch. 152, 17 Stat. 91, § 6, 30 U.S.C. § 29; *see* Chapter 51, *infra*.

[13.2] Pub. L. No. 103-332, § 113, 108 Stat. 2499 (1994).

[13.3] Pub. L. No. 103-332, § 113, 108 Stat. 2499 (1994).

[13.4] Memorandum from John D. Leshy, Solicitor, Dep't of the Interior, to Director, Bureau of Land Mgmt. (Nov. 12, 1997), GFS(MIN) SO-2 (1997).

which are fully treated at appropriate places in this treatise.

[2] Application to Nonmetalliferous Deposits

The Mining Law of 1872 does not define valuable mineral deposits.[14] More detailed definitions have been developed by the courts and administrative agencies. Their treatment constitutes a substantial portion of this treatise. In addition to court and administrative development of the definition of valuable minerals, Congress has enacted a few specific statutes on this topic, one of which was the Building Stone Act of 1892,[15] enacted, according to one authority, because land department rulings on the issue of the locatability of building stone were not uniform.[16]

Petroleum also initially presented a problem. A General Land Office decision in 1896 that petroleum was not within the scope of the mining law was reversed the next year.[17] Almost simultaneously, congressional reaction to the initial decision prompted the enactment of the Oil Placer Act of 1897,[18] which specifically included such hydrocarbons as locatable minerals under the placer location laws. Presidential withdrawals of petroleum lands within a few years of these two decisions and the subsequent placing of oil and gas under the Mineral Lands Leasing Act of 1920 made this issue moot.[19]

Another special mining statute was the Saline Placer Act of 1901,[20] in which salt springs and salt deposits were brought under the placer mining law, but with the limitation of only one location per person.[21]

§ 4.12 The Conservation Movement

The period between the late 1800s and the early 1900s saw the emergence of a strong and persuasive concern for the preservation of remaining forest lands. Historically, the initial period of feeling that the public domain should be disposed of in order to gain revenue for the federal government lasted but a short time and was replaced with a policy of disposition and settlement of the land. Disposition methods included, in addition to homesteading and preemption, grants to the states for support of the common schools and other institutional beneficiaries, for reclamation of swamp land, for construction of railroads, for support of various institutions, and for other purposes; grants to railroads; grants to veterans as bonuses; sales under timber and

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[14] Ch. 152, 17 Stat. 91, § 1, 30 U.S.C. § 22 (simply "valuable mineral deposits"); 30 U.S.C. § 23 ("gold, silver, cinnabar, lead, tin, copper, or other valuable deposits").

[15] Ch. 375, 27 Stat. 348, §§ 1, 3, 30 U.S.C. § 161.

[16] 1 *Lindley on Mines* § 210 (3d ed. 1914).

[17] Union Oil Co., 25 Pub. Lands Dec. 351 (1897).

[18] Ch. 216, 29 Stat. 526.

[19] Ch. 85, 41 Stat. 437 (codified as amended at 30 U.S.C. §§ 181–226-3).

[20] 30 U.S.C. § 162.

[21] Other than this limitation in the Saline Placer Act, it would appear that there have been no legal limitations since the passage of the 1872 mining law on the number of locations, lode or placer, which a qualified locator can initiate.

The importance of federal reserved minerals is apparent: through fiscal year 2013, patents covering more than 70 million acres of public lands have been issued with minerals reserved to the United States.[18]

§ 9.02 Effects of Statutory Grants and Limitations Upon Patents

[1] Congressional Power and Public Lands—The Property Clause

The source of Congress's power to dispose of public lands is the Property Clause, which provides: "The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States. . . ."[1] The authority the Property Clause grants to Congress has been held to be "without limitations"[2] but appears to be somewhat circumscribed by restrictions imposed by other provisions in the Constitution.[3] The authority is both proprietary and legislative,[4] and thus is greater than that of an "ordinary proprietor."[5]

Because Congress has full power under the Property Clause to dispose of public lands,[6] no person may appropriate such lands or acquire any rights therein except under such terms as Congress provides.[7] The power of Congress under the Property

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[18] Bureau of Land Mgmt., *Public Land Statistics 2013*, at 73, tbl. 3-2 (2014). Between 1949 and 2006, such patents were issued on 13,864,298 acres.

[1] U.S. Const. art. IV, § 3, cl. 2.

[2] Cal. Coastal Comm'n v. Granite Rock Co., 480 U.S. 572, 580 (1987); United States v. San Francisco, 310 U.S. 16, 29 (1940); United States v. Gratiot, 39 U.S. 526, 537 (1840). *See* Kleppe v. New Mexico, 426 U.S. 529, 536 (1976); Downes v. Bidwell, 182 U.S. 244, 268 (1901) ("general and plenary").

[3] *See* Dorr v. United States, 195 U.S. 138, 143 (1904) (congressional power to legislate for territories depends upon relationship of particular territory to the United States, e.g., whether the territory has been "incorporated into the United States as a body politic"); Pollard v. Hagan, 44 U.S. 212, 230 (1845) (Property Clause conferred no power upon Congress to grant title to submerged soil under navigable river within state's borders after the state, upon admission to Union, acquired such soil); United States v. San Francisco, 310 U.S. 16, 30 (1940) (Property Clause does not authorize "an exercise of a general control over public policy in a State").

The Property Clause does not necessarily exempt federally owned lands from state regulation; states are free to enforce their criminal and civil laws so long as those laws do not conflict with federal law, thereby invoking the Supremacy Clause, U.S. Const. art. VI, cl. 2. *See* Cal. Coastal Comm'n v. Granite Rock Co., 480 U.S. 572, 580 (1987). *But see* S.D. Mining Ass'n v. Lawrence Cnty., 155 F.3d 1005, 1011 (8th Cir. 1998) (local ordinance having effect of de facto ban on mining on federal lands within the county preempted by federal law).

[4] United States v. Midwest Oil Co., 236 U.S. 459, 474 (1915); Kleppe v. New Mexico, 426 U.S. 529, 540 (1976).

[5] Kleppe v. New Mexico, 426 U.S. 529, 540 (1976) (power to control occupancy and use of lands, protect them from trespass and injury, prescribe conditions under which others may acquire rights therein; extent to which Congress might go in exercising Property Clause power to be measured by exigencies of particular case).

[6] *See* United States v. Maxwell Land-Grant Co., 121 U.S. 325, 382 (1887); Van Brocklin v. Tennessee, 117 U.S. 151, 168 (1886).

[7] United States v. Fitzgerald, 40 U.S. 407, 421 (1841); Kissell v. Bd. of President & Dirs. of St. Louis

Clause includes the power to lease[8] as well as the power to protect public lands from trespass and injury,[9] even to the extent of proscribing conduct on private lands that imperils the uses for which the public lands are held.[10]

By express constitutional grant, the disposition of minerals in lands owned by the United States is the responsibility of Congress.[11] Congress may delegate regulation and management of public lands to the executive.[12] In the Federal Land Policy and Management Act of 1976 (FLPMA), Congress delegated to the Secretary of the Interior authority to correct patent documents "where necessary in order to eliminate errors."[13] This authority applies only to errors of fact, not errors of law.[14] Purported grants[15] or reservations[16] not authorized by statute are inoperative. Agencies' powers are limited to those delegated to them by statute.

[2] Grant in Excess of Statutory Authority

The government lacks authority to issue a patent omitting a reservation required by statute.[17] Statutes requiring reservation to the United States of specific minerals,[18] or

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Public Schools, 59 U.S. 19, 25 (1856). *See* Utah Power & Light Co. v. United States, 243 U.S. 389, 403–04 (1917).

[8] United States v. Gratiot, 39 U.S. 526, 538–39 (1840). *See* Ashwander v. Tenn. Valley Auth., 297 U.S. 288 (1936).

[9] Kleppe v. New Mexico, 426 U.S. 529, 540 (1976); Utah Power & Light Co. v. United States, 243 U.S. 389, 405 (1917).

[10] United States v. Alford, 274 U.S. 264, 267 (1927); Minnesota v. Block, 660 F.2d 1240, 1249 (8th Cir. 1981). *See* Camfield v. United States, 167 U.S. 518, 525 (1897); Jennifer Pruett Loehr, "Expansive Reading of Property Clause Upheld," 23 *Nat. Res. J.* 197 (1983). *But cf.* Burlison v. United States, 2006 U.S. Dist. LEXIS 62820 (W.D. Tenn. Aug. 31, 2006) (while private fences may be regulated to protect adjoining public lands, government may not limit access to private property without specific congressional authorization), *aff'd in part, rev'd in part*, 533 F.3d 419 (6th Cir. 2008).

[11] Mountain States Legal Found. v. Andrus, 499 F. Supp. 383, 394 (D. Wyo. 1980); Honchok v. Hardin, 326 F. Supp. 988, 992 (D. Md. 1971). *See* Butte City Water Co. v. Baker, 196 U.S. 119 (1905); United States v. Gratiot, 39 U.S. 526, 538 (1840).

[12] Mountain States Tel. & Tel. Co. v. United States, 499 F.2d 611, 613 (Ct. Cl. 1974); Sierra Club v. Hickel, 433 F.2d 24, 28 (9th Cir. 1970), *aff'd sub nom.* Sierra Club v. Morton, 405 U.S. 727, 748 (1972); Wyoming v. U.S. Dep't of Agric., 661 F.3d 1209, 1234 (10th Cir. 2011) (the Organic Act of 1897 delegates management of national forests to the U.S. Forest Service); Chisum v. U.S. Dep't of the Interior, 2007 U.S. Dist. LEXIS 84036, at *5 (D. Ariz. Oct. 31, 2007) (BLM has been appropriately delegated Congress's plenary power to regulate mines and mining on the public lands).

[13] 43 U.S.C. § 1746.

[14] Foust v. Lujan, 942 F.2d 712, 715 (10th Cir. 1991); Wood v. United States, No. 2:04-cv-00897, 2006 U.S. Dist. LEXIS 74706, at *9–10 (E.D. Cal. Sept. 29, 2006); 43 C.F.R. § 1865.0-5(b).

[15] *See generally* § 9.02[2], *infra*. Absent an express or implied delegation of congressional power under the Property Clause, subordinate officers of the United States have no power to release or otherwise dispose of federal property. Royal Indem. Co. v. United States, 313 U.S. 289, 294 (1941).

[16] *See generally* § 9.02[3], *infra*.

[17] Swendig v. Wash. Water Power Co., 265 U.S. 322, 332 (1924); Morton v. Nebraska, 88 U.S. 660, 674–75 (1874); Proctor v. Painter, 15 F.2d 974 (9th Cir. 1926).

[18] *See generally* § 9.03[2], *infra*.

all minerals,[19] in patents conveying public lands out of federal ownership have expressed such reservations with varying degrees of particularity.[20] In general, these statutes have required that patents contain reservations of specific minerals, or all minerals,[21] or that any conveyances shall be subject to a mineral reservation that must appear in the patent.[22] This statutory emphasis on including reservations in patents might suggest that the severance of minerals depends on the presence of the reservation in the patent, and that in the absence of such a reservation the patent conveys the minerals. On the contrary, when a statute requires a reservation of minerals, the government lacks power under that statute to convey any mineral rights, and therefore a patentee acquires no mineral rights even though the patent does not contain the mineral reservation.[23]

[3] Inclusion in Patent of Reservation Not Authorized by Statute

Generally, a reservation not authorized by statute, but which appears in a patent, is void.[24] It is presumed that a patent issued by the United States was regularly and lawfully issued.[25] Because the government's agents are under a duty to ascertain that

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[19] *See generally* § 9.03[3], *infra*.

[20] *See generally* § 9.03, *infra*.

[21] *See, e.g.*, Coal Lands Act of 1909, ch. 270, 35 Stat. 844, 30 U.S.C. § 81; Agricultural Entry Act of 1914, ch. 142, § 2, 38 Stat. 509, 30 U.S.C. § 122; Act of Mar. 3, 1925, ch. 462, 43 Stat. 1145, 43 U.S.C. § 299. Initially, the statutes required reservation only of specific minerals for which the land had been classified as valuable. *See generally* § 9.03[2], *infra*. Later acts expanded the scope of the reservation to encompass "all minerals" or some variant thereof. *See generally* § 9.03[3], *infra*.

[22] *See, e.g.*, Stock-Raising Homestead Act of 1916 (SRHA), ch. 9, § 9, 39 Stat. 862, 43 U.S.C. § 299.

[23] Swendig v. Wash. Water Power Co., 265 U.S. 322, 332 (1924) (reservation for power line right-of-way read into patent despite failure of patent to state that patentee's title was subject to the right-of-way); Proctor v. Painter, 15 F.2d 974 (9th Cir. 1926) (although patent omitted reservation of coal as required by act pursuant to which patent was issued, patentee did not acquire title to the coal). *See* Argo Oil Corp. v. Lathrop, 72 N.W.2d 431 (S.D. 1955) (mineral reservation prescribed by state statute deemed to be part of deed). *See generally* Loren L. Mall, *Public Land and Mining Law* 378 (3d ed. 1981).

[24] Shaw v. Kellogg, 170 U.S. 312, 342–43, 18 S. Ct. 632, 42 L. Ed. 1050 (1898). *See* Burke v. S. Pac. R.R. Co., 234 U.S. 669, 688–89, 34 S. Ct. 907, 58 L. Ed. 1527 (1914) (railroad grant patent for land conclusively deemed nonmineral; therefore, in absence of fraud, patent conveys minerals not known to exist at time of issuance); Thomas v. Union Pac. R.R. Co., 139 F. Supp. 588, 593–95 (D. Colo. 1956), *aff'd*, 239 F.2d 641 (10th Cir. 1956) (mineral reservations were read out of railroad grant patent, which, absent fraud, was immune to attack by those claiming lands were known to be mineral in character at time of issuance); Knight v. The Devonshire Co., 736 P.2d 1223 (Colo. App. 1986) (vendor's title not unmarketable due to purported reservation of "mineral rights" in federal patent of lands to railroad (citing *Burke*, 234 U.S. at 688–89)). A patent issued pursuant to the Homestead Act of May 20, 1862, ch. 75, 12 Stat. 392 (1862), *as amended* (repealed 1976), provides for no reservation of minerals to the United States and thus cannot be construed to reserve any minerals. No lands encompassed by such patents are available for location under the mining laws. Merrill G. Memmott, 100 IBLA 44, 46 (1987), GFS(MIN) 14(1988); Lee E. Williamson, 48 IBLA 329, 332, GFS(MIN) 164(1980).

[25] St. Louis Smelting & Refining Co. v. Kemp, 104 U.S. 636, 646, 26 L. Ed. 875 (1881). *See* Creede & Cripple Creek Mining & Milling Co. v. Uinta Tunnel Mining & Transp. Co., 196 U.S. 337, 348 (1904).

all conditions precedent have been met before issuing any patent,[26] it is presumed that all such conditions have been met.

[4] Required Mineral Reservation Not Reflected in Local Records

A search of local land records[27] may not disclose a mineral reservation affecting a tract of land either because the patent as recorded erroneously does not contain the reservation or because the patent containing the reservation has not been recorded.[28] The former situation is discussed above,[29] where it is shown that the omitted reservation is read into the patent as a matter of law. In the latter situation, the mineral reservation, as well as the patent of which it is a part, is read into the chain of title, because the patent can convey no more and no less than was authorized by the statute pursuant to which it was issued.[30]

Accordingly, a careful title examiner will not rely upon the absence of a mineral reservation from a federal patent in the local land records to conclude that no reservation of minerals by the United States exists. When inception of private title is a federal patent, recourse to the underlying statute is essential to determining the rights

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[26] Peabody Gold Mining Co. v. Gold Hill Mining Co., 111 F. 817, 819 (9th Cir. 1901). In *United States v. Price*, 111 F.2d 206 (10th Cir. 1940), the patent as issued contained no mineral reservation and conveyed land that had been open to entry under either the SRHA, which required a reservation of minerals, or the Enlarged Homestead Act of 1909 (EHA), ch. 160, 35 Stat. 639 (repealed 1976), which did not. In seeking a judicial declaration that the patent did not convey any right to minerals, the United States did not contend that the patent should be modified or cancelled or that a trust should be impressed upon the mineral rights. Noting that the patent was regular on its face, the court refused to examine proceedings underlying issuance of the patent and held that the patentee owned the mineral rights. Inferences to be drawn from *Price* include: (1) had the patent recited that it was issued under the SRHA while omitting the mineral reservation, the court would have read the statutory reservation into the patent; and (2) had the action been one to cancel or modify the patent, the court might have reviewed the administrative proceeding underlying its issuance. In *Conrad Luft*, 63 Interior Dec. 46 (1956), the patent contained a reservation of all minerals, but the patentee's successor argued that the patent had been issued under the EHA, not the SRHA, and sought a supplemental patent without a mineral reservation. Noting that the patent was entirely regular on its face and that the reservation was not unauthorized, but at most erroneous, the Department of the Interior held that only a review of proceedings underlying the issuance of the patent would disclose any defect, and refused to issue the supplemental patent.

[27] The local land records are usually found in county offices—typically the office of the county recorder, the county clerk and recorder, or some similar office. Tract indexes, if available, are a convenient starting point. In the public land states, reference to the land records in the state office of the Bureau of Land Management usually provides a lead to the statute pursuant to which the land was patented and its required reservations, if any. *See* Thomas J. Nance, "Title Examination of Fee Lands Including Severed Mineral Interests," *Mineral Title Examination* 3-1 (Rocky Mt. Min. L. Fdn. 1977). *See generally Nuts & Bolts of Mineral Title Examination* (Rocky Mt. Min. L. Fdn. 2015).

[28] Certified copies of patents may be obtained online from the Bureau of Land Management at http://www.glorecords.blm.gov.

[29] *See generally* § 9.02[2], *supra*.

[30] *See* Swendig v. Wash. Water Power Co., 265 U.S. 322, 332 (1924); Proctor v. Painter, 15 F.2d 974, 975 (9th Cir. 1926). *See generally* § 9.02[2]–[3], *supra*.

conveyed, excepted, or reserved.[31]

§ 9.03 Nature and Scope of Mineral Reservations

[1] Introduction

A mineral reservation occurs when an owner of lands conveying interests in those lands to another withholds or *reserves* to himself all or part of the rights to minerals therein.[1] The United States, in disposing of parts of the public domain, has frequently used this technique.[2] This section addresses those federal statutes—and the mineral reservations required by them—that are of substantial contemporary interest.[3]

[2] Acts Reserving Specific Minerals (1909–1916)

Congress has enacted several statutes providing for disposition of public lands with reservation of specific minerals to the United States.[4] The Coal Lands Acts of 1909[5]

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[31] *See* Richard H. Bate, "Mineral Exceptions and Reservations in Federal Public Land Patents," 17 *Rocky Mt. Min. L. Inst.* 325, 358–62 (1972).

[1] *See* Bureau of Land Mgmt. (BLM), *Glossary of Public Land Terms* 29 (1949, reprinted without revision 1959) ("A clause in a patent, certificate, deed, or other document of conveyance which retains in the grantor all or certain minerals in the land; also, a reservation of Federally owned minerals or of public lands which contain minerals."). *See also* BLM, *Public Land Statistics 2013*, at 258 (2014) ("Retention of the mineral estate by the grantor of a property; the grantee or patentee owns the land surface but not the minerals.").

[2] Patents issued with minerals reserved to the United States through fiscal year 2013 cover more than 70 million acres. BLM, *Public Land Statistics 2013*, at 73 tbl. 3-2 (2014).

[3] Statutes earlier than those discussed in the following sections of this chapter currently have little operative effect, and thus do not merit treatment here. For historic treatment of such laws, see generally, Paul W. Gates, *History of Public Land Law Development* ch. 23 (1968).

[4] *E.g.*, Coal Lands Act of 1909, ch. 270, 35 Stat. 844, 30 U.S.C. § 81 (lands "classified, claimed, or reported as being valuable for coal"); Coal Lands Act of 1910, ch. 318, § 1, 36 Stat. 583, 30 U.S.C. § 83 ("[u]nreserved public lands of the United States exclusive of Alaska . . . withdrawn or classified as coal lands, or are valuable for coal"); Act of Apr. 30, 1912, ch. 99, 37 Stat. 105, 30 U.S.C. § 90 (making the 1910 Act applicable to state selection lands); Agricultural Entry Act of 1914, ch. 142, § 1, 38 Stat. 509, 30 U.S.C. § 121 ("[l]ands withdrawn or classified as phosphate, nitrate, potash, oil, gas, or asphaltic minerals, or which are valuable for those deposits"); Atomic Energy Act of 1946, ch. 724, tit. I, § 68, 60 Stat. 755, *as amended by the* Atomic Energy Act of 1954, ch. 1073, § 1, 68 Stat. 919, 42 U.S.C. § 2098(b) (source materials and right to prospect for, mine, and remove them) (Act of Aug. 19, 1958, ch. 681, 72 Stat. 632, provides a statutory quitclaim by the United States of the source materials to persons entitled to them on the effective date of the Act); Multiple Mineral Development Act of 1954, ch. 730, § 4, 68 Stat. 710, 30 U.S.C. § 524 (requires reservation in mineral patents of all leasable minerals in certain lands); Uraniferous Lignite Act of 1955, ch. 795, § 1, 69 Stat. 679, 30 U.S.C. § 541 (required reservation in mineral patents of all leasable minerals "other than lignite containing valuable source material and lignite necessary to be stripped or mined in the recovery of such material"). This list is not exhaustive. For a useful discussion of these statutes and others, see Howard A. Twitty, "Law of Subjacent Support and the Right to Totally Destroy Surface in Mining Operations," 6 *Rocky Mt. Min. L. Inst.* 497, 512–14 (1961). *See also* Richard H. Bate, "Mineral Exceptions and Reservations in Federal Public Land Patents," 17 *Rocky Mt. Min. L. Inst.* 325, 334–58 (1972).

[5] 30 U.S.C. § 81.

[b] Establishing Validity of Existing Mining Locations
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§ 14.01 Scope of Chapter

This chapter focuses on the nature and effect of withdrawals of public lands—the segregation of certain lands from operation of particular public land laws, generally for

the purpose of maintaining the status quo—and the establishment of reservations—the dedication of public land for a specific predetermined purpose.[1] The first area to be examined is the promulgation of withdrawals and reservations. In this section, the sources of authority—constitutional, statutory, and nonstatutory—and the procedures for making withdrawals and reservations will be reviewed, as will the impact of the Federal Land Policy and Management Act of 1976[2] in these areas.[3] The focus of the chapter will then shift to the effect of withdrawals and reservations on the availability of public domain for mineral development and the impact of such actions on existing mineral rights.[4] Procedures for revoking withdrawals and reservations are then discussed.[5] The chapter concludes with discussions of specific withdrawals and reservations.[6]

§ 14.02 Promulgation of Withdrawals and Reservations

[1] Authority for Promulgation

[a] Pre-FLPMA Statutory Authority

[i] Overview of Statutory System

The U.S. Constitution vests in Congress the ultimate power to make withdrawals of public lands. Article IV states, in part, that Congress has the power "to dispose of and make all needful Rules and Regulations respecting the Territory or other Property

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[1] This definition of the distinction between withdrawals and reservations is based on that set forth in George C. Coggins et al., *Federal Public Land and Resources Law* 416 (6th ed. 2007) (emphasis added):

> In federal land law history, a "withdrawal" is a generic term referring to a statute, an executive order, or an administrative order that *changes the designation of a described parcel of federal land from "available" to "unavailable" for certain kinds of activities*, usually involving resource extraction or use. It is a protective measure used to preserve the status quo and prevent specified future uses in specified land. A withdrawal can be made by Congress or the Executive, and it can be temporary or permanent. A "reservation" means a *dedication of withdrawn land to a specified purpose*, more or less permanently.

The terms "reservation" and "withdrawal" appear to have been used interchangeably in the Pickett Act, ch. 421, § 1 (repealed 1976), 36 Stat. 847 (1910). Similarly, the Supreme Court, in *United States v. Midwest Oil Co.*, 236 U.S. 459 (1915), did not draw a clear distinction between the terms. The Federal Land Policy and Management Act of 1976, Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701–1787 and in scattered sections of Title 43 and various other titles) does not define "reservation." The Act's definition of "withdrawal," however, may be said to be broad enough to include reservations. 43 U.S.C. § 1702(j). Recently, the U.S. District Court for the District of Alaska similarly found that "Congress has used the terms 'withdrawal' and 'reservation' interchangeably for many decades." League of Conservation Voters v. Trump, 363 F. Supp. 3d 1013, 1027 (D. Alaska 2019), *appeal docketed*, No. 19-35461 (9th Cir. May 29, 2019).

[2] Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701–1787 and in scattered sections of Title 43 and various other titles).

[3] *See* § 14.02, *infra*.

[4] *See* §§ 14.03, 14.04, *infra*.

[5] *See* § 14.05, *infra*.

[6] *See* § 14.06, *infra*.

The issue was whether this order withdrew from oil and gas leasing the lands to which it applied. The Supreme Court, giving considerable weight to administrative interpretation of the executive order, held that the expansive language of the order encompassed only dispositions that, like "settlement," "location," "sale," or "entry," convey or lead to the conveyance of title by the United States.[28] The Court did not construe the statute on which the orders were based nor did it construe the term "withdrawal" as excluding withdrawal from disposition under the mineral leasing laws.[29]

The rules concerning the segregative effect of withdrawal applications on locations under the mining laws also apply to lands subject to mineral leasing.[30] In *Trent J. Parker*,[31] the appellant's oil and gas lease offer was rejected because the subject lands were included in an application for withdrawal to protect geothermal resources. Although the withdrawal application was later withdrawn, the Interior Board of Land Appeals ruled that the application for a lease was suspended while the withdrawal was pending.

§ 14.04 Effect of Withdrawals and Reservations on Existing Mining Locations and Mineral Leases

[1] Effect on Existing Mining Locations

[a] Valid Existing Rights Protected

Withdrawals and reservations, whether they have been accomplished by statute, executive order, or public land order, invariably purport to protect and preserve all valid existing rights or claims upon the public domain under the public land laws of the United States. For example, all national park acts contain a provision substantially as follows:

> Nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States, whether for homestead, mineral right of way, or any other purposes whatsoever, or shall affect the right of any such claimant, locator, or entryman to the full use and enjoyment of his land.[1]

The statute authorizing the President to establish national monuments protects tracts "covered by a bona fide unperfected claim or held in private ownership."[2] Generally

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examination, and in aid of proposed legislation." *Udall*, 380 U.S. at 5.

[28] *Udall*, 380 U.S. at 19.

[29] *See* Pac. Legal Found. v. Watt, 529 F. Supp. 982, 997–98 (D. Mont. 1981) (no traditional definition of "withdrawal" precluded the Secretary of the Interior from withholding from mineral leasing wilderness lands withdrawn pursuant to the emergency withdrawal provisions of FLPMA, 43 U.S.C. § 1714(e)).

[30] *See* § 14.03[1], *supra*.

[31] 49 IBLA 209, GFS(O&G) 152 (1980).

[1] *See, e.g.*, ch. 437, § 3, 45 Stat. 1435, 1436, 16 U.S.C. § 21d (amendment to Yellowstone National Park Establishment Act).

[2] Antiquities Act of 1906, ch. 3060, § 2, 34 Stat. 225 (codified at 54 U.S.C. § 320301(c)).

any lands withdrawn under a public land order are also "subject to valid existing rights."[3]

The valid existing rights provision is an acknowledgment that property rights established at the time of a withdrawal will be recognized and honored.[4] A valid existing right may be less than a legal right. It includes the equitable, possessory right of the owner of a validly located unpatented mining claim, even though the government holds legal title to the claim in trust for the locator.[5] A mining claim established under the Mining Law of 1872 is a vested property right,[6] and has been held to be real property "in the fullest sense."[7] Those who follow in an unbroken chain of title to a valid existing claim on withdrawn lands will succeed to those rights. However, if the prior claim has been void and closed, or the chain of title is otherwise broken, a new claimant will not have any rights under the prior valid claim.[8]

[b] Establishing Validity of Existing Mining Locations

When land is closed to location under the mining laws subsequent to the location of a mining claim, the claim will not be recognized as valid unless all the requirements under the mining laws, including discovery of a valuable mineral deposit, are met at the time of the withdrawal and at the time of the adjudication of the claimant's rights.[9] The validity of the claim will be tested by determining the value of the mineral deposit at the time of withdrawal, as well as on the date of the hearing.[10] Although there may have been a proper discovery at the time of withdrawal, or at some other time in the past, a mining claim cannot be considered valid unless the claim is supported by sufficient

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[3] *See, e.g.*, Pub. Land Order No. 5,250, 37 Fed. Reg. 18,730 (1972); Pub. Land Order No. 5,179, 37 Fed. Reg. 5579 (1972).

[4] Harry H. Wilson, 35 IBLA 349, 352, GFS(MIN) 64 (1978).

[5] Cameron v. United States, 252 U.S. 450 (1920); Lutzenhiser v. Udall, 432 F.2d 328 (9th Cir. 1970).

[6] Union Oil Co. v. Smith, 249 U.S. 337 (1919); Shell Oil Co. v. Andrus, 591 F.2d 597, 603 (10th Cir. 1979), *aff'd*, 446 U.S. 657 (1980); United States v. Etcheverry, 230 F.2d 193 (10th Cir. 1956).

[7] Cole v. Ralph, 252 U.S. 286, 295 (1920); *see* Cal. Portland Cement Corp., 83 IBLA 11, GFS(MIN) 128 (1984), wherein the IBLA considered the application of § 601(f) of FLPMA, 43 U.S.C. § 1781(f), which requires that patents issued on mining claims within the California Desert Conservation Area contain a stipulation subjecting the patented land to protective regulations of the Secretary of the Interior. The BLM had rejected the request of California Portland to remove the stipulation language in the patent issued for three gypsum placer claims. The claims had been originally located in 1968 and substantially all of the requirements for the patent had been completed prior to the passage of FLPMA. The IBLA reversed the BLM rejection, holding that § 601(f) must be applied only to mineral locations "which had not been perfected prior to the passage of FLPMA." The inclusion of the stipulation in the California Portland patent was held to be improper. *See also* Chapter 36, *infra*.

[8] *See, e.g.*, Richard L. Goergen, 144 IBLA 293, GFS(MIN) 77 (1998), J&J Bldg. Supply, 145 IBLA 196, GFS(MIN) 93 (1998).

[9] Udall v. Snyder, 405 F.2d 1179, 1180 (10th Cir. 1968); United States v. Chappell, 72 IBLA 88, GFS(MIN) 97 (1983); United States v. Jones, 72 IBLA 52, GFS(MIN) 93 (1983); United States v. Kuretich, 54 IBLA 124, GFS(MIN) 119 (1981); United States v. Wood, 51 IBLA 301 (1980), GFS(MIN) 20 (1981). See Chapter 35, *infra*, for comprehensive discussion of discovery under the mining law.

[10] *Jones*, 72 IBLA 52; United States v. Rouse, 56 IBLA 36, GFS(MIN) 190 (1981).

discovery at the time the validity of the claim is adjudicated.[11] A loss of the discovery, whether through exhaustion of minerals, changes in economic or market conditions, or other circumstances, results in the loss of the location.[12]

Similarly, if the requisite discovery is made upon a mining claim subsequent to withdrawal of the land from mineral location, such discovery cannot validate the claim or serve to except the land from the withdrawal.[13] A claim cannot become valid after withdrawal by any additional exploratory work or through an increase in mineral value due to a change in the market.[14] A request by a mining claimant to drill on mining claims after the land has been withdrawn from mining is properly denied when the work would constitute an attempt to make a valid discovery rather than to confirm or corroborate a discovery made prior to the withdrawal.[15] To permit further exploration toward discovery after the land has been withdrawn would negate the withdrawal order.[16] On the other hand, if a mining claimant can show that sufficient mineralization existed on a claim prior to withdrawal so that further testing is necessary only to confirm and corroborate the extent of a preexisting discovery, the claim cannot be declared null and void without the government allowing further testing by the claimant.[17]

By withdrawing the land from mineral entry, the government has prohibited the initiation of new claims and has prevented the curing of substantive defects in claims located prior to the withdrawal.[18] However, withdrawal of land subject to a prior valid mining claim may not preclude the filing of an amended location of the claim upon the same land. An amended location of a claim is a subsequent location intended to further the rights acquired by the locator while making some change in the location, such as changing the name of the claim or its record owners, or excluding excess acreage.[19] In contrast to a relocation, which is adverse to the original location, an amended location relates back to the date of the filing of the original notice of location.[20] Therefore, the filer of an amended location may preserve the rights associated with the original location, including its superiority in right to subsequent withdrawals, to the extent that

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[11] *Chappell*, 72 IBLA at 93.

[12] *Wood*, 51 IBLA at 312.

[13] Cameron v. United States, 252 U.S. 450 (1920); *Udall v. Snyder*, 405 F.2d at 1180; Doria Mining & Eng'g Corp. v. Morton, 420 F. Supp. 837, 839 (C.D. Cal. 1976), *vacated on other grounds*, 608 F.2d 1255 (9th Cir. 1979); *Kuretich*, 54 IBLA at 126–27.

[14] *Jones*, 72 IBLA at 56.

[15] *Jones*, 72 IBLA at 56–57.

[16] *Chappell*, 72 IBLA at 94.

[17] *Jones*, 72 IBLA at 56.

[18] Coates-Lahusen, 69 IBLA 137, 142 (1982), GFS(MIN) 19 (1983).

[19] Rhinehart Berg, 71 IBLA 131, GFS(MIN) 71 (1983); R. Gail Tibbetts, 43 IBLA 210, GFS(MIN) 92 (1979).

[20] *Rhinehart Berg*, 71 IBLA 131; *R. Gail Tibbetts*, 43 IBLA 210. See Chapter 38, *infra*, for comprehensive discussion of relocation and amendment of unpatented mining claims and the confusion that still surrounds use of these terms.

the amended location furthers rights acquired by a prior, existing location and does not include any new land.[21] A 1996 IBLA decision required an additional burden on the claimant to establish that the amended claim had not been invalidated.[22] Further, if preexisting claims are abandoned, claims amending the formerly grandfathered claims are ineffective and void *ab initio*.[23]

The relocation, or "top-filing" over, of a claim located prior to a withdrawal does not create an exception to the withdrawal of land from mineral location by relating back to the original location.[24] Withdrawals "subject to valid existing rights" provide exceptions to the withdrawal only on behalf of those claimants, or their successors in interest, who themselves held valid rights at the time of withdrawal. An adverse top-filing claimant who enters the withdrawn land after the effective withdrawal date cannot base his claim on a prior, valid claim held by another party in interest.[25]

[c] Locations of Leasable and Common Variety Minerals

The Mineral Lands Leasing Act of 1920[26] effectively withdraws lands known to be valuable for coal, phosphate, sodium, potassium, sulfur, oil, gas, and oil shale from location, entry, and patent under the general mining laws. The Act contains its own savings clause,[27] which has been interpreted to mean that so long as the locator of a claim made prior to the passage of the Act meets the requirements of the Mining Law of 1872, he may proceed to patent his claim under the terms of that statute.[28]

Similarly, the Common Varieties Act of 1955[29] is, in effect, a withdrawal of common varieties of sand, stone, gravel, pumice, pumicite, cinders, and petrified wood, and of lands known to be valuable therefor, from location, entry, and patent under the general

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[21] United States v. Consol. Mines & Smelting Co., 455 F.2d 432, 441, 449 (9th Cir. 1971); Grace P. Crocker, 73 IBLA 78, GFS(MIN) 124 (1983); *Rhinehart Berg*, 71 IBLA at 133; *R. Gail Tibbetts*, 43 IBLA at 219; *see also* William H. Nordeen, 129 IBLA 369, 371, GFS(MIN) 36(1994); Patsy A. Brings, 119 IBLA 319, GFS(MIN) 42(1991). To show that a location of a mining claim made after a withdrawal is an amendment of a location made before the withdrawal, the claimant must show that: (1) the earlier location included the portion of the claim subject to the withdrawal, (2) the claimant has an unbroken chain of title with the original locator, and (3) the location predating the withdrawal was properly made. Jack T. Kelly, 113 IBLA 280, 283, GFS(MIN) 18 (1990).

[22] Steven A. Beld, 136 IBLA 142, 145, GFS(MIN) 59 (1996).

[23] Cotter Corp., 127 IBLA 18, GFS(MIN) 26 (1993).

[24] *R. Gail Tibbetts*, 43 IBLA at 215–19.

[25] Harry H. Wilson, 35 IBLA 349, GFS(MIN) 64 (1978).

[26] Ch. 85, 41 Stat. 437 (codified as amended at 30 U.S.C. §§ 181–263).

[27] 30 U.S.C. § 181.

[28] Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306 (1930), *disapproved on other grounds by* Hickel v. Oil Shale Corp., 400 U.S. 48 (1970); *see also* Ickes v. Va.-Colo. Dev. Corp., 295 U.S. 639 (1935), *disapproved on other grounds by* Hickel v. Oil Shale Corp., 400 U.S. 48 (1970).

[29] Ch. 375, § 3, 69 Stat. 368 (§ 3 of the Multiple Surface Use Act of 1955), 30 U.S.C. § 611.

mining laws. Again, the Act contains a savings clause for valid claims located prior to the effective date of the Act.[30]

[2] Effect on Existing Mineral Leases

Mineral leases fall within the protection afforded "valid existing rights" in typical withdrawals and reservations.[31] Hence the holder of a federal mineral lease will retain rights in the leasehold if the land is subsequently withdrawn or reserved.[32] Such leasehold rights, however, may be subject to the federal government's right to attach stipulations or conditions to the lease, and thus to limit mineral development activities.[33]

Attempts to "withdraw" land subject to an existing lease may lead to substantial contract damages against the United States. In *Mobil Oil Exploration & Producing Southeast v. United States*,[34] the plaintiff oil companies held lease contracts giving them the right to explore for and develop oil off of the North Carolina coast. These rights were conditioned on the companies obtaining a series of subsequent governmental approvals.[35] While the companies were in the midst of obtaining the approvals, the Outer Banks Protection Act (OBPA) went into effect, and thereby prevented the Department of the Interior from granting discretionary approvals for drilling activity in the area covered by the leases.[36] The U.S. Supreme Court held that through passage of the OBPA the United States had effectively repudiated the contracts, and awarded the plaintiffs over $150 million in restitutionary damages.[37] Although not a "withdrawal" in the general sense, scholars have suggested that a refusal to grant a discretionary lease is tantamount to a withdrawal.[38]

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[30] Ch. 375, § 3, 69 Stat. 368 (§ 3 of the Multiple Surface Use Act of 1955), 30 U.S.C. § 611. The effective date of the Act is July 23, 1955.

[31] *See* Cameron v. United States, 252 U.S. 450 (1920); Lutzenhiser v. Udall, 432 F.2d 328 (9th Cir. 1970).

[32] *See* Solicitor Op., "The Bureau of Land Management Wilderness Review and Valid Existing Rights," 88 Interior Dec. 909, 911–13 (1981), GFS(MIN) SO-3 (1982).

[33] Solicitor Op., "The Bureau of Land Management Wilderness Review and Valid Existing Rights," 88 Interior Dec. 909, 911–13 (1981), GFS(MIN) SO-3 (1982); *see also* Sierra Club v. Peterson, 12 Envtl. L. Rep. 20,454 (D.D.C. 1982), *rev'd on other grounds*, 717 F.2d 1409 (D.C. Cir. 1983).

[34] 530 U.S. 604, 607–08 (2000).

[35] *Mobil Oil*, 530 U.S. at 609–10.

[36] *Mobil Oil*, 530 U.S. at 613.

[37] *Mobil Oil*, 530 U.S. at 624.

[38] *See generally* George C. Coggins et al., *Federal Public Land and Resources Law* 434–35 (6th ed. 2007).

[5] Mineral Patents

§ 30.07 Mining Law and Administrative Reform Efforts During the Clinton and Bush Years

§ 30.01 Basis of the Location-Patent System

The essential tenets of the present system of federal mining law were first developed and applied by the early miners who worked on the uncharted public domain starting in the late 1840s. The local customs they established and the mining district rules they adopted were incorporated into the Lode Law of 1866[1] and the Placer Act of 1870.[2] Soon after these two Acts, the first federal mining laws with general applicability were repealed in part by the enactment of the Mining Law of 1872.[3] The 1872 law, along with the surviving portions of the 1866 and 1870 Acts, as interpreted by thousands of judicial and administrative opinions, modified by more than a dozen federal statutes, and supplemented by state law and administrative regulations, form the location-patent system of today.

The location-patent system created by the early mining laws is the foundation for the establishment of private mining rights to locatable minerals[4] on federal lands.[5] The major alternatives are the leasing systems under the Mineral Leasing Act,[6] the Mineral Leasing Act for Acquired Lands,[7] and other leasing acts by which certain nonmetallic minerals were removed from location and made subject to leasing by the federal government or were subsequently made available to leasing by statute.[8] Other programs include the sales system by which nonmetallic minerals of widespread occurrence may be sold under authority of the Materials Act of 1947[9] and the Common Varieties Act.[10]

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[1] Act of July 26, 1866, ch. 262, 14 Stat. 251 (remaining provisions codified at 30 U.S.C. §§ 43, 46, 51; 43 U.S.C. § 661).

[2] Act of July 9, 1870, ch. 235, 16 Stat. 217 (remaining provisions codified at 30 U.S.C. §§ 35, 36, 38, 47, 52; 43 U.S.C. §§ 661, 766).

[3] Act of May 10, 1872, ch. 152, 17 Stat. 91 (codified at 30 U.S.C. §§ 22–24, 26–28, 29–30, 33–35, 37, 39–42, 47).

[4] *See* Chapter 8, *supra*.

[5] *See* Chapter 6, *supra*.

[6] 30 U.S.C. §§ 181–263 (covering such diverse minerals as coal, oil, gas, potash, and phosphate, among others); *see* Chapter 20, *supra*.

[7] 30 U.S.C. §§ 351–360; *see* Chapter 20, *supra*.

[8] *See* Act of June 30, 1950, 64 Stat. 311 (codified at 16 U.S.C. § 508b) (making hardrock minerals subject to leasing laws in Minnesota national forests). Recent disputes concerning preference right lease applications on these lands are considered in Solicitor's Opinion M-37049, "Reversal of M-37036, 'Twin Metals Minnesota Application to Renew Preference Right Leases (MNES-01352 and MNES-01353)' " (Dec. 22, 2017), GFS(MIN) SO-1 (2017).

[9] 30 U.S.C. §§ 601–604; *see generally* Chapter 21, *supra*.

[10] 30 U.S.C. § 611.

The fundamental basis of the mineral location system is the right of self-initiation. Unless mineral entry has been restricted,[11] subject to federal surface management regulations,[12] a mineral prospector may enter the public domain at will (subject to

(Text continued on page 30-3)

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[11] *See* § 36.01[1], *infra*; *see generally* Chapter 14, *supra*.

[12] *See generally* Chapter 173, *supra*.

access restrictions), search for minerals, and establish ownership rights in available deposits of locatable minerals he finds. In essence, the location system provides that the first mineral claimant who finds a valuable mineral deposit on vacant, unappropriated, unreserved, and non-withdrawn public domain, and who locates a mining claim and diligently pursues the find, is protected against rivals, is entitled to produce all the minerals from the deposit without being required to purchase fee simple title from the United States, and, in certain circumstances may be able to obtain fee simple title by means of a patent issued by the United States government. The many refinements of this core of the mining laws constitute the location-patent system and the subject matter of the chapters that follow.

§ 30.02 Mineral Entry Contrasted with Land Entry

The body of public land law contains many references to entry onto the public lands. In this context, entry is the appropriation of conditional rights in public land by private parties. To avoid confusion, however, it should be understood that there are two distinct types of entry: land entry under the settlement laws and mineral entry under the mining laws.

Under the settlement laws, which were intended to enable settlers to acquire tracts of the public domain and make their homes and livelihood upon them,[1] the act of entry is a notation made by a staff member in the federal land office records to record the application of an entryman for certain rights in federal lands. The registers of the old General Land Office kept tract and plat books of the public lands in their districts. As the government declared public lands open to sale, preemption, or homesteading, or available for private ownership under other laws, members of the public could go to the land office and review the federal land records. If they were the winning bidder at a public auction, or chose to preempt or homestead, they could file an application with the land office to acquire ownership of the land upon payment to the receiver of the filing fees and proof acceptable to the register that they were qualified entrymen under the applicable settlement law. When the completed application was accepted by the land office, the register noted the application on the tract and plat books to give notice of the application. The notation was the entry, and with it the land had been entered.

The notation on the land office records that an application to acquire rights in land under the settlement statutes had been made was accepted as the initial entry. Thereafter, the entryman was entitled to occupy and cultivate the land to meet the applicable residency or other requirements of the settlement law under which the entry had been made. When the entryman thought the statutory requirements were met, he returned to the land office for final entry with proof that the statutory requirements had been met. Proof was made by personal testimony, affidavits, and sometimes by inspection of the land by land office officials. When the initial entry had been "proved up," the final fees and the purchase price, if required, were paid to the land office receiver, who receipted for the money and issued a final certificate of entry to show that all requirements had been met. Then the register made another notation, called the

[1] *See generally* Chapter 12, *supra*.

arguments have never been directly resolved by the U.S. Supreme Court, the result of early decisions was to determine that both requirements apply to placer claims.[9] In addition, it has been held that the "exclusive right of possession and enjoyment" of the surface of mining claims granted to lode locators by the Mining Law of 1872[10] is equally applicable to placer locations.[11]

The Placer Act of 1870 did not contain any provision governing the location or ownership of veins within placer locations. Consequently, all veins within a placer location were conveyed by a patent to the land.[12] The 1872 law contains a provision excluding known veins from patents unless they are specifically applied and paid for as part of a patent application.[13] That law repealed the patenting provisions of the Lode Law of 1866,[14] under which placer patents had been obtained, but permitted pending placer applications to proceed to patent under the prior law.[15] Therefore, placer patents either issued or applied for before May 10, 1872, include title to all veins whether known or unknown at the time application was made. All other placer patents are subject to the provisions of the 1872 law.[16]

§ 30.05 Location Under the Mining Law of 1872

[1] Locators

The Mining Law of 1872 extends the rights of exploration and purchase of public domain lands containing valuable mineral deposits to those who are citizens of the United States or who have declared their intent to become citizens.[1] The same requirement of citizenship applies to those who locate mining claims as well as to those who purchase or inherit them, or who apply to the United States for a

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[9] *See* George P. Costigan, *American Mining Law* §§ 72, 78 (1908); 2 *Lindley on Mines* §§ 432, 454 (3d ed. 1914); Emilio D. De Soto & Arthur R. Morrison, *Mining Rights on the Public Domain* 135, 268 (16th ed. 1936).

[10] 30 U.S.C. § 26.

[11] State *ex rel.* Andrus v. Click, 554 P.2d 969 (Idaho 1976). *Accord* Clipper Mining Co. v. Eli Mining & Land Co., 194 U.S. 220, 24 S. Ct. 632, 48 L. Ed. 944 (1904) (apparent purpose of the Placer Act of 1870 was to place placer locations on equality, both in procedure and rights, with lode claims).

[12] Cranes Gulch Mining Co. v. Scherrer, 134 Cal. 350, 66 P. 487 (1901) (limitations in patents that are not authorized by the law under which they are granted are of no effect). *See* § 54.04, *infra*. Mining locations made prior to the passage of any mining law by Congress were governed by the local rules and customs in force at the time of location. Glacier Mountain Silver Mining Co. v. Willis, 127 U.S. 471, 8 S. Ct. 1214, 32 L. Ed. 172 (1888) (tunnel location made in 1865); Chambers v. Harrington, 111 U.S. 350, 352, 4 S. Ct. 428, 28 L. Ed. 452 (1884); Jackson v. Roby, 109 U.S. 440, 441, 3 S. Ct. 301, 27 L. Ed. 990 (1883); Broder v. Water Co., 101 U.S. 274, 276, 25 L. Ed. 790 (1879); Jennison v. Kirk, 98 U.S. 453, 457, 25 L. Ed. 240 (1879).

[13] 30 U.S.C. § 37.

[14] Act of May 10, 1872, ch. 152, § 9, 17 Stat. 91, 94.

[15] Act of May 10, 1872, ch. 152, § 10, 17 Stat. 91, 94.

[16] *See* §§ 32.05, 54.03, *infra*.

[1] 30 U.S.C. § 22. *See* Chapter 31, *infra*.

conveyance of the land by patent.[2] Citizenship extends to individuals, whether minors or not, and for purposes of the federal mining laws, citizenship is recognized in corporations, unincorporated associations, and governmental bodies.[3]

Aliens may not locate mining claims on the public domain or seek a patent unless they have declared their intent to become citizens.[4] Nevertheless, only the United States can question the citizenship of a locator, mining claim owner, or patent applicant, and conveyance of a claim by an alien to a citizen vests the latter with valid title.[5]

[2] Prediscovery Rights—*Pedis Possessio*

Exploration is necessary for the discovery of minerals and requires occupation of the land. Accordingly, courts have, by judicially created doctrine, adopted the early custom of miners and protected the possessory rights of miners who are in actual occupation of a particular portion of the public domain and diligently searching for a mineral deposit.[6] These possessory rights prior to discovery are referred to as *pedis possessio* rights. Under the doctrine of *pedis possessio*, no rights can be acquired by a forcible, fraudulent, or clandestine intrusion upon the possession of a diligent explorer.[7] If, however, another explorer enters the land peaceably, either with consent or by acquiescence, and makes both a discovery and a location of a claim, the *pedis possessio* rights of the prior explorer are lost.

In order to obtain *pedis possessio*, a prospector must establish actual and physical occupation of a portion of the public domain that is open to mineral entry and location, continue to diligently search it in good faith for a mineral discovery, and exclude other prospectors.[8] The traditional rule is that these requirements apply to each claim in a group, although it has been held by one court that *pedis possessio* of a group of claims may be established by diligent and systematic exploration on some of these pursuant to an overall work program for the entire area claimed.[9]

[3] Types and Characteristics of Locations

Four distinct types of mining locations may be made pursuant to the Mining Law of 1872.[10] These are lode claims,[11] placer claims,[12] mill sites,[13] and tunnel sites.[14] In

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[2] *See* § 31.01, *infra*.

[3] *See* § 31.02, *infra*.

[4] *See* § 31.04, *infra*.

[5] *See* § 31.04, *infra*.

[6] *See* § 34.01, *infra*.

[7] *See* § 34.02[2], *infra*.

[8] *See* § 34.03, *infra*.

[9] *See* § 34.05, *infra*.

[10] *See* § 32.01, *infra*.

[11] *See* § 32.03, *infra*.

[12] *See* § 32.04, *infra*.

addition, lode deposits existing within placer locations may be acquired by the placer locators or by others, depending on the circumstances.[15]

A lode deposit is a mineralized zone or belt of rock in place that has reasonable trend and continuity and is separated from the neighboring country (nonmineralized) rock by reasonably distinct boundaries on either side.[16] A placer is defined negatively as a mineral deposit that is not a lode deposit.[17] To err in locating a deposit as a lode or a placer, while sometimes difficult to avoid, is fatal to a claim because a lode deposit will not sustain a placer location and vice versa.[18]

Mill sites of up to five acres are authorized to provide additional surface on which to work mining claims or process ore from claims.[19] A mill site must be located on nonmineral land.[20] A tunnel site, although seldom located now, is authorized to facilitate underground exploration by granting rights to minerals discovered in a tunnel.[21]

[4] Location Procedures

A mining claim is located by compliance with the location procedures specified by the Mining Law of 1872, as supplemented by federal and state law and local customs.[22] The acts of location may be performed in any order, but a mining location is not perfected and possessory rights do not attach to lode and placer locations until there has been a discovery of a valuable mineral deposit.[23]

The acts of location by which rights in a lode or placer claim are determined include discovery of a mineral deposit,[24] posting notice of the location on the ground,[25] marking the claim on the ground,[26] discovery or development work,[27] and filing a notice or certificate of location with the county recorder's office[28] and the U.S. Bureau

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[13] *See* § 32.06, *infra*.

[14] *See* § 32.07, *infra*.

[15] *See* § 32.05, *infra*.

[16] *See* § 32.02[2], *infra*.

[17] *See* 30 U.S.C. § 35.

[18] *See* § 32.02, *infra*.

[19] *See* § 32.06, *infra*. For a discussion of the mill site controversy, see § 32.06[2][b], *infra*.

[20] *See* § 32.06[2], *infra*.

[21] *See* § 32.07, *infra*.

[22] *See* § 33.01, *infra*.

[23] *See* § 33.02, *infra*.

[24] *See* Chapter 35, *infra*.

[25] *See* § 33.03, *infra*.

[26] *See* § 33.04, *infra*.

[27] *See* § 33.05, *infra*.

[28] *See* § 33.09, *infra*.

of Land Management (BLM) state office.[29] After August 10, 1993, new locations also require payment of a location fee.[30]

Placer claims must, as much as possible, conform with the U.S. system of public land surveys and the rectangular subdivisions of said surveys.[31] Association placer claims are limited to 20 acres per locator (i.e., an association of two locators may locate 40 acres, and an association of three may locate 60 acres). The maximum area of an association placer claim is 160 acres, requiring eight or more locators.[32] As a general rule, claimants whose locations fail to conform in shape or size may be allowed to cure those defects before BLM declares that the claim is invalid, assuming that the defect was inadvertent.[33]

The same requirements for locating a lode or placer claim apply, in general, to mill sites and tunnel sites. The major difference for mill sites is that no discovery of a mineral deposit is required because mill sites must be located upon nonmineral land. Rights vest when the site is used or occupied for mining or milling purposes.[34] There are special requirements for location of a tunnel site.[35]

On October 24, 2003, BLM issued final rules for location of mining law claims.[36] The significant provisions related to location of mining claims include: (1) mill site acreage should be limited to that which is "reasonably necessary to be used or occupied for efficient and reasonably compact mining or milling operations";[37] (2) in a certificate of location, a lode claim description must be given in metes and bounds;[38] (3) claimants are allowed 30 days to file an amended location certificate in the event the claim is oversized;[39] (4) a claim amendment may not be used to enlarge an existing claim or site;[40] and (5) location defects, resulting forfeiture of claims, and instances when defects can be corrected are clarified.[41]

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[29] *See* § 33.10, *infra*.

[30] 30 U.S.C. § 28g. As of February 2020, the location fee is $40, which amount should be confirmed upon payment. 43 C.F.R. § 3830.21(a)(2).

[31] 30 U.S.C. § 35; 43 C.F.R. § 3832.12.

[32] 30 U.S.C. §§ 35, 36; *see also* 43 C.F.R. §§ 3832.12, .22.

[33] For an example of BLM treatment of irregularly shaped placer claims, see *Melvin Helit*, 157 IBLA 111, GFS(MIN) 18 (2002). *See also* Sunburst Minerals, LLC v. Emerald Copper Corp., 300 F. Supp. 3d 1056 (D. Ariz. 2018) (as between competing claimants, claim not invalid unless upon notice claimant fails to resize claim).

[34] *See* §§ 32.06[4], [5], 33.06, *infra*.

[35] *See* §§ 32.07[6], 33.07, *infra*.

[36] 68 Fed. Reg. 61,046 (Oct. 24, 2003) (codified at 43 C.F.R. pts. 3710, 3730, 3810, 3820, 3830–3840, 3850).

[37] 43 C.F.R. § 3832.32.

[38] 43 C.F.R. § 3832.12.

[39] 43 C.F.R. §§ 3830.94(b), 3832.91.

[40] 43 C.F.R. § 3833.21.

[41] 43 C.F.R. §§ 3830.90–.97.

[5] Discovery of a Valuable Mineral Deposit

Discovery of a valuable mineral deposit is the *sine qua non* of a valid mining claim. The term "valuable mineral deposit" is the statutory predicate for the law defining both materials locatable under the mining laws[42] and the law of discovery, which governs the qualities a deposit must have to sustain a lode or placer location.[43]

Two rules form the core of the law of discovery.[44] The prudent man rule provides that when the evidence of mineralization is such that "a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine," a discovery has been made.[45] The marketability rule requires that a mineral deposit be of such value that, given its accessibility, the costs of its development, its proximity to a market, and the demand for the mineral, the deposit can be mined and sold at a profit.[46]

A discovery must be made on unappropriated federal land open to the location of mining claims.[47] In a dispute between rival locators over possession of an area covered by claims made by both, the prudent man rule applies, but courts are generally liberal in finding that the first locator's evidence of a discovery is sufficient to meet the test.[48] In controversies between a mineral claimant and the United States, both the prudent man and marketability rules are applied.[49] In a contest proceeding,[50] the discovery must be shown to exist as of the date of the hearing, and, if the land has been withdrawn from location, also shown to exist prior to the date of withdrawal as well as reasonably continuously since the withdrawal.[51] To support a patent application,[52] a discovery must exist as of the date of application as well as of the date of mineral entry.[53]

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[42] *See* Chapter 8, *supra*.

[43] *See* Chapter 35, *infra*.

[44] See *Skaw v. United States*, 13 Cl. Ct. 7 (1987), for a discussion of the two rules.

[45] Castle v. Womble, 19 Pub. Lands Dec. 455 (1894); *see* § 35.11, *infra*.

[46] *See* §§ 35.11, 35.12, *infra*; *see also* Great Basin Mine Watch, 146 IBLA 248 (1998), GFS(MIN) 1A (1999) (costs of compliance with federal and state laws proper consideration in determining whether mineral deposit is marketable at a profit); Agri Beef Co., 148 IBLA 52, GFS(MIN) 28 (1999) (present existence of access and cost of access to a mineral deposit are appropriate factors to consider in determining whether a valid discovery has been made).

[47] *See* § 35.09, *infra*.

[48] *See* § 35.10[2], *infra*. *But see* Ariz. Lithium Co. v. N. Am. Cobalt, Inc., No. 4:17-cv-00351, 2019 WL 4777303 (D. Idaho Sept. 30, 2019) (in dispute between overlapping locators, court denied summary judgment to both parties for failure to prove a discovery and an overarching question of fact as to whether first locator properly located claim).

[49] *See* § 35.10[1], *infra*. More recently, the marketability test also has been applied in challenges between mining claimants and grantees of rights under other laws. *See* § 35.10[4], *infra*.

[50] *See* Chapter 50, *infra*.

[51] *See* § 35.08[1], *infra*.

[52] *See generally* Chapter 51, *infra*.

[53] *See* §§ 35.08[2], 51.10, *infra*.

[6] Ownership Interests in Valid Unpatented Mining Claims

When a locator has made a discovery of a valuable mineral deposit and completed the required acts of location, he acquires vested property rights in the mining claim. These rights are intraliminal rights, that is, rights exercisable wholly within the vertical boundaries of the claim, and extralateral rights, that is, the right to follow outside the vertical side lines of the claim the dip of veins or lodes that apex within the claim boundaries.[54]

Intraliminal rights extend by statute to both the surface and subsurface of a claim, but the exercise of these rights has been limited by federal multiple use and surface occupancy legislation.[55] The incidents of ownership of a valid mining claim are the rights of possession and enjoyment of the minerals as well as the surface ground,[56] equitable ownership that follows from complying with the requirements for patent and paying the purchase price to the United States,[57] and the inchoate right to obtain a patent from the United States for a valid location based upon discovery of a valuable mineral deposit.[58]

In a conflict of overlapping surface area, a senior location prevails over a junior location if the senior claim has been perfected by a discovery. Conflicts as to subsurface mineral rights to veins, however, are determined by the ownership of the apex of the vein rather than by priority of location.[59]

[7] Extralateral Rights

Extralateral rights granted by the Mining Law of 1872 give the locator or patentee of a lode claim the exclusive right to all veins throughout their entire depth if the top or apex lies within the surface lines of the claim extended downward vertically.[60] In order to follow a vein in its downward course outside the vertical extension of a claim's side lines, its apex must be within the boundaries of the claim, the vein at depth must be continuous with the apex within the claim, and the end lines of the claim must be parallel.[61]

Locators often do not know the true course of the vein when they establish their locations. The maximum extent of extralateral rights exists when the location runs generally parallel with the course of the vein and passes out of the location at each end

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[54] *See* § 36.01, *infra*.

[55] *See* § 36.03[1], *infra*.

[56] *See* § 36.03[1], *infra*; *see also* Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv., 409 F. Supp. 3d 738 (D. Ariz. 2019) (court vacated plan of operations for use of nonmineral lands; discovery in one claim does not extend extralimital rights to surface occupancy outside boundary of claims with discovery), *appeal docketed*, No. 19-17585 (9th Cir. Dec. 27, 2019).

[57] *See* § 36.03[2], *infra*.

[58] *See* § 36.03[3], *infra*.

[59] *See* § 36.05, *infra*.

[60] 30 U.S.C. § 26; *see* § 37.01, *infra*.

[61] *See* § 37.02, *infra*.

line. In other circumstances, the extent of extralateral rights will be less than the maximum possible.[62] Extralateral rights are recognized for secondary veins that apex within a location regardless of the extent or existence of extralateral rights obtainable in the discovery vein.[63]

The locator or patentee of a lode mining claim containing an apex has extralateral rights under other mining claims regardless of the priority of location.[64] However, extralateral rights do not extend into previously patented nonmineral lands because a conclusive presumption that these lands are nonmineral arises when patent issues.[65]

When veins owned by different parties intersect, the senior location is entitled to all ore in the intersection, but the junior location is entitled to a right-of-way through the intersection to follow his vein.[66] If two or more veins unite, the senior location is entitled to the vein below the union.[67]

[8] Relocation and Amendment of Unpatented Mining Claims

Mining claims may be amended or relocated for various reasons by their owners or by subsequent locators.[68] The distinction between an amended location and a relocation has been and continues to be a source of confusion due in part to jurisdiction-specific use of the terms.[69] A significant federal administrative decision held that an amended location makes a change in an earlier valid location and may or may not take in different or additional ground, but it cannot include new ground if adverse rights have been established, and a relocation is a subsequent location made adverse to an original location.[70] The use of these terms under state law, however, may be different.[71] The distinction can be significant in determining whether the amended location or relocation relates back to the effective date of an earlier location.[72] Relation back is critical when

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[62] *See* § 37.03, *infra*.

[63] *See* § 37.04, *infra*.

[64] *See* § 37.05[1], *infra*.

[65] *See* § 37.05[2], *infra*.

[66] *See* § 37.05[3], *infra*.

[67] *See* § 37.05[4], *infra*.

[68] *See* § 38.01, *infra*.

[69] *See* § 38.01[3], *infra*.

[70] R. Gail Tibbets, 43 IBLA 210, 216–17, GFS(MIN) 92 (1979); *accord* Patsy A. Brings, 119 IBLA 319, 325, GFS(MIN) 42 (1991) (defining an amended location as "a location made in furtherance of an earlier valid location and relates back to the date of the original location as long as no adverse rights have intervened"); *see* § 38.01[3], *infra*.

[71] *See* § 38.01[3], *infra*.

[72] *See* § 38.01[4], *infra*; *see also Brings*, 119 IBLA at 325, GFS(MIN) 42 (1991) ("A location notice cannot be considered an amended location, so as to relate back to a location which predates a segregation of lands from mineral location, to the extent such location notice describes new land not included in the original location. Such a location notice must be considered a new location or a relocation as to those added lands, not an amended location, and the locator's rights as to the added lands date from the date of the amended location.").

priority of location determines either the better right between competing locators or the validity of a location before the land was withdrawn from mineral location.[73] BLM has clarified this issue for federal purposes in its section 3809 regulations.[74]

State statutes generally control the amendment and relocation of mining claims, whether done by the owner of a claim[75] or by a subsequent locator upon abandonment or forfeiture of a prior location.[76] However, the right of a locator to amend or relocate his claim exists independently of any statute.[77]

[9] Maintenance Fee and Assessment Work Requirements

Historically, valid unpatented mining claims were maintained by the performance of $100 of labor or improvements per claim per year.[78] Claimants were required to perform assessment work intended to develop and facilitate extraction of ore from the claim. Work was permitted on one claim for the benefit of a group of claims if the work tended to benefit all of the claims in the group.[79]

In 1992, Congress enacted an appropriations bill that changed the long-standing assessment work requirement by establishing an annual $100 maintenance fee for each mining claim, mill site, or tunnel site in lieu of assessment work unless the claimant qualifies for the small miner exception.[80] To qualify for the small miner exception, the claimant can hold no more than 10 mining claims, mill sites, and/or tunnel sites by August 31 of the year for which the waiver applies.[81] A claimant qualifying for a fee waiver under this exception must perform assessment work, file an affidavit of assessment work,[82] and be wary of potential pitfalls.

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[73] *See* § 38.01[4], *infra*.

[74] *See, e.g.*, 43 C.F.R. § 3832.21.

[75] *See* § 38.02, *infra*.

[76] *See* § 38.04, *infra*.

[77] *See* § 38.01[2], *infra*.

[78] *See* 30 U.S.C. §§ 28–28e; *see also* § 45.03, *infra*; United States v. Locke, 471 U.S. 84 (1985) (unpatented mining claim declared void due to failure to file notice of intent to hold or proof of assessment work performed by December 30 of the calendar year as required by section 314(a) of FLPMA); Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 317 (1930) ("The owner is not required to purchase the claim or secure patent from the United States; but, so long as he complies with the provisions of the mining laws, his possessory right, for all practical purposes of ownership, is as good as though secured by patent. While he is required to perform labor of the value of $100 annu[a]lly, a failure to do so does not ipso facto forfeit the claim, but only renders it subject to loss by relocation.").

[79] *See* § 45.04[7], *infra*.

[80] As of February 2020, the maintenance fee was $165, which amount should be confirmed upon payment. 43 C.F.R. § 3830.21(a)(3). See Chapters 44, 45, *infra*, for an exhaustive discussion of the maintenance fee and assessment work requirements. This requirement has been codified at 30 U.S.C. § 28f(a).

[81] See § 44.03[3], *infra*, for a more complete discussion. *See also* 43 C.F.R. pt. 3835; John Herzog, 191 IBLA 26, GFS(MIN) 24 (2017) (totality of circumstances test used as to whether claimant controlled more than 10 claims resulting in forfeiture without opportunity to cure).

[82] 30 U.S.C. § 28f(d); *see also* 43 C.F.R. § 3834.11.

Where assessment work continues to be performed, such as with the small miner exception, the assessment work requirement terminates upon entry in patent proceedings,[83] and it may be deferred or excused in certain limited situations.[84] Unexcused noncompliance with the assessment work requirement subjects the claim to relocation by a subsequent locator,[85] and may subject the claim to cancellation by the United States.[86]

Failure to pay the mining claim maintenance fee within the prescribed time limits results in statutory abandonment and forfeiture.[87] This nonrefundable fee is due on or before September 1 of each year in order to maintain a claim for the upcoming year.[88]

Most states have provided for the filing of affidavits that the assessment work was performed,[89] and federal law requires annual filings of either an affidavit of assessment work or a notice of intention to hold a claim.[90] Failure to comply with the federal filing requirement is fatal, resulting in a conclusive presumption that the claim has been abandoned.[91]

[10] Abandonment and Forfeiture

Like other property, an unpatented mining claim may be abandoned.[92] Abandonment requires a subjective intent by the claim's owner to abandon and an objective act that carries the intent into effect.[93] Whether an abandonment has occurred is a question of fact and, if disputed, must be proved by the party asserting abandonment.[94]

A mining location may also be forfeited to a subsequent locator, a co-owner, or the U.S. government. Forfeiture to a subsequent locator occurs only when the ground has

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[83] *See* § 45.06, *infra*.

[84] *See* § 45.07, *infra*.

[85] *See* § 45.08[1], *infra*.

[86] *See* § 45.08[2], *infra*.

[87] 30 U.S.C. § 28i; 43 C.F.R. § 3830.91.

[88] 30 U.S.C. § 28f(a); *see* Majuba Mining, Ltd. v. Pumpkin Copper, Inc., 299 P.3d 363 (Nev. 2013); Art Anderson (On Reconsideration), 182 IBLA 27, GFS(MIN) 2 (2012), *vacating* Art Anderson, 181 IBLA 270, GFS(MIN) 14 (2011); Consol. Golden Quail Res. (On Judicial Remand), 183 IBLA 250, GFS(MIN) 7 (2013) (mine claims void for failure to pay maintenance fees), *aff'g* Consol. Golden Quail Res., Ltd. v. United States, No. 2:11-cv-01853, 2012 U.S. Dist. LEXIS 145099 (D. Nev. Oct. 9, 2012), *aff'g* Consol. Golden Quail Res., 179 IBLA 309, GFS(MIN) 14 (2010); *see also* Consolidated Appropriations Act, 2012, Pub. L. No. 112-74, § 430, 125 Stat. 786, 1047 (2011). In *Kearn River, LLC*, the Interior Board of Land Appeals rejected a small miner maintenance fee waiver certification because the miner did not use a bona fide mail delivery service as required by regulations; rather the miner used a commercial postage provider, and the certification was not received until September 6. 189 IBLA 345, GFS(MIN) 10 (2017).

[89] *See* § 45.05[1], *infra*.

[90] *See* § 45.05[2][a], *infra*.

[91] *See* § 45.05[2][a], *infra*.

[92] *See* § 46.01, *infra*.

[93] *See* § 46.01[2], *infra*.

[94] *See* § 46.01[8], *infra*.

been relocated, thereby effectuating the forfeiture to the subsequent relocator,[95] and, in general, such a relocation may be made only after failure of the claim's owner to pay the maintenance fee or perform annual assessment work and before the claim owner has resumed work on the claim, as required.[96] Forfeiture to a co-owner can occur when one co-owner fails to contribute his share of the expense of performing the required annual assessment work.[97] A statutory procedure of "advertising out"[98] must be followed to effectuate such a forfeiture. A location may also be forfeited to the United States due to exhaustion of the minerals on the claim, loss of discovery, failure to pay maintenance fees or perform annual assessment work, or failure to make required filings with the BLM.[99]

§ 30.06 Administrative Proceedings Under the Mining Law of 1872

[1] Contests

A contest is an administrative proceeding within the U.S. Department of the Interior brought to invalidate a claim of title or interest in the public domain that is adverse to the interest of the contestant.[1] A private contest is one brought by a private party, and a government contest is one brought by the government, acting through the U.S. Bureau of Land Management (BLM).[2]

A contest may be based upon any reason for which an unpatented mining location is invalid.[3] The rules governing contests are set out in the federal regulations.[4]

[2] Mineral Patent Proceedings

Subject to recent limitations imposed by the patent moratorium, the Mining Law of 1872 extends to locators the right to apply for a mineral patent and thus to obtain title in fee simple from the United States.[5] There is no requirement to apply for patent, and a locator may mine and extract all mineral from his claim without ever making payment to the United States. Nevertheless, the possessory rights of a locator are not fully secure until he obtains full legal title by patent.[6]

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[95] *See* § 46.03[1], *infra*.

[96] 30 U.S.C. § 28; *see* § 46.03[3], *infra*.

[97] *See* § 46.04[1], *infra*.

[98] *See* § 46.04[1], *infra*.

[99] *See* § 46.05, *infra*.

[1] *See* § 50.01, *infra*.

[2] *See* § 50.01, *infra*. As a matter of policy, BLM declines to intervene in private disputes, especially when the dispute involves interpretation of state law. *See* David J. Bartoli, 123 IBLA 27, GFS(MIN) 19 (1992).

[3] *See* §§ 50.03 (government contests), 50.04 (private contests), *infra*.

[4] *See* §§ 50.05 to 50.12, *infra*.

[5] 30 U.S.C. § 29; *see* § 51.07, *infra*.

[6] *See* § 51.02, *infra*.

AMERICAN LAW OF MINING

Second Edition

VOLUME 2

Edited by

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mining states have authority "to regulate the possession of the public lands in the interest of peace and good order . . . ,"[14] thus giving them the capability of shaping the doctrine differently than is customary among miners.

Pedis possessio is Latin meaning "a foothold," and as a legal term requires actual, as opposed to constructive, possession.[15] The doctrine is not a form of title, and it does not vest title or any permanent rights.

The protection of possessory rights to mining claims was approved by the Supreme Court as early as 1878,[16] and has been consistently applied by it since then.[17] On several occasions Congress has implicitly recognized the prediscovery rights of prospectors.[18]

§ 34.02 *Pedis Possessio* Rights

[1] Nature of *Pedis Possessio* Rights

The purpose of the doctrine of *pedis possessio*, which excludes others from an area possessed by a prospector who is diligently searching for mineral, is to reward diligence and to promote peaceful competition for mineral discoveries, the keynotes of the mining law.[1] The doctrine was given its fullest statement by the Supreme Court in *Cole v. Ralph*:

> In advance of discovery an explorer in actual occupation and diligently searching for mineral is treated

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possessionis"). Previously, the term had been applied to the claims of competing agricultural entrymen. *See* Attwood v. Fricot, 17 Cal. 37, 43 (1860); English v. Johnson, 17 Cal. 107, 116 (1860). Although these cases apply the concept of *pedis possessio* to mining claim cases, they do not use the term, thereby distinguishing the acts necessary to possess agricultural land from those necessary to possess a mining claim. *See* Hess v. Winder, 30 Cal. 349, 355 (1866).

[14] *Union Oil*, 249 U.S. at 348 (dictum).

[15] Ranchers Expl. & Dev. Co. v. Anaconda Co., 248 F. Supp. 708, 724 n.45 (D. Utah 1965); *Geomet*, 601 P.2d at 1340. The Latin term for actual possession also has been stated as "*pedis positio*." Regions Bank v. Dean, 29 So. 3d 201, 209 (Ala. Civ. App. 2009).

[16] Campbell v. Rankin, 99 U.S. 261 (1878).

[17] *See, e.g.*, Cole v. Ralph, 252 U.S. 286 (1920); *Union Oil*, 249 U.S. 337; Belk v. Meagher, 104 U.S. 279, 286–88 (1881); *see also* Dower v. Richards, 151 U.S. 658, 660 (1894) ("*pedis possessio*" used but not applied).

[18] *See, e.g.*, Act of June 25, 1910, ch. 421, § 2, 36 Stat. 847 (codified as amended at 43 U.S.C. § 142); Mineral Leasing Act of 1920, ch. 85, § 37, 41 Stat. 437, 451 (codified as amended at 30 U.S.C. § 193); Mining Claims Rights Restoration Act of 1955, ch. 797, § 5, 69 Stat. 681, 683 (codified at 30 U.S.C. § 624); *see also* Space Resource Exploration and Utilization Act of 2015, Pub. L. No. 114-90, tit. IV, 129 Stat. 704, 720 (codified at 51 U.S.C. §§ 51301–51303); Lauren E. Shaw, "Asteroids, The New Western Frontier: Applying Principles of the General Mining Law of 1872 to Incentivize Asteroid Mining," 78 *J. Air L. & Com.* 121 (2013) (recognition of the concept of *pedis possessio* in the development of legislation to address rights related to the mining of asteroid and space resources). The concept of *pedis possessio* continues to be recognized even in proposed legislation to reform the Mining Law of 1872. *See, e.g.*, S. 1386, 116th Cong. § 102(a)(8) (2019) ("Use and occupancy of claims.—Timely performance of required assessment work or payment of the maintenance fee under this subsection satisfies any obligation the claim holder has under the pedis possessio doctrine . . . .").

[1] Ranchers Expl. & Dev. Co. v. Anaconda Co., 248 F. Supp. 708, 727 (D. Utah 1965).

as a licensee or tenant at will, and no right can be initiated or acquired through a forcible, fraudulent or clandestine intrusion upon his possession. But if his occupancy be relaxed, or be merely incidental to something other than a diligent search for mineral, and another enters peaceably, and not fraudulently or clandestinely, and makes a mineral discovery and location, the location so made is valid and must be respected accordingly.[2]

Neither before nor after discovery does a locator have the right to exclude parties other than competing mineral locators from his claim. The Multiple Use Mining Act of 1955 entitles many other government licensees to enter claims so long as they do not unreasonably interfere with mineral activities.[3] Before he makes a discovery, a prospector obtains no rights against the United States under the Mining Law of 1872.[4] Consequently, the federal government may withdraw its land from mineral entry or dispose of it under appropriate laws and regulations regardless of the *pedis possessio* of a prospector.[5] Among other methods of disposal, the United States might grant a permit or lease of leasable minerals under the Mineral Leasing Act of 1920,[6] thus authorizing another mineral operator to also use the same land for mining purposes.[7]

It is critical to distinguish the rights afforded a prospector before discovery by the judicial doctrine of *pedis possessio* from the vested rights accorded by the Mining Law of 1872[8] to a locator who has discovered and properly located a valuable mineral deposit. A prospector has only a right to be protected in his occupation, and his right is dependent upon strict compliance with requirements developed by the courts.[9] Only the concurrence of a discovery of a valuable mineral deposit and compliance with applicable location procedures perfects a location and vests a property right in a

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[2] 252 U.S. 286, 294–95 (1920) (footnote omitted); *see also* Bruce W. Crawford, 86 IBLA 350, 358, GFS(MIN) 55(1985); Ariz. Lithium Co. v. N. Am. Cobalt, Inc., No. 4:17-cv-00351, 2019 WL 4777303 (D. Idaho Sept. 30, 2019).

[3] Act of July 23, 1955, ch. 375, § 4, 69 Stat. 367, 368 (codified at 30 U.S.C. § 612); *see* § 36.03[1], *infra*.

[4] Davis v. Nelson, 329 F.2d 840, 845 (9th Cir. 1964).

[5] United States v. Midway N. Oil Co., 232 F. 619, 625 (S.D. Cal. 1916) (oil placer location); L.W. Lowell, 40 Pub. Lands Dec. 303 (1911) (oil placer location); U.S. Forest Serv. v. Walter D. Milender, 104 IBLA 207, 222–23, GFS(MIN) 104(1988) ("[T]he rights appurtenant to the operation of the doctrine of pedis possessio do not apply against the United States. Since the United States holds paramount legal title and has permitted the taking up of mineral lands only upon the making of a discovery, pre-discovery locations gain the locator no rights vis-à-vis the United States, which may at any time withdraw the lands from location under the mining laws and thereby defeat any inchoate rights flowing from a mere location."); Ronald R. Graham, 77 IBLA 174, 179 (1983), GFS(MIN) 14(1984) ("[R]ights initiated under the doctrine of *pedis possessio* will not survive segregation of the land by BLM pursuant to a classification action."); Skaw v. United States, 13 Cl. Ct. 7, 28 (1987) ("Until a patent issues, the United States as a fee owner, retains paramount rights and interests in the Federal lands under the claim, and maintains the authority to regulate the uses of those lands.").

[6] *See* § 4.18, *supra*, on the Mineral Leasing Act of 1920.

[7] *See* § 4.18, *supra*, on the Multiple Mineral Development Act of 1954.

[8] *See* 30 U.S.C. § 26.

[9] *See* § 34.03, *infra*.

locator.[10] Discovery is the source of a claimant's title, and upon making a discovery, he acquires the right to make a location and perfect it within a prescribed time.[11] If he does not do so, he has no title or right of possession[12] except as may accrue by virtue of his *pedis possessio*.[13]

In order to define the area in which a prospector expects to explore for minerals, it

(Text continued on page 34-5)

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[10] Davis v. Nelson, 329 F.2d 840, 845 (9th Cir. 1964); *accord* Cole v. Ralph, 252 U.S. 286, 296 (1920); Gwillim v. Donnellan, 115 U.S. 45, 49 (1885); Ariz. Lithium Co. v. N. Am. Cobalt Inc., No. 4:17-cv-00351, 2019 WL 4777303 (D. Idaho Sept. 30, 2019) ("*pedis possessio* is not relevant if a purported senior locator has not first properly located a claim").

[11] Doe v. Waterloo Mining Co., 70 F. 455, 459–60 (9th Cir. 1895); McCleary v. Broaddus, 111 P. 125, 127 (Cal. Ct. App. 1910). Time allowances are discussed in Chapter 33, *supra*.

[12] Lockhart v. Johnson, 181 U.S. 516, 527–28 (1901); Walsh v. Henry, 88 P. 449 (Colo. 1906); Gobres v. Ill. & Josephine Gravel Mining Co., 67 P. 666 (Or. 1902). A subsequent locator who prevents a prior locator from perfecting his location within the prescribed time cannot initiate any right that would defeat the rights of the prior locator. Erhardt v. Boaro, 113 U.S. 527, 534–35 (1885).

[13] Adams v. Benedict, 327 P.2d 308, 319–20 (N.M. 1958); *see* Joel O. Benson, "Discovery in the 21st Century," *Advanced Mineral Title Examination* 9-1 (Rocky Mt. Min. L. Fdn. 2014); M. Craig Haase, "Non-Record Title Examination of Unpatented Mining Claims," *Mineral Title Examination III* 8-1 (Rocky Mt. Min. L. Fdn. 1992).

is now customary to make a location prior to making a discovery.[14] This establishes the specific ground that is claimed under the doctrine of *pedis possessio* but, without a discovery, does not establish vested rights in the location.[15]

If a claim is declared invalid for failure to meet the requirements of the applicable rule of discovery,[16] a question arises as to whether the claimant is liable for removing minerals during the time he was in possession under the doctrine of *pedis possessio*. It appears that so long as the ground was open to location, the minerals removed were locatable, and the claimant acted in good faith, removing minerals prior to a declaration of invalidity should not give rise to an action for trespass.[17]

A prospector's prediscovery rights, like the vested rights that accrue upon discovery, are valuable rights that may be conveyed to another.[18] Prediscovery rights, resting as they do upon actual possession, may be transferred only by transferring actual possession along with a deed, lease, or assignment of the color of title acquired by locating and recording the claim.[19] The transferability of a prospector's prediscovery rights has been recognized by Congress.[20]

[2] Protection Against Adverse Entry

Only those prospectors who bring themselves within the doctrine of *pedis possessio* are entitled to the aid of a court for protection against forcible, fraudulent, or clandestine intrusions.[21] The decision in *Ranchers Exploration & Development Co. v. Anaconda Co.*[22] is particularly instructive on this issue. The court stated that in the absence of discovery by, or *pedis possessio* of, a first locator, a rival claimant who proceeds, in good faith and in accordance with the mining law, toward location and mineral discovery has an equal right to be upon the public domain, and forceful resistance by the first locator to prospecting by the second would be equally or even

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[14] *See* § 34.04[2], *infra*.

[15] Phillips v. Brill, 95 P. 856, 859 (Wyo. 1908).

[16] Discovery rules are discussed in Chapter 35, *infra*. *See also* Joel O. Benson, "Discovery in the 21st Century," *Advanced Mineral Title Examination: Oil, Gas, and Mining* 9-1 (Rocky Mt. Min. L. Fdn. 2014).

[17] *See* George E. Reeves, "Liability for Mining on a Void Mining Claim," 16 *Rocky Mt. Min. L. Inst.* 505, 514 (1971).

[18] Consolidated Mut. Oil Co. v. United States, 245 F. 521, 525 (9th Cir. 1917); Rooney v. Barnette, 200 F. 700, 710 (9th Cir. 1912); Frazier v. Consol. Tungsten Mines, 296 P.2d 447, 450 (Ariz. 1956); Miller v. Chrisman, 73 P. 1083, 1086 (Cal. 1903), *aff'd on other grounds*, 197 U.S. 313 (1905); United W. Minerals Co. v. Hannsen, 363 P.2d 677 (Colo. 1961) (lease). *Cf.* H.H. Yard, 38 Pub. Lands Dec. 59, 64 (1909) (gold placer location of 160 acres located by eight people cannot be perfected by discovery made by single transferee).

[19] Davis v. Nelson, 329 F.2d 840, 845 (9th Cir. 1964).

[20] Act of Mar. 2, 1911, ch. 201, § 1, 36 Stat. 1015 (codified at 30 U.S.C. § 103). *Cf.* United States *ex rel.* U.S. Borax Co. v. Ickes, 98 F.2d 271, 278–79 (D.C. Cir. 1938).

[21] Ranchers Explor. & Dev. Co. v. Anaconda Co., 248 F. Supp. 708, 725 (D. Utah 1965); Terry N. Fiske, "Pedis Possessio—New Dimensions or Back to Basics?" 34 *Rocky Mt. Min. L. Inst.* 8-1 (1988).

[22] 248 F. Supp. 708 (D. Utah 1965).

more unjustifiable than a forcible, fraudulent, or clandestine intrusion by the second.[23] The court added:

> [I]t cannot be accepted that the guns of the [first locator] could be substitutes for picks, shovels or drills or for proceeding diligently with discovery, or that roving guards patrolling several square miles of desert could be in actual occupancy for the purpose of discovery within the meaning of the doctrine. One seeking to maintain an unlawful possession by force is not entitled to the court's protection on that account.[24]

An entry is not forcible merely because it is upon land in the actual possession of another.[25] Even in the absence of consent by the one in possession, an adverse entry may be made if done peaceably without forceful, fraudulent, or clandestine conduct.[26] The prediscovery rights of a prior claimant will not prevail against one who so enters and perfects a location.[27] Any other rule would make the wrongful occupation of public land superior in right to a lawful entry by a locator acting in accordance with the Mining Law of 1872.[28]

A prospector who is in *pedis possessio* is also entitled to protection against fraudulent intrusions.[29] If the intruder seeks

> to obtain possession by questionable means amounting to a demonstration of bad faith, either in the sense that he has unconscionably improved his position at the expense of his competitor, or unfairly worsened his competitor's position to his own aggrandizement, he does not qualify as a locator against such competing interest.[30]

It has been held that one who uses information obtained as an employee and also through negotiations, which were ostensibly for the purchase of mining claims, in order to invade, overstake, and make discoveries in an area previously located was not acting in good faith.[31] Bad faith was also imputed to the principal who could acquire no rights through the overstaked claims.[32] It would seem that the bad faith of the agent amounted to fraudulent intrusion, against which courts uniformly state protection will be granted.

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[23] *Ranchers*, 248 F. Supp. at 725–26.

[24] *Ranchers*, 248 F. Supp. at 726.

[25] *See* Belk v. Meagher, 104 U.S. 279, 287–88 (1881); Nevada Sierra Oil Co. v. Home Oil Co., 98 F. 673, 680 (C.C.S.D. Cal. 1899).

[26] *Belk*, 104 U.S. at 287; Hanson v. Craig, 170 F. 62, 65 (9th Cir. 1909); Thallmann v. Thomas, 111 F. 277, 278–79 (8th Cir. 1901); *Nevada Sierra*, 98 F. at 680.

[27] Cole v. Ralph, 252 U.S. 286 (1920); *Belk*, 104 U.S. at 287–88; Horswell v. Ruiz, 7 P. 197 (Cal. 1885).

[28] *Thallmann*, 111 F. at 279.

[29] *Cole*, 252 U.S. at 294–95; Union Oil Co. v. Smith, 249 U.S. 337, 347 (1919). *See also* § 34.04, *infra*.

[30] Ranchers Explor. & Dev. Co. v. Anaconda Co., 248 F. Supp. 708, 728 (D. Utah 1965).

[31] *Ranchers*, 248 F. Supp. at 725. *Cf. Thallmann*, 111 F. 277.

[32] *Ranchers*, 248 F. Supp. at 731. The prior claimant was held not to have established *pedis possessio* except on a few claims in a large block covering an area of more than five square miles, but possession was denied the overstaking intruder because of bad faith.

No rights may be acquired by a second claimant who intrudes clandestinely upon a claim as to which a prospector has *pedis possessio* rights.[33] An example of clandestine entry upon the prospector's possession is one made "while he is asleep in his cabin, or temporarily absent from his claim."[34] Nevertheless, a clandestine nighttime intrusion onto a claim not held by *pedis possessio* has been approved by one court as a means to avoid a violent confrontation with the armed guards of the first locator.[35]

[3] Use of Surface Resources

Courts have not distinguished the rights of an explorer occupying land under *pedis possessio* to possess and enjoy the surface resources of a mining claim from those of a locator who has perfected his claim with a discovery. Despite the Mining Law of 1872's broad language that locators "shall have the exclusive right of possession and enjoyment of all the surface included within . . . their locations,"[36] the courts have limited those rights to uses reasonably related to mining operations.[37] Congress has imposed similar restrictions by the Multiple Mineral Development Act of 1954[38] and the Multiple Use Mining Act of 1955,[39] and it has required locators to file plans of operation with the Forest Service pursuant to the Organic Administration Act of 1897[40] and with the Bureau of Land Management pursuant to the Federal Land Policy and Management Act of 1976[41] in order to minimize adverse environmental impacts.[42]

Subject to these limitations, an explorer who has established *pedis possessio* by being in actual occupancy and diligently exploring for mineral is entitled to construct such improvements on the area claimed as reasonably necessary for exploration.[43] A

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[33] In *Springer v. S. Pacific Co.*, 248 P. 819 (Utah 1926), the intruder, before or near daylight and long before working hours, entered the improperly located claims of a locator who had been in actual possession for 20 years and was diligently engaged in developing the mineral deposit. The court considered the intrusion to be clandestine and surreptitious and held that the first locator prevailed, although the holding was based on the adverse possession statute, 30 U.S.C. § 38, rather than the more obvious doctrine of *pedis possessio*. *See* Sparks v. Mount, 207 P. 1099, 1101 (Wyo. 1922).

[34] Nevada Sierra Oil Co. v. Home Oil Co., 98 F. 673, 681 (C.C.S.D. Cal. 1899); *see* Davis v. Dennis, 85 P. 1079, 1080 (Wash. 1906); *Sparks*, 207 P. at 1099 (temporary absence); *cf.* Hanson v. Craig, 161 F. 861 (9th Cir. 1908), *rev'd*, 170 F. 62 (9th Cir. 1909).

[35] *Ranchers*, 248 F. Supp. at 726.

[36] 30 U.S.C. § 26.

[37] *See* § 110.02[2][a], *infra*.

[38] 30 U.S.C. §§ 521–531; *see* § 110.02[2][b], *infra*.

[39] 30 U.S.C. §§ 601, 603, 611–615; *see* § 110.02[2][b], *infra*.

[40] 16 U.S.C. §§ 473–482, 511; *see* United States v. Backlund, 588 F. App'x 525, 527 (9th Cir. 2014) ("a miner's possessory right as against all other miners does not limit the ability of the Forest Service to regulate mining activities in national forests" (citation omitted)).

[41] 43 U.S.C. §§ 1701–1782.

[42] *See* § 110.02[2][c], *infra*.

[43] *See* Cole v. Ralph, 252 U.S. 286, 300–01 (1920) (ownership and guarding of an inoperable mill and other buildings for mining purposes, standing on a claim on which prospecting had been recently conducted, established *pedis possessio* for at least the ground where the buildings were located).

prospector without *pedis possessio* is not entitled to compensation for his improvements when his possession is lost to another with a better right.[44] An explorer who holds under *pedis possessio* is only a licensee or tenant at will, however,[45] so his ownership of improvements is at risk of loss to the United States upon revocation of his possessory right.[46] The mining law does not entitle a mineral claimant to use water that may be found on the claim, and acquisition of water rights, even those necessary for mining, must be obtained separately under the laws regulating the appropriation of water.[47]

§ 34.03 Requirements to Establish *Pedis Possessio*

[1] Introduction

In order to establish *pedis possessio* rights, a prospector must meet the conditions that have been developed by the courts. The requirements were summarized by the Supreme Court in *Cole v. Ralph*[1] and *Union Oil Co. of Cal. v. Smith*.[2] These cases make it clear that there must be an actual, physical occupation of the ground claimed, that a prospector must be diligently searching in good faith for a mineral discovery, and that other prospectors must be excluded, although those who make a forcible, fraudulent, or clandestine intrusion upon the possession of an earlier prospector can acquire no rights.[3] Traditionally, these requirements have been applied to each claim for which a prospector asserts *pedis possessio*.[4]

[2] Actual and Physical Occupation of the Ground

In order to obtain the benefit of the *pedis possessio* doctrine, the traditional rule is that the prospector's possession of each claim must be actual and physical.[5] The

(Text continued on page 34-9)

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[44] Deffeback v. Hawke, 115 U.S. 392, 407 (1885); Sparks v. Pierce, 115 U.S. 408, 413 (1885).

[45] *Cole*, 252 U.S. at 294–95.

[46] *See* § 110.02[4][d], *infra*, pointing out that an explorer who cannot establish *pedis possessio* has no rights and may be subject to prosecution for waste or trespass.

[47] Andrus v. Charlestone Stone Prods. Co., 436 U.S. 604 (1978).

[1] 252 U.S. 286 (1920).

[2] 249 U.S. 337 (1919) (*pedis possessio* did not apply to an oil placer claim on which no discovery existed and that was not in the actual possession of the locator).

[3] *See also* Adams v. Benedict, 327 P.2d 308, 320 (N.M. 1958).

[4] *See* § 34.05[1], *infra*. The application of *pedis possessio* to multiple claims is discussed in § 34.05[2], *infra*.

[5] Union Oil Co. of Cal. v. Smith, 249 U.S. 337, 348 (1919); Belk v. Meagher, 104 U.S. 279, 286–87 (1881); Hanson v. Craig, 170 F. 62, 65 (9th Cir. 1909); McLemore v. Express Oil Co., 112 P. 59, 61 (Cal. 1910); Granlick v. Johnston, 213 P. 98, 100–01 (Wyo. 1923); Regions Bank v. Dean, 29 So. 3d 201, 209 (Ala. Civ. App. 2009). *See generally* § 34.05[1], *infra*. *See* § 34.05[2], *infra*, for the minority rule allowing *pedis possessio* for a group of claims when only a few of them are actually occupied.

whether these decisions go further than to say that if there is no practical, economical method of working the claim, or if the known facts demonstrate that an expected mining operation could not be profitable, then a prudent man would not reasonably expend his money and time in such an operation.[49] While the prudent man may reasonably expect to overcome problems encountered in mining and processing,[50] he cannot rely upon conjecture or speculation as to unforeseen lowering of costs because of a dramatic technological breakthrough.[51] Other factors, such as the existence of sufficient water to conduct the type of operation contemplated, should also be shown.[52]

[c] Economic Factors

In a relatively early decision regarding placer claims it was held that "the discovery . . . must be such as to give reasonable evidence that the ground claimed as placer ground is valuable for such mining, but beyond that the locator is not required to go."[53] The prudent man rule has been described as "an inquiry into the economic feasibility of a proposed mining operation on the mining claim in question,"[54] and the economics of the claimant's operation may be considered in applying the prudent man rule.[55] If there is no practical, economical method of working the claim, or if the known facts demonstrate that an expected mining operation could not be profitable, then a prudent

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States v. Mouat, 61 Interior Dec. 289 (1954); *see also* Freeman v. U.S. Dep't of the Interior, 83 F. Supp. 3d 173 (D.D.C. 2015) (use of alternative cost saving measures for extraction and processing was speculative and cost savings were not supported), *aff'd*, 650 F. App'x 6 (D.C. Cir. 2016).

[49] *See* United States v. McKenzie, 4 IBLA 97 (1971), GFS-BLA-MIN-1971-36; United States v. Jones, 3 IBLA 177 (1971), GFS-BLA-MIN-1971-30; Big Pine Mining Corp., 53 Interior Dec. 410 (1931); United States v. Bullington (On Rehearing), 51 Pub. Lands Dec. 604 (1926).

[50] When uranium was discovered in deposits of lignite in North Dakota, South Dakota, and Montana, the Atomic Energy Commission recognized that although a satisfactory process for recovering uranium from uraniferous lignite was not known, the development of such a process would be undertaken by private industry if the problem of the locatability of the mineral deposit could be resolved. Statement on Behalf of Atomic Energy Commission Relating to H.R. 6471 Presented Before the House Committee on Interior and Insular Affairs, June 22, 1955, H.R. Rep. No. 1478, 84th Cong., 1st Sess. 12 (1955).

[51] United States v. Colonna & Co., 14 IBLA 220, GFS(MIN) 15 (1974); United States v. Estate of Denison, 76 Interior Dec. 233 (1969), GFS SO-1969-36 (Mining), *aff'd sub nom.* Shoup v. Udall, Civil No. 5822-Phx. and *sub nom.* Smith v. Udall, Civil No. 1053 (D. Ariz. Jan. 31, 1972), *aff'd*, 489 F.2d 1275 (9th Cir. 1974).

[52] United States v. Pittsburgh Pac. Co., 84 Interior Dec. 282, GFS(MIN) 30 (1977); United States v. Osborne (Supp. on Judicial Remand), 28 IBLA 13, GFS(MIN) 30 (1976), *aff'd sub nom.* Bradford Mining Corp. v. Andrus, Civ. No. LV 77-218 (D. Nev. Nov. 15, 1979); United States v. King, 15 IBLA 20, GFS(MIN) 34 (1974).

[53] United States v. Ohio Oil Co., 240 F. 996, 1003 (D. Wyo. 1916).

[54] United States v. Swain, A-30926 at 7 (Dec. 30, 1968), GFS SO-1969-1 (Mining); *see* United States Steel Corp., 52 IBLA 319, GFS(MIN) 59 (1981); Pittsburgh Pac. Co., 84 Interior Dec. 282, GFS(MIN) 30 (1977); Marvel Mining Co. v. Sinclair Oil Co., 75 Interior Dec. 407 (1968), GFS SO-1969-7 (Mining).

[55] United States v. Walls, 30 IBLA 333, GFS(MIN) 29 (1977).

man would not be acting reasonably in expending his money and time in such an operation.[56]

(Text continued on page 35-69)

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[56] United States v. McKenzie, 4 IBLA 97 (1971), GFS BLA-MIN-1971-36; United States v. Herman, 72 Interior Dec. 307 (1965), GFS SO-1965-26 (Mining); Big Pine Mining Corp., 53 Interior Dec. 410 (1931); *see* United States v. Clark, 18 IBLA 368, GFS(MIN) 8 (1975); United States v. Jones, 3 IBLA

(Footnote continued on page 35-69)

The economic factors that may be considered in determining whether a valuable mineral deposit has been discovered include such factors as the cost of mining, transporting, and processing the mineral, and the existence of a market for the mineral.[57]

The prudent man's reasonable prospect of success must be based upon present economic facts that compare the expected costs with the expected returns for the product. The question is not whether at some time in the future under more favorable circumstances a prudent man might expect to develop a profitable mine, but whether under the circumstances known at the time he might expect to develop a profitable mine. This expectation must be based upon present considerations as to the value of the deposit determined by the extent of saleable mineral, the market price for the mineral, and the expected costs of the mining operation.[58] Furthermore, the expectation of future market prices must be based upon rational considerations, including normal market ups and downs, and not upon conjecture and speculation as to possible sharp increases in market prices due to unpredictable changes in world political and economic conditions or to a governmental subsidy, or to the unforeseen lowering of costs because of a dramatic technological breakthrough. Thus, the expectation of future profitability under the prudent man rule must be based upon present economic circumstances and not upon mere speculation as to possible substantial changes in the market place.[59] Nevertheless, a prudent man could be justified in the belief that a sustained upward trend in the prices of minerals of the types found on his claim would continue and have the tendency, within a predictable period, to result in a remunerative return for the products of the claim.[60] Normal economic fluctuation is a factor that a prudent man would consider in determining whether to expend his labor and means, and the mining claimant may rely upon a reasonable expectation of future profitable exploitation,[61] but significant adverse changes of a more enduring nature might

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177 (1971), GFS-BLA-MIN-1971-30; United States v. Bullington (On Rehearing), 51 Pub. Lands Dec. 604 (1926).

[57] Waters v. Jossie, 155 Fed. App'x 984 (9th Cir. 2005); United States v. Garner, 30 IBLA 42, GFS(MIN) 22 (1977); United States v. Denison, 71 Interior Dec. 144 (1964), GFS SO-1964-31 (Mining), *rev'd,* 248 F. Supp. 942 (D. Ariz. 1966); United States v. Mulkern, A-27746 (Jan. 19, 1959).

[58] United States v. Jenkins, 75 Interior Dec. 312 (1968), GFS SO-1968-48 (Mining).

[59] United States v. Garner, 30 IBLA 42, GFS(MIN) 22 (1977); United States v. Colonna & Co., 14 IBLA 220, GFS(MIN) 15 (1974); United States v. Estate of Denison, 76 Interior Dec. 233 (1969), GFS SO-1969-36 (Mining), *aff'd sub nom.* Shoup v. Udall, Civil No. 5822-Phx. and *sub nom.* Smith v. Udall, Civil No. 1053 (D. Ariz. Jan. 31, 1972), *aff'd,* 489 F.2d 1275 (9th Cir. 1974). In any particular case, it may be difficult to predict whether the mining claimant's anticipation of improved market conditions will be deemed "speculation" or "reasonable expectation." Compare the majority and dissenting opinions in *Barrows v. Hickel,* 447 F.2d 80 (9th Cir. 1971).

[60] United States v. Ariz. Mining & Ref. Co., 27 IBLA 99, GFS(MIN) 66 (1976).

[61] United States v. San Juan Exploration Co., A-30965 (Mar. 27, 1969), GFS SO-1969-18 (Mining); United States v. Erickson, A-30942 (Jan. 17, 1969), GFS SO-1969-10 (Mining); United States v. Jenkins, 75 Interior Dec. 312 (1968), GFS SO-1968-48 (Mining).

prevent him from expecting to develop a valuable mine.[62]

The evidence should show the probable costs of extracting, processing, and transporting the mineral product for comparison with the price for which it can be sold.[63] Such costs must include the amortization cost of the equipment used in the mining operation, even though the claimant may have access to equipment at a cost less than the average prudent person would have to pay.[64] Similarly, the claimant must take into consideration the value of his own labor and the value of the labor of those who work for him.[65] There is no reason to consider the value of the labor of a claimant or the use of his equipment differently from that which he might hire. Either one must be taken into consideration in determining whether there is a reasonable prospect of success.[66] In this regard, the minimum wage merely establishes a floor for the determination of the value of the claimant's labor. Where there is independent evidence establishing the value of labor necessary to mine a deposit, it is that value which is properly used.[66.1] Accepted independent evidence has included letters describing labor costs at the time of discovery based upon personal experiences.[66.2]

A lease of a mining claim is only slight evidence of discovery when the lease does not require the lessee to mine any particular quantity of minerals.[67]

The fact that past revenues derived from a claim are insignificant when compared with the high cost of exploration and development does not negate the possibility of a discovery.[68] A low level of profits may be the result of factors other than the ability of the claimant to extract and market the mineral profitably.[69]

[d] Good Faith

Evidence of the value of the lands for purposes other than minerals, such as for the

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[62] United States v. Hines Gilbert Gold Mines Co., 1 IBLA 296 (1971), GFS-BLA-MIN-1971-2.

[63] Adams v. United States, 318 F.2d 861 (9th Cir. 1963); United States v. N.J. Zinc Co., 74 Interior Dec. 191 (1967), GFS SO-1967-24 (Mining). *See* United States v. Anderson, 74 Interior Dec. 292 (1967), GFS SO-1968-1 (Mining) (transportation).

[64] United States v. Garner, 30 IBLA 42, GFS(MIN) 22 (1977).

[65] Waters v. Jossie, 155 Fed. App'x 984 (9th Cir. 2005); United States v. Heard, 18 IBLA 43, GFS(MIN) 74 (1974); United States v. Alexander, 17 IBLA 421, GFS(MIN) 73 (1974); United States v. White, 72 Interior Dec. 522 (1965), GFS SO-1966-11 (Mining), *aff'd*, 404 F.2d 334 (9th Cir. 1968). *See* United States v. Melluzzo, 32 IBLA 46, GFS(MIN) 52 (1977).

[66] United States v. Garner, 30 IBLA 42, GFS(MIN) 22 (1977); United States v. White, 72 Interior Dec. 522 (1965), GFS SO-1966-11 (Mining), *aff'd*, 404 F.2d 334 (9th Cir. 1968).

[66.1] United States v. Miller, 138 IBLA 246, GFS(MIN) 53 (1997).

[66.2] United States v. Anthony, 180 IBLA 308, GFS(MIN) 3 (2011).

[67] United States v. Foster, 65 Interior Dec. 1 (1958), GFS Mining Supp. Decision No. 9, *aff'd sub nom.* Foster v. Seaton, 271 F.2d 836 (D.C. Cir. 1959). *See* United States v. Guild, 34 IBLA 387, GFS(MIN) 42 (1978) (fact that claims are under lease has no relation to their validity).

[68] United States v. Ariz. Mining & Ref. Co., 27 IBLA 99, GFS(MIN) 66 (1976).

[69] United States v. Williamson, 87 Interior Dec. 34, GFS(MIN) 33 (1980).

CHAPTER 36

OWNERSHIP INTERESTS IN VALID UNPATENTED MINING CLAIMS

Updated by Robert D. Comer

SYNOPSIS

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§ 36.01 General Nature of Rights in a Valid Unpatented Mining Claim

[1] Background

From early in the history of mining on the public domain, courts have held that when a discovery of a valuable mineral deposit[1] coincides with an appropriation of it by means of a mining location,[2] the locator holds a valid unpatented mining claim[3] and has acquired vested property rights that are enforceable against both third parties and

[1] Requirements for a discovery are discussed in Chapter 35, *supra*.

[2] Location procedures are discussed in Chapter 33, *supra*.

[3] The term "valid unpatented mining claim," as used herein, refers to an unpatented mining claim that has been properly located, perfected by a discovery of a valuable mineral deposit, and maintained thereafter as required.

the United States.[4] Discovery coupled with appropriation converts the right of a prospector to occupy a portion of the public domain in search of minerals protected only by his *pedis possessio*[5] into the much more substantial interest of an owner of property rights based on a statutory grant.[6] In a leading case, the U.S. Supreme Court has said:

> [W]hen the location of a mining claim is perfected under the law, it has the effect of a grant by the United States of the right of present and exclusive possession. The claim is property in the fullest sense of that term; and may be sold, transferred, mortgaged, and inherited without infringing any right or title of the United States. The right of the owner is taxable by the state; and is "real property," subject to the lien of a judgment recovered against the owner in a state or territorial court. The owner is not required to purchase the claim or secure patent from the United States; but, so long as he complies with the provisions of the mining laws, his possessory right, for all practical purposes of ownership, is as good as though secured by patent.[7]

The purpose of the statute granting possessory rights[8] is to preserve to the owner of a claim the full benefit of his discovery.[9] Thus, an owner has the right, even without acquiring a patent, "to extract and convert to his own use all the ores and precious metals which may be found" within his surface lines without payment to the U.S. government.[10] This right, however, is limited in that it must give way to the properly asserted extralateral rights of other locators.[11] The rights that accrue to owners of valid unpatented mining claims, whether lode or placer, encompass the right of possession and enjoyment of both the surface and subsurface.[12]

Even though a patent has not issued, the right of possession and enjoyment of the owner of a valid unpatented mining claim allows for use rights that are tantamount to complete title,[13] so long as the claim is maintained in compliance with the mining laws. The interest of the owner of a valid unpatented mining location, however, is subject to defeasance for failure to pay annual maintenance fees or perform annual assessment work and recording,[14] inability to prove a discovery of a valuable mineral

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[4] *See* Best v. Humboldt Placer Mining Co., 371 U.S. 334, 83 S. Ct. 379, 9 L. Ed. 2d 350 (1963); Swanson v. Sears, 224 U.S. 180, 32 S. Ct. 455, 56 L. Ed. 721 (1912); Gwillim v. Donnellan, 115 U.S. 45, 5 S. Ct. 1110, 29 L. Ed. 348 (1885).

[5] *See* Chapter 34, *supra*.

[6] 30 U.S.C. §§ 26, 35. *See* Union Oil Co. v. Smith, 249 U.S. 337, 348–49, 39 S. Ct. 308, 63 L. Ed. 635 (1919); Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 50 S. Ct. 103, 74 L. Ed. 445 (1930); Belk v. Meagher, 104 U.S. 279, 26 L. Ed. 735 (1881).

[7] *Krushnic*, 280 U.S. at 316–17 (citations omitted).

[8] 30 U.S.C. § 26.

[9] Butte & Bos. Mining Co. v. Societe Anonyme des Mines de Lexington, 58 P. 111, 113 (Mont. 1899).

[10] O'Connell v. Pinnacle Gold Mines Co., 140 F. 854, 855 (9th Cir. 1905); Forbes v. Gracey, 9 F. Cas. 401 (C.C.D. Nev.), *aff'd*, 94 U.S. 762, 24 L. Ed. 313 (1877).

[11] Extralateral rights are discussed in Chapter 37, *infra*.

[12] *See* § 36.03[1], *infra*.

[13] *See* § 36.03[2], *infra*.

[14] See Chapters 44 and 45, *infra*, discussing annual maintenance fees and assessment work.

deposit,[15] and compliance with required acts of location.[16]

[2] Inchoate Right to Patent Limited by Patent Moratorium

A valid, unpatented mining claim carries with it an inchoate right to the issuance of a patent by the United States,[17] conditioned upon the performance of statutory requirements.[18] Historically, if the statutory requirements were met, the right to have the patent issue was absolute, not discretionary with the United States.[19] The fact that many years elapsed after the original location of a mining claim does not affect its validity;[20] there is no obligation to ever apply for patent.[21] An unpatented mining claim may be held for an indefinite time under the exclusive right of possession and enjoyment granted by statute,[22] so long as there is a valid discovery and the claim is maintained in accordance with federal statutory requirements.[23]

In 1994, Congress through an appropriations measure[24] imposed a moratorium on processing, and hence issuance, of any mining or mill site patents after September 30, 1994, except for applications that had been forwarded to the Secretary of the Interior prior to that date.[25] The moratorium has been extended through the 2020 fiscal year.[26]

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[15] *See* Chapter 35, *supra*.

[16] *See* §§ 33.03[1], [7], 33.04[1], [8], 33.05[1], 33.09[1], 33.10[1], *supra*.

[17] An inchoate interest in real estate is one "that has not yet vested." *Black's Law Dictionary* (11th ed. 2019); *see* Erhardt v. Boaro, 113 U.S. 527, 534–35 (1885).

[18] United States v. Etcheverry, 230 F.2d 193, 195 (10th Cir. 1956); Bowen v. Chemi-Cote Perlite Corp., 432 P.2d 435, 438 (Ariz. 1967).

[19] Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 318–19 (1930); Noyes v. Mantle, 127 U.S. 348 (1888); United States *ex rel.* Krushnic v. West, 30 F.2d 742, 746–47 (D.C. Cir. 1929), *modified*, 280 U.S. 306 (1930); United States v. Kosanke Sand Corp. (On Reconsideration), 12 IBLA 282, GFS(MIN) 79 (1973); Suessenbach v. First Nat'l Bank, 41 N.W. 662 (Dakota Terr. 1889).

[20] Clipper Mining Co. v. Eli Mining & Land Co., 194 U.S. 220, 224 (1904).

[21] Union Oil Co. v. Smith, 249 U.S. 337, 349 (1919); United States v. Carlile, 67 Interior Dec. 417, 421 (1960); Nash v. McNamara, 93 P. 405, 410 (Nev. 1908) ("So long as $100 is expended each year upon the claim . . . , the owner's right to exclusive possession and to extract and exhaust the ore is as complete as if he held a patent, for which he may never apply unless he desires.").

[22] 30 U.S.C. § 26.

[23] *See Clipper Mining*, 194 U.S. at 227; Gwillim v. Donnellan, 115 U.S. 45, 49 (1885).

[24] Department of the Interior and Related Agencies Appropriations Act, 1995, Pub. L. No. 103-332, 108 Stat. 2499.

[25] Patent applications are first processed by the Bureau of Land Management (BLM), yielding what is termed a "first half-mineral entry final certificate," which establishes equitable title in the patent applicant, leaving only the mineral examination to be conducted. Until 1993, BLM state directors and district managers had authority to issue first-half and second-half certificates and patents. *See* Solicitor's Opinion M-36990 (Nov. 12, 1997), GFS(MIN) SO-2 (1997). On March 3, 1993, BLM authority to conduct the mineral examination was revoked by Secretarial Order No. 3163, and that authority was reserved by the Secretary of the Interior.

[26] *See* Department of the Interior, Environment, and Related Agencies Appropriations Act, 2020, Pub. L. No. 116-94, div. D, tit. IV, § 404, 133 Stat. 2534. It is uncertain how long this moratorium will be continued.

The patent moratorium limits the inchoate right to obtain a patent in the present. However, absent a change to the 1872 law, the right continues to exist, even if currently suspended. When and if the patent moratorium is lifted, the owner of an unpatented mining claim may lose the inchoate right to a patent by failing to file an adverse claim in patent proceedings before the Department of the Interior, even though such proceedings are initiated by a junior locator.[27] Issuance of a patent removes the possibility of defeasance of title through forfeiture of the claim to the United States,[28] which retains the legal title until patent issues.[29] Issuance of a patent transfers legal title to the patentee and eliminates the prerogatives retained by the United States as holder of the paramount title.[30]

Technically, the issuance of a patent does not confer greater rights against third parties than are acquired by the location of a valid, perfected mining location.[31] As a practical matter, however, the issuance of a patent terminates the ever-present threats of overstaking by other locators and contests by the United States or private parties.[32] Thus, it cannot be said, as it was in the past, that the possessory right afforded by an unpatented location provides as much security of ownership as does the legal title obtained by a patent.[33] As has been noted by the U.S. Supreme Court, "A locator who does not carry his claim to patent does not lose his mineral claim, though he does take the risk that his claim will no longer support the issuance of a patent."[34]

§ 36.02 Intraliminal and Extralateral Rights

[1] Intraliminal and Extralateral Rights in General

The vested property rights that inure to the owner of a valid unpatented mining claim are twofold; one set of rights is intraliminal and the other is extralateral.[1] Intraliminal rights include all rights exercisable within the vertical boundaries of a claim, and extralateral rights, which depend upon the existence of an apex within the

(Text continued on page 36-5)

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[27] Bowen v. Chemi-Cote Perlite Corp., 432 P.2d 435 (Ariz. 1967); *see also* Pac. Oil Co. v. Udall, 273 F. Supp. 203 (D. Colo. 1967).

[28] Benson Mining & Smelting Co. v. Alta Mining & Smelting Co., 145 U.S. 428, 430 (1892).

[29] United States v. Rizzinelli, 182 F. 675, 681 (D. Idaho 1910).

[30] *See* § 36.04, *infra*.

[31] *See* Mt. Rosa Mining, Milling & Land Co. v. Palmer, 56 P. 176, 178 (Colo. 1899).

[32] *See* Chapter 50, *infra* (on contests); *see, e.g.*, Andersen v. Echols, No. 2:11-cv-01995, 2013 U.S. Dist. LEXIS 104513 (E.D. Cal. July 25, 2013) (suggesting less than noble acts of would-be claim jumper that "appeared driven by 'evil motive and intent' ").

[33] Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 317 (1930); Chambers v. Harrington, 111 U.S. 350, 353 (1884).

[34] Best v. Humboldt Placer Mining Co., 371 U.S. 334, 336 (1963).

[1] *See* Jefferson Mining Co. v. Anchoria-Leland Mining & Milling Co., 75 P. 1070, 1073–75 (Colo. 1904).

deposit was known to exist at the time of the application for patent.[29] Since it is clear that property rights in an unpatented mining claim are not increased by the issuance of a patent,[30] it has been stated in dictum that the owner of an unpatented placer claim is entitled to "any vein that he may encounter within the downward extension of his boundary lines, provided it has not already been appropriated."[31] This result is not based on a presumption of ownership grounded on common law, although that would be logical, but is an interpretation of the statute based on an inference that a locator has the same rights of possession and enjoyment before patent as are granted with a patent.[32]

§ 36.03 Ownership Interests in a Valid Unpatented Mining Claim

[1] Rights of Possession and Enjoyment of Minerals and Surface

The Mining Law of 1872 extends to the locator of a valid unpatented lode mining location, and to his heirs and assigns, the "exclusive right of possession and enjoyment" of all surface areas, as well as all "veins, lodes, and ledges throughout their entire depth" that have apexes within the mining claim.[1] While the statute refers only to lode mining claims, the same exclusive right of possession and enjoyment of surface areas has been judicially extended to placer mining claims.[2] Thus, the statute is, in effect, a grant by the United States of a right of present and exclusive possession[3] of the surface,[4] as well as minerals under the surface,[5] of both lode and placer mining locations, subject to certain qualifications. The statute grants a possessory right, a term that is more correct than possessory title,[6] because the United States retains the

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[29] 30 U.S.C. § 37. See § 32.05, *supra*, discussing lodes in placers.

[30] *See* Mt. Rosa Mining, Milling & Land Co. v. Palmer, 56 P. 176 (Colo. 1899).

[31] Woolsey v. Lassen, 371 P.2d 587, 591 (Ariz. 1962) (quoting 36 *Am. Jur.* "Mines and Minerals" § 113). *See* Mason v. Washington-Butte Mining Co., 214 F. 32 (9th Cir. 1914).

[32] Manuel v. Wulff, 152 U.S. 505 (1894) ("the right of purchase [patent] and the right of possession are indivisible").

[1] 30 U.S.C. § 26. See also 30 U.S.C. §§ 35, 37 as to the statutory grant applicable to placer claims.

[2] *See* Clipper Mining Co. v. Eli Mining & Land Co., 194 U.S. 220, 227, 229, 24 S. Ct. 632, 48 L. Ed. 944 (1904); State *ex rel.* Andrus v. Click, 554 P.2d 969, 973 (Idaho 1976) (the exclusive rights of possessory title and the exclusive rights of possession and enjoyment of the surface of mining claims granted to lode locators under 30 U.S.C. § 26 are equally applicable to placer locators under 30 U.S.C. § 35).

[3] Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 316, 50 S. Ct. 103, 74 L. Ed. 445 (1930); Del Monte Mining & Milling Co. v. Last Chance Mining & Milling Co., 171 U.S. 55, 83, 18 S. Ct. 895, 43 L. Ed. 72 (1898) (every other person may be excluded); Belk v. Meagher, 104 U.S. 279, 283, 26 L. Ed. 735 (1881).

[4] *E.g.*, Butte City Water Co. v. Baker, 196 U.S. 119, 122, 25 S. Ct. 211, 49 L. Ed. 409 (1905); *Clipper*, 194 U.S. at 226; King v. Amy & Silversmith Mining Co., 152 U.S. 222, 227, 14 S. Ct. 510, 38 L. Ed. 419 (1894); Noyes v. Mantle, 127 U.S. 348, 351, 8 S. Ct. 1132, 32 L. Ed. 168 (1888); *Belk*, 104 U.S. 279.

[5] St. Louis Mining & Milling Co. v. Mont. Mining Co., 194 U.S. 235, 236–37, 24 S. Ct. 654, 48 L. Ed. 953 (1904).

[6] Geomet Exploration, Ltd. v. Lucky Mc Uranium Corp., 601 P.2d 1339, 1341 (Ariz. 1979).

equitable title until application has been made for patent and the purchase price paid and retains the legal title until patent is issued.[7] The nature of the possessory estate to an unpatented location that includes the discovery of a valuable mineral deposit is such that actual physical or continuous possession of the location is not necessary.[8]

The rights of possession and use of the surface of an unpatented mining claim or the surface resources on it have always been qualified by courts to require a reasonable relationship to mining purposes.[9] Subject to this requirement, the possessory right to a valid mining claim was exclusive in its owner prior to 1953. In order to make it legally possible for both mining locators and mineral lessees of the United States to explore and develop the same land for locatable and leasable minerals at the same time,[10] Congress enacted the Act of August 12, 1953,[11] allowing for the first time the location of mining claims on public lands previously subject only to mineral operations for leasing act minerals. Subsequently, in 1954, the Multiple Mineral Development Act[12] made public domain lands on which mining claims are located available for mineral leasing, requiring the mining locator and the mineral lessee to share use of the land.[13]

In order to eliminate abuses of the mining laws, Congress substantially reduced the former rights of locators to exclusive possession and use by the Act of July 23, 1955 (Multiple Surface Use Act).[14] This act limits the use of mining claims, prior to patent, to operations and uses reasonably incident to mining, reserves to the United States the right to manage and dispose of the vegetative and other surface resources, and authorizes use of the surface by the United States, its permittees, and licensees.[15]

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[7] United States v. Rizzinelli, 182 F. 675, 681 (D. Idaho 1910). See § 36.03[2], *infra*, on equitable ownership of valid, unpatented mining location and Chapter 54, *infra*, on legal title acquired by patent.

[8] Union Oil Co. v. Smith, 249 U.S. 337, 349, 39 S. Ct. 308, 63 L. Ed. 635 (1919); Bradford v. Morrison, 212 U.S. 389, 394, 29 S. Ct. 349, 53 L. Ed. 564 (1909); *Belk*, 104 U.S. 279.

[9] *See, e.g.*, United States v. Nogueira, 403 F.2d 816 (9th Cir. 1968) (use of claim for residence denied); United States v. Etcheverry, 230 F.2d 193 (10th Cir. 1956) (use of surface for grazing denied); Teller v. United States, 113 F. 273, 274–81 (8th Cir. 1901) (timber harvesting barred); Bradley-Turner Mines, Inc. v. Branagh, 187 F. Supp. 665, 666 (N.D. Cal. 1960) (use of land and timber limited to mining purposes); *Rizzinelli*, 182 F. 675 (construction of saloon on claim denied). *See also* §§ 110.01 & 110.02, *infra*.

[10] *See* Loren L. Mall, *Public Land and Mining Law* 356–59 (3d ed. 1982).

[11] 67 Stat. 539 (codified at 30 U.S.C. §§ 501–505).

[12] 30 U.S.C. §§ 521–531.

[13] *See* 30 U.S.C. § 526. The United States, as the owner of the nonlocatable minerals, reserves the right to grant mining leases for and authorize exploration and development of leasable minerals under unpatented claims as well as under patented claims and mill sites from which leasable minerals have been reserved by the United States. 30 U.S.C. § 524. Similar reservations are made by the 1953 act. *See* 30 U.S.C. § 502. *See also* § 110.02[2][b], *infra*.

[14] 69 Stat. 367, 368–373 (codified at 30 U.S.C. §§ 611–615); *see also* 43 C.F.R. subpt. 3715 (restricting occupancy to that which is reasonably incident to mining, and requiring Bureau of Land Management's prior concurrence to proposed occupancy).

[15] 30 U.S.C. § 612. However, a mining locator may use timber and remove vegetative resources from the claim as required for his mineral operations. 30 U.S.C. § 612(c). The uses allowed to licensees and

Regulations adopted under authority of the Forest Service Organic Administration Act of 1897[16] and the Federal Land Policy and Management Act of 1976 (FLPMA)[17] require mineral operators to file plans of operations with the Forest Service and the Bureau of Land Management (BLM), respectively, in order to minimize adverse environmental impacts.

Locators must comply with BLM surface management regulations designed to implement FLPMA's mandate that the Department of the Interior (DOI) "take any action necessary to prevent unnecessary or undue degradation" of the public lands.[18] BLM's surface management regulations underwent significant amendments in the final days of the second Bill Clinton Administration, including alteration of a long-standing interpretation of the "unnecessary or undue degradation" standard. Prior to amendment, DOI interpreted the standard to turn primarily on whether a plan of operation would result in "disturbance greater than what would normally result when an activity is being accomplished by a prudent operator."[19] The Clinton amendments revised the interpretation to turn on whether a plan of operation would result in "substantial irreparable harm" to a "significant" scientific, cultural, or environmental resource value of the public lands that could not be "effectively mitigated."[20] As a practical result, BLM could subsequently deny a plan of operation if it considered the location unsuitable for mining, even if the project involved no unnecessary or undue degradation of the surrounding landscape. The George W. Bush Administration overturned the Clinton regulations and adopted a hybrid standard that includes performance standards and a requirement that activities are "reasonably incident" to exploration, mining, or processing operations.[21]

Solicitor John D. Leshy issued a significant opinion at the close of the second Clinton Administration regarding ancillary uses of unpatented mining claims, and mill sites in particular, concluding that the 1872 Mining Law limited to five acres the amount of land that could be claimed for a mill site associated with a particular mining

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permittees of the United States include broad recreational uses under an implied license of the public to use lands in the public domain. United States v. Curtis-Nevada Mines, Inc., 611 F.2d 1277 (9th Cir. 1980). The Multiple Surface Use Act provides that uses allowed others are "not to endanger or materially interfere with prospecting, mining, or processing operations" of the locator. 30 U.S.C. § 612(b). *See also* § 110.02[2][b], *infra*. The same limitation applies to activities on the surface of a mining claim carried out by a federal agency. Robert E. Shoemaker, 110 IBLA 39, GFS(MIN) 82 (1989).

[16] 16 U.S.C. §§ 473–478, 479–482, 551; *see* 36 C.F.R. pt. 228.

[17] 43 U.S.C. §§ 1701–1782; *see* 43 C.F.R. pt. 3800.

[18] 43 C.F.R. subpt. 3809 (requiring, among other things, posting of reclamation bonds and removal of equipment from inactive claims). *See also* Robert D. Comer & Lance C. Wenger, "The Role of the 'Unnecessary or Undue Degradation' Standard in Protecting Public Lands Under FLPMA," 54 *Rocky Mt. Min. L. Inst.* 10-1 (2008).

[19] 45 Fed. Reg. 78,902, 78,910 (Nov. 26, 1980).

[20] 65 Fed Reg. 69,998, 70,116 (Nov. 21, 2000).

[21] 66 Fed. Reg. 54,834, 54,860 (Oct. 30, 2001) (codified at 43 C.F.R. § 3809.5).

claim.[22] The Leshy opinion directed BLM to deny plans of operation that involved the use of more than five acres per claim for mill site purposes, unless the additional land was procured through other means. The implications were crippling for modern mining operations that require large mill operations to process lower grade ores. Although not binding on a court, the opinion was highly controversial due to potential deference that a court might afford and its binding effect on the Interior Board of Land Appeals.

On October 7, 2003, Deputy Solicitor Roderick E. Walston issued a Solicitor's Opinion[23] that explicitly overturned the Leshy opinion. The Walston opinion concluded that

> the mill site provision [of the 1872 Mining Law] does not categorically limit the number of mill sites that may be located and patented to one for each mining claim and that the Department's traditional practice of not applying such a numerical limitation is in conformity with the requirements of the Mining Law.[24]

The Walston opinion cited administrative practice and interpretation that the five-acre provision in the Mining Law of 1872 regarding mill sites does not impose a numeric limitation. Secretary of the Interior Gale Norton concurred with the Walston opinion, restoring the ability to use unpatented mining claims for mill sites capable of supporting modern mining.

So long as a mining locator complies with federal and state laws and regulations in good faith, his mining claim, if valid, is segregated from the public domain[25] and is protected from intrusion.[26] His possessory right prohibits adverse location of the claim[27] as well as mineral exploration by others within the boundaries of the claim, except as permitted by multiple mineral development legislation.[28] Likewise, the

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[22] Solicitor's Opinion M-36988, "Limitations on Patenting Millsites under the Mining Law of 1872" (Nov. 7, 1997), GFS(MIN) SO-1 (1997).

[23] Solicitor's Opinion M-37010, "Mill Site Location and Patenting under the 1872 Mining Law" (Oct. 7, 2003), GFS(MIN) SO-1 (2003).

[24] M-37010, at 23.

[25] St. Louis Mining & Milling Co. v. Mont. Mining Co., 171 U.S. 650, 655, 43 L. Ed. 320, 19 S. Ct. 61 (1898); Bagg v. New Jersey Loan Co., 354 P.2d 40, 46 (Ariz. 1960). See also § 31.08, *supra*, discussing the good faith required of locators.

[26] Miller v. Chrisman, 73 P. 1083, 1086 (Cal. 1903), *aff'd*, 197 U.S. 313, 25 S. Ct. 468, 49 L. Ed. 770 (1905). *See also* Jualpa Co. v. Thorndyke, 4 Alaska 207, 210 (1910); Garthe v. Hart, 15 P. 93, 94 (Cal. 1887); Bramlett v. Flick, 57 P. 869, 872–73, 875 (Mont. 1899).

[27] Cole v. Ralph, 252 U.S. 286, 295, 40 S. Ct. 321, 64 L. Ed. 567 (1920) ("A location based upon discovery gives an exclusive right of possession and enjoyment, is property in the fullest sense, is subject to sale and other forms of disposal, and so long as it is kept alive by performance of the required annual assessment work prevents any adverse location of the land."); Swanson v. Sears, 224 U.S. 180, 181, 32 S. Ct. 455, 56 L. Ed. 721 (1912); Gwillim v. Donnellan, 115 U.S. 45, 49, 5 S. Ct. 1110, 29 L. Ed. 348 (1885); Belk v. Meagher, 104 U.S. 279, 284, 26 L. Ed. 735 (1881).

[28] *See* Clipper Mining Co. v. Eli Mining & Land Co., 194 U.S. 220, 230, 24 S. Ct. 632, 48 L. Ed. 944 (1904) (prospecting upon a prior valid placer location for unknown lodes vests no title to lodes discovered and located within the placer, "unless the placer owner has abandoned his claim, waives the trespass, or,

mining claim is also closed to entry under the homestead laws.[29] Possession of a valid unpatented claim may be maintained as against all other persons,[30] including the United States,[31] subject, prior to the issuance of patent, to use by the United States and persons authorized by it for certain purposes that do not materially interfere with the locator's mineral operations.[32] Thus, a mining locator can maintain an action for quiet title or trespass[33] and can seek all the usual remedies available to a landowner for protection of his rights.[34]

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by his conduct, is estopped to complain of it" (quoting Clipper Mining Co. v. Eli Mining & Land Co., 68 P. 286, 289 (Colo. 1902))); United States v. 237,500 Acres of Land, 278 F.2d 584 (9th Cir. 1960).

[29] Ainsworth Copper Co. v. Bex, 53 Interior Dec. 382 (1931); Layman v. Ellis, 52 Pub. Lands Dec. 714, 722 (1929). Homesteading in the continental United States was ended by executive orders issued in 1934 and 1935 under authority of the Taylor Grazing Act, 43 U.S.C. §§ 315–315o-1. These orders withdrew the remaining public domain in the western United States from further homestead entries unless classified by the Secretary of the Interior for the purpose of homesteading. Very little land was so classified. Loren L. Mall, *Public Land and Mining Law* 83–84 (3d ed. 1982). The homestead laws were repealed on October 21, 1976, by section 702 of FLPMA, except for Alaska, where the repeal was delayed until October 21, 1986.

[30] Mt. Rosa Mining, Milling & Land Co. v. Palmer, 56 P. 176, 177–78 (Colo.1899). *See also* Duguid v. Best, 291 F.2d 235, 239 (9th Cir. 1961); United W. Minerals Co. v. Hannsen, 363 P.2d 677, 680–81 (Colo. 1961).

[31] Gwillim v. Donnellan, 115 U.S. 45, 49, 50, 5 S. Ct. 1110, 29 L. Ed. 348 (1885); Coleman v. United States, 363 F.2d 190, 196 (9th Cir. 1966), *rev'd on other grounds*, 390 U.S. 599, 88 S. Ct. 1327, 20 L. Ed. 2d 170 (1968); United States v. Carlile, 67 Interior Dec. 417, 421 (1960); Coos Bay Timber Co. v. Bigelow, 365 P.2d 619, 620 (Or. 1961). *See also* Best v. Humboldt Placer Mining Co., 371 U.S. 334, 83 S. Ct. 379, 9 L. Ed. 2d 350 (1963).

[32] Unpatented claims, patented claims, and mill sites from which leasable minerals have been reserved by the United States are subject to exploration and development of leasable minerals by lessees and permittees of the United States under the Act of August 12, 1953 and the 1954 Multiple Mineral Development Act. Public lands, including mining claims, which are subject to the Federal Power Act, 16 U.S.C. §§ 791a–825r, and the Mining Claims Rights Restoration Act of 1955 (Engle Act), 30 U.S.C. §§ 621–625, are subject to the right of the United States to develop and use power sites for the development of electrical power. Mining claims located on lands subject to the Stock-Raising Homestead Act of 1916, 43 U.S.C. §§ 299, 301, are subject to the surface owner's right to use his estate, and the mining claimant may use the surface only insofar as reasonably required for mining purposes. Locators of mining claims on public lands regulated according to other special laws are subject to various restrictions on the exploration and development of claims. *See* Chapter 17, *supra*.

[33] Gillis v. Downey, 85 F. 483 (8th Cir. 1898); Black v. Elkhorn Mining Co., 49 F. 549, 552 (C.C.D. Mont. 1892).

[34] Lindsey v. Moyle, 358 F.2d 727 (9th Cir. 1966); *Duguid*, 291 F.2d 235 (trespass action seeking damages against irrigation district respecting right-of-way); Walkeng Mining Co. v. Covey, 352 P.2d 768 (Ariz. 1960) (forcible entry and detainer action is possessory in character and may be maintained by unpatented mining claimant); Consol. Tungsten Mines, Inc. v. Frazier, 348 P.2d 734 (Ariz. 1960) (quiet title action); Bowen v. Sil-Flo Corp., 9 Ariz. App. 268, 451 P.2d 626 (1969) (declaratory judgment and quiet title action); Velasco v. Mallory, 427 P.2d 540 (Ariz. Ct. App. 1967) (quiet title action as to unpatented mining claims may be maintained by tenant in common without joining cotenant); Lightner Mining Co. v. Lane, 120 P. 771 (Cal. 1911) (action to recover damages for removal of ore); Smpardos v. Piombo Constr. Co., 244 P.2d 435, 438 (Cal. Ct. App. 1952) ("trespasser is liable for the reasonable value of the use of said property, together with any other damage that said trespasser may have caused

[2] Equitable Ownership

A citizen locating a mining claim on the public domain may at various times hold one of three possible estates: (1) by locating the claim in compliance with the statutes and regulations he acquires a possessory right, with title remaining in the United States; (2) after complying with the requirements for patent[35] and paying the required purchase price, he acquires the "equitable title"; and (3) he may obtain a patent, thus divesting the United States of all interest, both legal and equitable.[36] Because the statute grants the "exclusive right of possession and enjoyment,"[37] the locator of a valid unpatented mining claim has a "possessory right" rather than "equitable ownership." The equitable title to an unpatented mining location does not pass until the owner of a valid claim has completed the required improvements, filed an application for patent, and paid the purchase price.[38]

Prior to the initiation of patent procedures, a locator with a valid location acquires a vested property right[39] in real property,[40] with full attributes and benefits of ownership exercisable against third parties,[41] but with the fee remaining in the United

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to the locator"); Calhoun Gold Mining Co. v. Ajax Gold Mining Co., 59 P. 607 (Colo. 1899), *aff'd*, 182 U.S. 499, 21 S. Ct. 885, 45 L. Ed. 1200 (1901) (enjoining trespass); Lewiston Lime Co. v. Barney, 394 P.2d 323 (Idaho 1964) (quiet title action); White v. Ames Mining Co., 349 P.2d 550 (Idaho 1960) (in an action to quiet title plaintiff must succeed on the strength of his own title and not on the weakness of that of his adversary); W. Standard Uranium Co. v. Thurston, 355 P.2d 377 (Wyo. 1960) (quiet title action).

[35] Patent proceedings are discussed in Chapter 51, *infra*.

[36] United States v. Rizzinelli, 182 F. 675, 681 (D. Idaho 1910) (noting that a bare possessory right is a distinct and vested property right).

[37] 30 U.S.C. § 26 (lode claims). See § 36.03[1], *supra*, as to placer claims.

[38] Benson Mining & Smelt. Co. v. Alta Mining & Smelt. Co., 145 U.S. 428, 431–32, 12 S. Ct. 877, 36 L. Ed. 762 (1892). *See also* Wyoming v. United States, 255 U.S. 489, 497–98, 41 S. Ct. 393, 65 L. Ed. 742 (1921) (state's waiver of right to equitable title analogous to cash consideration).

[39] Creede & Cripple Creek Mining & Milling Co. v. Uinta Tunnel Mining & Transp. Co., 196 U.S. 337, 342, 25 S. Ct. 266, 49 L. Ed. 501 (1905); Davis v. Nelson, 329 F.2d 840, 845 (9th Cir. 1964) (upon compliance with the legal requirements of location and discovery of a valuable mineral deposit, "the locator has acquired a vested property right . . . . Such vested right may be prosecuted to patent."); O'Connell v. Pinnacle Gold Mines Co., 131 F. 106, 110, 111 (C.C.D. Wash. 1904), *aff'd*, 140 F. 854 (9th Cir. 1905); Oil Shale Corp. v. Udall, 261 F. Supp. 954, 965 (D. Colo. 1966) (valid mining location "creates a vested property right"); Walkeng Mining Co. v. Covey, 352 P.2d 768, 771 (Ariz. 1960) (locator obtains "vested property right").

[40] Wilbur v. United States *ex rel.* Krushnic, 280 U.S. 306, 316, 50 S. Ct. 103, 74 L. Ed. 445 (1930); Bradford v. Morrison, 212 U.S. 389, 394, 29 S. Ct. 349, 53 L. Ed. 564 (1909). *Accord* Kasey v. Molybdenum Corp. of Am., 336 F.2d 560, 563–64 (9th Cir. 1964) (unpatented mining claims, mill sites, and appurtenances and improvements thereto are real property within the meaning of California civil procedure statute defining such as "coextensive with lands, tenements, and hereditaments"); Humboldt Placer Mining Co. v. Best, 293 F.2d 553, 555 (9th Cir. 1961) (valid mining claim is an interest in real property that cannot be taken under eminent domain power except upon payment of just compensation), *rev'd on other grounds*, 371 U.S. 334 (1963); Bagg v. N.J. Loan Co., 354 P.2d 40, 44 (Ariz. 1960) (A mining locator's interest "is regarded as real property and accorded that protection").

[41] United States v. Etcheverry, 230 F.2d 193, 195 (10th Cir. 1956):

> The law is well settled by innumerable decisions that when a mining claim has been perfected

States.[42] Once moved to patent, however, based upon a valid application and payment of the purchase price, equitable title rests with the purchaser,[43] and only naked legal title remains in the government.[44] Nevertheless, until legal title passes to the applicant, the Secretary may order further inquiry into the validity of claimed rights to public land.[45] Legal title is held "in trust" for conveyance to the beneficial owner, the mining locator,[46] upon compliance with the statutory requirements for patent issuance, and is without the usual incidents of proprietorship.[47] Hence, a locator may extract, process, and market the minerals in the deposit for which the location is made without infringing any right or title of the United States.[48] When compliance with the statutory requirements has occurred during patent proceedings and the full equitable title has vested in the purchaser, the duty to pay maintenance fees or perform annual assessment work ceases, based on the issuance of a final certificate that generally precludes the initiation of adverse claims.[49]

> under the law, it is in effect a grant from the United States of the exclusive right of possession to the same. It constitutes property to its fullest extent, and is real property subject to be sold, transferred, mortgaged, taxed, and inherited without infringing any right or title of the United States.

The case cites all of the principal U.S. Supreme Court decisions that have established this proposition. *See, e.g.*, Ickes v. Va.-Colo. Dev. Corp., 295 U.S. 639, 79 L. Ed. 1627, 55 S. Ct. 888 (1935); *Krushnic*, 280 U.S. 306; Clipper Mining Co. v. Eli Mining & Land Co., 194 U.S. 220, 24 S. Ct. 632, 48 L. Ed. 944 (1904); St. Louis Mining & Milling Co. v. Mont. Mining Co., 171 U.S. 650, 19 S. Ct. 61, 43 L. Ed. 320 (1898); Belk v. Meagher, 104 U.S. 279 (1881).

[42] Union Oil Co. v. Smith, 249 U.S. 337, 348–49, 39 S. Ct. 308, 63 L. Ed. 635 (1919):

> But . . . a discovery of mineral by a qualified locator upon unappropriated public land initiates rights much more substantial as against the United States and all the world. If he locates, marks, and records his claim in accordance with section 2324 [30 U.S.C. § 28] and the pertinent local laws and regulations, he has, by the terms of section 2322 [30 U.S.C. § 26], an exclusive right of possession to the extent of his claim as located, with the right to extract the minerals, even to exhaustion, without paying any royalty to the United States as owner, and without ever applying for a patent or seeking to obtain title to the fee; subject, however, to the performance of the annual labor specified in section 2324, for upon his failure to do this the claim is open to relocation by others at any time before resumption of work upon it by the original locator.

Accord Andrus v. Charlestone Stone Prods. Co., 436 U.S. 604, 98 S. Ct. 2002, 56 L. Ed. 2d 570 (1978) (dictum); Oil Shale Corp. v. Morton, 370 F. Supp. 108, 124 (D. Colo. 1973); Walkeng Mining Co. v. Covey, 352 P.2d 768, 771 (Ariz. 1960).

[43] McKnight v. El Paso Brick Co., 120 P. 694, 698 (N.M. 1911); Sweet v. Rivers, 318 P.2d 260, 264 (N.M. 1957).

[44] *Smith*, 249 U.S. at 349; Union Oil Co. v. Udall, 289 F.2d 790, 791–92 (D.C. Cir. 1961); Foster v. Seaton, 271 F.2d 836 (D.C. Cir. 1959); United States v. Mulligan, 177 F. Supp. 384 (D. Or. 1959); *Walkeng*, 352 P.2d 768; Watterson v. Cruse, 176 P. 870, 872 (Cal. 1918).

[45] *Udall*, 289 F.2d at 792.

[46] Noyes v. Mantle, 127 U.S. 348, 8 S. Ct. 1132, 32 L. Ed. 168 (1888); Bowen v. Chemi-Cote Perlite Corp., 432 P.2d 435, 443 (Ariz. 1967); Bagg v. N.J. Loan Co., 354 P.2d 40, 44 (Ariz. 1960).

[47] Forbes v. Gracey, 9 F. Cas. 401 (C.C.D. Nev.), *aff'd*, 94 U.S. 762, 24 L. Ed. 313 (1877).

[48] *Smith*, 249 U.S. at 349; *Forbes*, 9 F. Cas. 401; United States v. Kosanke Sand Corp., 12 IBLA 282, GFS(MIN) 79 (1973).

[49] Wyoming v. United States, 255 U.S. 489, 41 S. Ct. 393, 65 L. Ed. 742 (1921); Benson Mining &

Even after the United States has allowed a mineral locator to acquire the equitable title, it retains significant prerogatives to protect its legal title. These include the rights, under the Act of July 23, 1955 (Multiple Surface Use Act),[50] to manage and dispose of the surface resources not reasonably required for mining and to have access to the claim for the agents of the United States, its permittees, and licensees. These statutory provisions codify earlier judicial decisions,[51] which held that the mining laws imply that the United States has the right to protect the land from waste,[52] the right to dispose of timber thereon,[53] and the right to require entry of mineral surveyors.[54] The prerogatives of the United States also include the right to prescribe the procedure that any claimant must follow in order to obtain rights in public lands, including administrative proceedings for determining the validity of mining claims.[55] By the multiple mineral development acts, the United States requires a mineral locator to develop its minerals by methods that, so far as reasonably practical, avoid damage to deposits of leasable minerals and facilities for mineral operations related to such deposits.[56] Also, before a patent is issued, the government may at any time conduct a validity examination of the mining claimant's discovery of minerals, maintenance fee payment, or performance of assessment work and filing,[57] and other statutory requirements.[58] Nevertheless, because the estate granted to a mining locator is vested when his possessory right has been perfected by location and discovery, even the United States as legal title holder cannot deprive a locator of his rights without making just compensation.[59] Hence, the government does not destroy the perfected rights of a locator when it withdraws lands from mineral location and entry or places them into a

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Smelting Co. v. Alta Mining & Smelting Co., 145 U.S. 428 (1892).

[50] 30 U.S.C. §§ 611–615; *see* § 4.19, *supra*.

[51] *See* United States v. Richardson, 599 F.2d 290 (9th Cir. 1979).

[52] Teller v. United States, 113 F. 273 (8th Cir. 1901); *accord* United States v. Etcheverry, 230 F.2d 193 (10th Cir. 1956).

[53] Bradley-Turner Mines, Inc. v. Branagh, 187 F. Supp. 665 (N.D. Cal. 1960); *see also* § 4.19, *supra*.

[54] United States v. Fickett, 205 F. 134 (9th Cir. 1913) (unpatented mining claim is still public domain within the protection of an act of Congress forbidding interference with mineral surveyors).

[55] Best v. Humboldt Placer Mining Co., 371 U.S. 334, 340 (1963) (administrative determination of validity of mining claims upheld notwithstanding pending judicial action).

[56] *See* 30 U.S.C. §§ 526, 612. See also § 4.18, *supra*, on the multiple mineral development statutes.

[57] Adams v. United States, 318 F.2d 861, 872 (9th Cir. 1963). See also Chapters 44 and 45, *infra*, for an exhaustive discussion of maintenance fees and assessment work.

[58] Union Oil Co. v. Udall, 289 F.2d 790 (D.C. Cir. 1961) (patent applicant required to bring a private contest against a lessee under the Mineral Leasing Act of 1920, 30 U.S.C. §§ 181–263, to establish the validity of the claims as against the lease); United States v. Mulligan, 177 F. Supp. 384 (D. Or. 1959) (action in equity to determine validity of claims, enjoin removal of timber, and recover treble damages for timber sold). See Chapter 51, *infra*, on patent proceedings.

[59] United States v. N. Am. Transp. & Trading Co., 253 U.S. 330 (1920) (due compensation required to owner of placer claim appropriated by United States for part of military post); Humboldt Placer Mining Co. v. Best, 293 F.2d 553 (9th Cir. 1961) (valid mining claim on public land, though unpatented, is an interest in real property that cannot be taken under power of eminent domain except upon payment of just compensation), *rev'd on other grounds*, 371 U.S. 334 (1963).

government reservation.[60] Furthermore, the government cannot dispose of land by sale prior to a proper finding of invalidity of any mining claims on it.[61]

The Department of the Interior may also at any time before patent issues, and on its own initiative, inquire into the validity of mining locations,[62] the effect of which is to remove the cloud on the title of the United States that an invalid mining claim casts.[63] A locator's title is further qualified in that it is subject to defeasance upon failure to timely pay annual maintenance fees, or to perform and file for completion of annual assessment work, as required. Beginning in 1993, Congress substantially altered the requirements for maintaining an unpatented claim through an appropriations act[64] that replaced the annual assessment work requirement with a claim maintenance fee. Subsequent appropriations acts have continued the claim maintenance fee regime, which remains in effect.[65] Notably, "small miners" who hold 10 or fewer unpatented mining claims are exempt from the claim maintenance fee requirement and may perform traditional assessment work (and file associated documentation) in lieu of paying the maintenance fee.[66] The small miner exemption has been strictly construed and does not apply to multiple entities that own fewer than 10 claims and are related by common directors or officers.[67] Strict implications for noncompliance remain intact: failure to pay the fee or properly qualify for the small miner exception results in defeasance of the locator's unpatented claim.[68]

(Text continued on page 36-17)

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[60] Oil Shale Corp. v. Morton, 370 F. Supp. 108 (D. Colo. 1973); United States v. 9,947.71 Acres of Land, 220 F. Supp. 328 (D. Nev. 1963); Van Ness v. Rooney, 116 P. 392 (Cal. 1911); *see* Secretary's instructions of Jan. 13, 1904, 32 L.D. 387, 388 (withdrawal of arid lands); Reservation of Land for Public Purposes, 17 Op. Att'y Gen. 230 (1881).

[61] Mrs. Marion E. Beresford, A-30015 (1964), GFS(MIN) SO-1965-42.

[62] United States v. Zweifel, 508 F.2d 1150, 1154–56 (10th Cir. 1975).

[63] Cameron v. United States, 252 U.S. 450 (1920); *see* Chapter 50, *infra* (government contests); *see also* Davis v. Nelson, 329 F.2d 840 (9th Cir. 1964).

[64] Department of the Interior and Related Agencies Appropriations Act, 1993, Pub. L. No. 102-381, 106 Stat. 1374 (1992); *see also* 43 C.F.R. subpt. 3833. See Chapters 44 and 45, *infra*, for an exhaustive discussion of maintenance fees and assessment work.

[65] Department of the Interior, Environment, and Related Agencies Appropriations Act, 2019, Pub. L. No. 116-6, div. E, tit. I, 133 Stat. 13, 206.

[66] *See* 43 C.F.R. pt. 3835; *see also* § 30.05[9], *supra*.

[67] *See* Black Bear Mines Co., 152 IBLA 387, GFS(MIN) 29 (2000) (commonality of directors and officers rendered claims ineligible for small miner exemption); *see also* John Herzog, 191 IBLA 26, GFS(MIN) 24 (2017) (four parties determined to be related on totality of the circumstances where one party exercises control over other claims, especially where checkerboarding of claims makes separate management impracticable).

[68] *See, e.g.*, Jones v. United States, 121 F.3d. 1327 (9th Cir. 1997) (upholding forfeiture of unpatented mining claim for failure to pay annual maintenance fees against due process and equal protection challenges); Lee H. & Goldie E. Rice, 128 IBLA 137, GFS(MIN) 9 (1994) (holding that BLM could not consider mitigating factors, even in the case of "tragic incidents," where locators had failed to timely submit claim maintenance fees). *But see* Gary L. Carter (On Reconsideration), 132 IBLA 46, GFS(MIN)

(Text continued on page 36-17)

12 (1995) (holding that a bank error acknowledged by the bank justified reinstatement for prompt payment of claim rental fees).

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Published by Wolters Kluwer Law & Business in New York.

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Printed in the United States of America.

1 2 3 4 5 6 7 8 9 0

ISBN 978-1-4548-3388-8

Library of Congress Cataloging-in-Publication Data

Posner, Richard A.
Economic analysis of law / Richard A. Posner, Judge, U.S. Court of Appeals for the Seventh Circuit, Senior Lecturer, University of Chicago Law School. — Ninth Edition.
pages cm. — (Aspen casebook series)
Includes bibliographical references and index.
ISBN 978-1-4548-3388-8 (alk. paper)
1. Law and economics. I. Aspen Publishers. II. Title.

K487.E3P67 2014
349.73—dc23

2013046762

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CHAPTER 1

THE NATURE OF ECONOMIC REASONING

This book is written in the conviction that economics is a powerful tool for analyzing a vast range of legal questions but that most lawyers and law students—even very bright ones—have difficulty connecting economic principles to concrete legal problems. A student takes a course in price theory and learns what happens to the price of wheat when the price of corn falls and to the price of grazing land when the price of beef rises but does not understand what these things have to do with free speech or accidents or crime or the Rule Against Perpetuities or corporate indentures or gay marriage. This book anchors discussion of economic theory in concrete, numerous, and varied legal questions; the discussion of economic theory in the abstract is confined to this chapter.

§1.1 Fundamental Concepts

Many lawyers still think that economics is the forbiddingly mathematized study of inflation, unemployment, business cycles, monetary policy, foreign trade, and other macroeconomic phenomena remote from the day-to-day concerns of the legal system. Of course the domain of economics is broader, and not merely in studying the behavior of particular markets and business practices. Understood most broadly it is the science of rational choice in a world—our world—in which resources are limited in relation to human wants. The task of economics, so understood, is to explore the implications of assuming that human beings are rational maximizers of their ends in life, their satisfactions—equivalently, their "self-interest," which should not however be confused with selfishness. The happiness—or for that matter the misery—of other people may be a part of one's satisfactions, although to avoid confusion economists generally prefer to speak of "utility" than of self-interest.

Rational maximization should not be confused with conscious calculation either. Economics is not a theory about consciousness. Behavior is rational when it conforms to the model of rational choice, whatever the state of mind of the chooser. So animals are rational. Nor is rationality omniscience.

Information is costly, and often the costs are prohibitive, especially when the information one would like to have concerns the future. Rational choice theory accepts that people's ability to process information is limited—there are costs not only of obtaining information but also of absorbing and using it.

Central to this book is the further assumption that a person is a rational utility maximizer in *all* areas of life, not just in his "economic" affairs, that is, not just when engaged in buying and selling in explicit markets. This idea—which is vital to economic analysis of law because so much of law concerns nonmarket behavior (such as crime, marriage and divorce, accidents, and bequests)—goes back to Jeremy Bentham in the eighteenth and early nineteenth century, but received little attention from economists until the work of Gary Becker in the 1950s and 1960s.[1]

But an assumption must not be confused with a finding. The assumption that people are rational choosers in all areas of life is just the starting point of economic analysis. It holds only as an approximation. Even perfectly normal people are not always rational. It is not rational to be frightened by watching a horror movie, but most people are. And there are situations in which rational choice is precluded by uncertainty, defined as noncalculable risk.[2] There is a calculable risk of drawing a royal flush in a poker game, but the probability of a terrorist attack on the United States in the next six months cannot be calculated or even estimated. Uncertainty is a pervasive feature of human life and cannot be ignored by economics. Marriage is an example. In our society the probability that a given married couple will divorce cannot (in general) be calculated at the time of their marriage.

People take measures to cope with uncertainty; in the marriage case these include the making of prenuptial agreements. If the rate of divorce rises, then even though the probability of a particular divorce remains uncertain we can still expect such agreements to become more common. That is a reasonable response to uncertainty. A protracted courtship is another response; the hope is that the delay in marrying will enable both parties to obtain information that will dispel or at least reduce their uncertainty about the likely durability of a marriage between them.

The concept of uncertainty will figure in several places in the book (including the last section of this chapter), but let's set it to one side for now and return to the assumption (extremely useful, though not exact) that human beings are rational maximizers of their satisfactions. This implies that people respond to incentives—that if a person's surroundings change in such a way that he could increase his satisfaction by altering his behavior,

§1.1 1. See Gary S. Becker, The Economic Approach to Human Behavior, ch. 1 (1976); Richard A. Posner, Frontiers of Legal Theory 54–57 (2001).

2. The distinction was introduced in books published the same year by a distinguished American economist (the founder of the Chicago School of Economics) and the famous English economist John Maynard Keynes. See Frank H. Knight, Risk, Uncertainty, and Profit 19–20 and ch. 7 (1921); Keynes, A Treatise on Probability, ch. 3 (1921).

he will do so. From this proposition derive four fundamental principles of economics that organize the analysis of law in this book. They are the Law of Demand; opportunity cost; the tendency of resources to gravitate toward their most valuable uses; and equilibrium. These turn out to be straightforward, intuitive premises of economic analysis.

1. The Law of Demand posits an inverse relation between price charged and quantity demanded. If the price of steak rises by 50¢ a pound and other prices remain unchanged, a steak will now cost the consumer more, relatively, than it did before. The rational self-interested consumer will react by investigating (at least if this can be done at a low cost in time and effort) the possibility of substituting goods that he preferred less when steak was at its old price but that are more attractive now because they are cheaper relative to steak. Many consumers will continue to buy as much steak as before; for them, other goods are poor substitutes even at somewhat lower relative prices (or the costs of searching for substitutes may exceed the benefits). But some purchasers will reduce their purchases of steak and substitute other meats (or other foods, or different products altogether), with the result that the total quantity demanded by purchasers, and so the amount produced, will decline.

This is shown in Figure 1.1. Dollars are plotted on the vertical axis, units of output on the horizontal. A rise in price from p_1 to p_2 results in a reduction in the quantity demanded from q_1 to q_2. Equally, we could imagine quantity supplied falling from q_1 to q_2 and observe that the effect would be to raise the price of the good from p_1 to p_2. The causality runs in both directions: If quantity falls, price will rise—otherwise there will be a shortage. If price rises, quantity falls because consumers buy less of the good.

This analysis assumes that the only change is the change in relative[3] price or in quantity. Yet if, for example, demand were increasing at the same time that price was rising, the quantity demanded and supplied might not fall. It might even rise if the good were becoming so popular that more people bought it even at its higher price.

The Law of Demand doesn't operate just on goods with explicit prices. Unpopular teachers sometimes try to increase class enrollment by raising the average grade of their students, thereby reducing the "price" of the course to the students and so inducing them to substitute the unpopular teacher's class for another class. The convicted criminal who has served his sentence is said to have "paid his debt to society," and an economist would find the metaphor apt. Punishment is, from the criminal's standpoint (but not society's, unless the punishment takes the form of a fine), the price that society charges for a criminal offense. The economist predicts that an increase in either the severity of the punishment or the likelihood of its

3. If the price level is rising at the same rate for all goods (i.e., if there is inflation), there is no quantity effect, because relative prices are unchanged, and so there is no incentive to substitute.

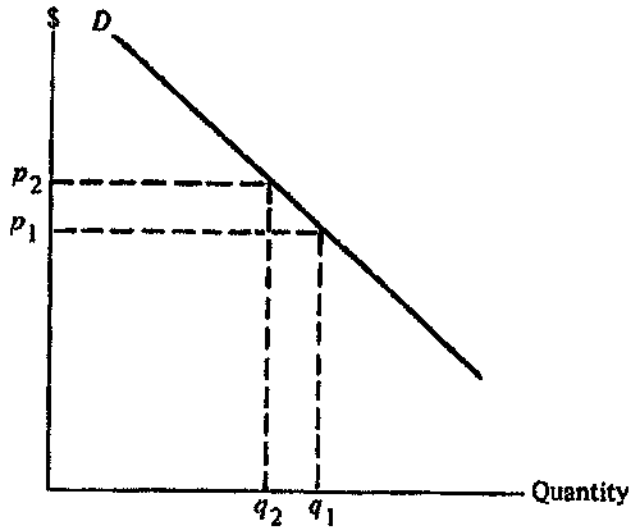

Figure 1.1

imposition will raise the price of crime and therefore reduce its incidence. The criminal will be encouraged to substitute other activity. Economists call nonpecuniary prices, such as the disutility imposed by a prison sentence, "shadow prices."

2. The consumers in our steak example were assumed to be trying to maximize their utility (happiness, pleasure, satisfactions).[4] The same is true of the producers of beef, though in the case of sellers (apart from nonprofits and government agencies) one usually speaks of profit maximization rather than utility maximization. Sellers seek to maximize the difference between their costs and their sales revenues, but for the moment we are interested only in the lowest price that a rational self-interested seller would charge. That minimum is the price that the resources consumed in making (and selling) the seller's product would command in their next best use—the alternative price. It is what the economist means by the cost of a good, and suggests why (subject to some exceptions that need not trouble us here) a rational seller would not sell below cost. For example, the cost of manufacturing a lawn mower is the price the manufacturer must pay for the capital and labor consumed in making it. That price must exceed the price at which the resources could have been sold to the next highest bidder, because if the manufacturer hadn't been willing to beat that price, he would not have been the high bidder and would not have obtained the resources. The economic concept of cost (opportunity cost) is the second fundamental principle of economics.

A corollary of the notion of cost as alternative price is that a cost is incurred only when someone is denied the use of a resource. Since I can breathe as

4. The concept of utility is analyzed more critically in the next section of this chapter.

much air as I want without depriving anyone of any of the air he wants, no one will pay me to relinquish my air to him; therefore air is costless.[5]

Here are two more examples of opportunity cost: (1) The principal cost of higher education is not tuition; it is the forgone earnings that the student would have if he were working rather than attending school. (2) Suppose the labor, capital, and materials costs of a barrel of oil are only $2, but because low-cost oil is being rapidly depleted, a barrel of oil is expected to cost $20 to produce in 10 years. The producer who holds on to his oil for that long will be able to sell it for $20 then. That $20 is an opportunity cost of selling the oil now—although not a net opportunity cost, because if he waits to sell his oil he'll lose the interest he would have earned by selling now and investing the proceeds. Suppose, however, that the current price of oil is only $4 a barrel, so that if the producer sells now, he will have a profit of only $2. If he invests the $2 it is unlikely to grow to $20 (minus the then cost of production) 10 years hence. So he is better off leaving the oil in the ground. The scarcer that oil is expected to be in the future, the higher the future price will be, and therefore the likelier the oil is to be left in the ground, which (not incidentally) will avert a future shortage.

This discussion of cost may help dispel one of the most tenacious fallacies about economics—that it is just about money. Money is obviously a vital feature of any advanced economy—as a medium of exchange that enables the substitution of a price system of transactions for a barter system, as a store of value to be drawn on as needed for acquiring goods or services, and as a measure of value—but it is only a small part of the subject matter of economics. Because economics is primarily concerned with how resources are allocated,[6] economists distinguish between transactions that affect the use of resources, whether or not money changes hands, and purely pecuniary transactions—transfer payments—and have more to say about the former than about the latter. Housework, for example, is an economic activity even if the houseworker is a spouse who does not receive pecuniary compensation. For housework involves cost—primarily the opportunity cost of the houseworker's time. In contrast, the transfer by taxation of $1,000 from me to a poor (or to a rich) person is costless *in itself*, that is, regardless of its secondary effects on his and my incentives, the (other) costs of implementing it, and any possible differences in the value of a dollar to us. It does not diminish the stock of resources. It diminishes my purchasing power, but it increases the recipient's by the same amount. It is what economists call a

5. This is not to say that clean air is costless. See §8.7 *infra*.

6. Noneconomists attach more significance to money than economists do. One of Adam Smith's achievements in *The Wealth of Nations* was to demonstrate that mercantilism, the policy of trying to maximize a country's gold reserves, would (in general, though not in every instance) impoverish rather than enrich the country that followed it. Other common misconceptions about economics that this book will try to dispel are that it is primarily about business or explicit markets, that it is pro-business, that it is heartless, that it slights nonquantifiable costs and benefits, and that it is conservative.

private cost but not a *social* one. A social cost diminishes the wealth of society; a private cost rearranges that wealth.

Competition is a rich source of "pecuniary" as distinct from "technological" externalities—that is, of wealth transfers from, as distinct from cost impositions on, unconsenting parties. Suppose A opens a gas station opposite B's gas station and as a result siphons revenues from B. Since B's loss is A's gain, there is no diminution in overall wealth and hence no social cost, even though B is harmed by A's competition and so incurs a private cost. It would be different if to eliminate B's competition, A destroyed B's gasoline pumps. That would reduce the total stock of goods in the economy.

The distinction between opportunity costs and transfer payments, or in other words between economic and accounting costs, helps show that cost to an economist is a forward-looking concept. "Sunk" (already incurred) costs do not affect a rational actor's decisions on price and quantity. Suppose that a life-sized porcelain white elephant cost $1,000 to build ($1,000 being the alternative price of the inputs that went into making it) but that the most anyone will pay for it now that it is built is $10. The fact that $1,000 was sunk in making it will not affect the price at which it is sold, provided the seller is rational. For if he takes the position that he must not sell it for less than it cost him to make it, the only result will be that instead of losing $990 he will lose $1,000.

This discussion of sunk costs should help explain the emphasis that economists place on the ex ante (before the fact) rather than ex post (after the fact) perspective. Fully rational people base their decisions on expectations of the future rather than on regrets about the past. They treat bygones as bygones. If regret is allowed to undo decisions, the ability of people to shape their destinies is impaired.[7] If a party for whom a contract to which he freely agreed turns out badly is allowed to revise the terms of the contract ex post, few contracts will be made.

The most celebrated application of the concept of opportunity cost in the economic analysis of law is the Coase Theorem.[8] The theorem, slightly oversimplified—for qualifications, see §3.5 *infra*—is that if transactions are costless, the initial assignment of a property right will not affect the ultimate use of the property. Suppose a farmer has the legal right to grow crops free from damage from locomotive sparks, and that it is a property right—that is, a right to exclude entry (including entry of sparks emitted by locomotives) upon his land, enforceable by an injunction or perhaps even a criminal penalty for trespass—rather than just a right to be compensated for damage. Assume that his crops are worth $100 and are flammable, that the value to the railroad of unimpeded use of its right-of-way is $120, but that at a cost of $110 the railroad can install spark arresters that will eliminate the fire

7. It is not the *emotion* of regret that is irrational, but acting on the emotion rather than letting bygones be bygones. Regret is a form of self-evaluation and is valuable in improving future conduct ("I won't do this again because I know I would regret it"). See §1.4 *infra*.

8. Ronald H. Coase, The Problem of Social Cost, 3 J. Law & Econ. 1 (1960).

hazard. On these assumptions, plus the further assumption that unless the railroad installs spark arresters its locomotives are sure to destroy the farmer's crops, the real value of the crops to the farmer is not $100 but somewhere between $100 and $110, since at any price above $110 the railroad would install spark arresters rather than buy the farmer's property but at any price below $110 the railroad would buy the property. The farmer is better off selling his property right to the railroad at a price between $100 and $110; he will do this because the railroad will buy at a price in that range; and as a result his land will be shifted into some fire-insensitive use, just as if the railroad had owned it in the first place. If he fails to sell, his crops will be destroyed, and he will be compensated only for the lost value, $100.

Now suppose that instead of the farmer's having the right to grow crops free from damage from locomotive sparks, the railroad has the right to the unimpeded use of its right-of-way. Because the farmer's crops are worth less than the railroad's cost of installing spark arresters, as before the locomotives will spew sparks and the farmer's land will be shifted into some fire-insensitive use. Thus, the initial assignment of property rights, whether to the railroad or to the farmer, will not affect the ultimate use to which the property will be put; in either event it will be put to its most productive use, namely a fire-insensitive use. The initial assignment of rights will affect the distribution of wealth but not the allocation of resources. Stated differently, the opportunity cost of the farmer's crops exceeds their value; for the crops are an impediment to a more valuable economic activity, namely railroading with spark emission. The land is worth more to the railroad without crops on it than to the farmer with crops on it.

The process by which price tends toward alignment with opportunity cost is illustrated in Figure 1.2. *D* represents the demand schedule and *S* the opportunity cost of supplying a unit of output at various levels of output. Another name for *S* is the industry marginal-cost curve. Marginal cost is the change in total costs brought about by a one-unit change in output; in other words, it is the cost that would be avoided by producing one unit less. (Marginal cost is explored further in Chapters 9 and 10.) This definition should help you see why the intersection of *D* and *S* is the equilibrium price and output under competition. "Equilibrium" (about which more shortly) means a stable point, that is, a point at which, unless the conditions of demand or supply change, there is no incentive for sellers to alter price or output. If price is at the right of this point, supply will exceed demand (the *S* curve is above the *D* curve in this region), so price will fall (*S* will decline, intersecting *D* at a lower point) to enable the market to clear (rather than unsold goods pile up). To the left of the equilibrium price and output, where demand exceeds supply, price will rise (*S* will rise, intersecting *D* at a higher point, because a higher price induces a greater supply) to avoid the shortage that excess demand would create were there no price adjustment.

Even in long-run competitive equilibrium there is no assurance that all sales will take place at prices equal to the opportunity costs of the goods sold. This is implicit in the upward slope of the supply curve in Figure 1.2. The fact

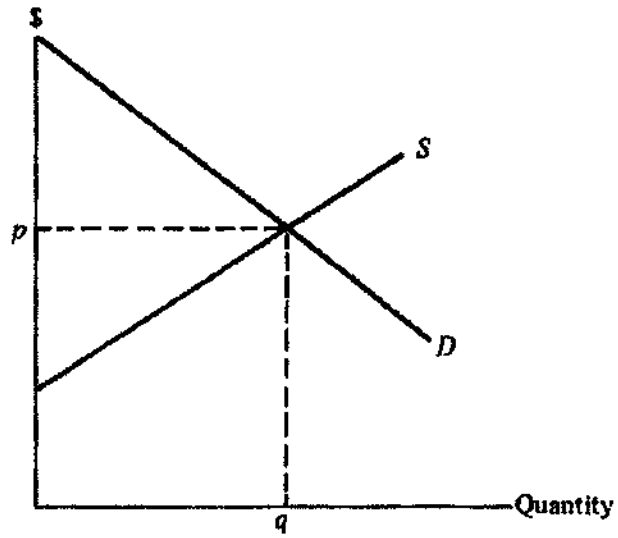

Figure 1.2

that the cost of producing the good rises with the quantity produced implies that its production requires some resource that is scarce in relation to the demand, such as fertile or well-located land. Suppose, for example, that the very best corn land can produce corn at a cost of $1 a bushel, with the cost consisting both of the direct costs of producing corn (labor, fertilizer, etc.) and the value of the land in its next best use, and that the market price of the corn produced on such land would be $10 a bushel were no other corn produced. Clearly there are incentives to expand production, and since the good land cannot be expanded, inferior land will be shifted into corn production — land that requires greater inputs of labor, fertilizer, and so on to produce the same quantity of corn.

This process of reallocation will continue until price and marginal cost are equalized, as in Figure 1.2. At this point the market price will equal the cost of the marginal producer. Suppose that cost is $2.50. All corn farmers will be selling corn at $2.50 a bushel, but the cost of producing the corn will be only $1 on the best land. The difference is called "economic rent" (not to be confused with rental). Who will get the rent? Not the producers of the corn, but the owners of the good land (of course, they may be the same people, but the roles of owner and producer are distinct). Competition between producers will eliminate any producer rents, leaving all the rents to be captured by the owners of the resource that generates them. If the quantity of the best land could be increased without cost, competition would eliminate the scarcity that generates the rents, and with it the rents themselves. Thus under competition rents are earned only by the owners of resources that cannot be augmented rapidly and at low cost to meet an increased demand for the goods they are used to produce.

The very high incomes earned by a few singers, athletes, and lawyers include economic rents attributable to the inherent scarcity of the resources that these persons control—a fine singing voice, athletic skill and determination, the analytical and forensic skills of the successful lawyer. Their earnings may greatly exceed their highest potential earnings in an alternative occupation even if they sell their services in a fully competitive market. A different kind of economic rent, discussed in Chapter 9, is earned by the monopolist, who creates an *artificial* scarcity of his product.

Although economists tend to treat opportunity cost as if it were the same as out-of-pocket cost, there is a difference that is illuminated by the concept, introduced earlier in this chapter, of uncertainty. An out-of-pocket cost is observed; an opportunity cost is an estimate of what will happen if an individual or a firm does or fails to do something. If it is uncertain what will happen, a person may hesitate to act, preferring the bird in the hand to the (possible) two birds in the bush. The difference between the two types of cost is discussed further in Chapters 9 and 15.

3. An equilibrium, as already noted, is a stable point. Until demand or supply conditions in a market change, there is no incentive for either the sellers or the buyers to leave the market, or for new sellers or buyers to enter. But equilibria tend to be fragile, transient. Imagine, for example, that the government has placed a price ceiling on the good depicted in Figure 1.2 and that the ceiling is below the equilibrium price (otherwise the regulation would be ineffective), thus forcing down the dotted line p. As a result, p will now intersect the supply curve to the left of the demand curve—meaning that supply will fall short of demand, because the lower price simultaneously reduces the incentive of producers to make the good and increases the desire of consumers to buy it. The result is a shortage. Equilibrium can be restored by use of a nonprice method of allocating supply to demand. Consumers might be required to queue up for the product; the cost of their time would determine the length of the queue. Queues are common in markets in which prices are regulated, and we'll see examples in this book. The removal of price regulation invariably reduces, and usually eliminates, queues.

The significance of the concept of equilibrium is that it causes economists to think hard about conditions that prevent resources from gravitating to their most valuable use and staying there indefinitely—conditions that, by driving a wedge between cost and price, create gluts or shortages, and in either case waste economic resources. (For example, if price is above cost, consumers may be induced to substitute products that actually cost society more to produce, but are cheaper because produced in a competitive market, where price equals rather than exceeds cost). Observation that a particular market is not in equilibrium—for example, that there are frequent gluts or shortages, firms undergoing liquidation, sudden layoffs, machinery that quickly becomes obsolete and is junked though it's still in good working order—incites a search for economic or regulatory or even

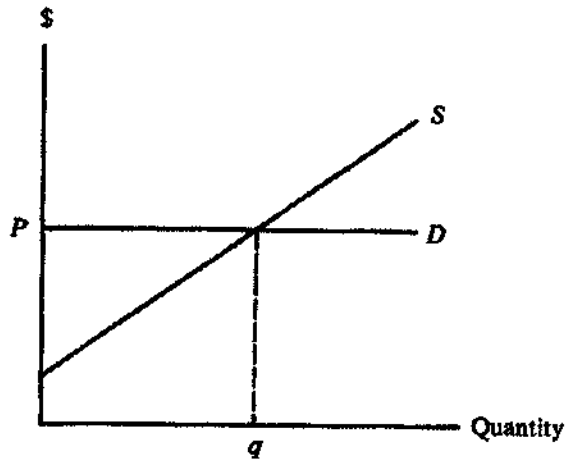

Figure 1.3

psychological reasons why the market is not in equilibrium and thus failing to allocate resources with maximum efficiency.

4. Resources tend to gravitate toward their most valuable uses if voluntary exchange—a market—is permitted. Why did the manufacturer of lawn mowers in an earlier example pay more for labor and materials than competing users of these resources? Because he thought he could use them more profitably than could competing demanders. By a process of voluntary exchange, resources are shifted to those uses in which the value to consumers, as measured by their willingness to pay, is highest. When resources are being used where their value is highest, or, equivalently, when no reallocation would increase their value, we say they're being employed efficiently.

A methodologically useful assumption related to competitive equilibrium is that there are no unexploited profit (in the sense of rent, not cost of equity capital) opportunities. A profit opportunity is a magnet drawing resources into an activity. If the magnet doesn't work, the economist takes this as a sign not that people are irrational but that there are barriers to the free flow of resources. The barrier could be high information costs, externalities (effects, positive or negative, that an economic activity has outside the market in which the activity occurs, as when waste discharged from a paper-manufacturing plant into a river poisons the river's fish), inherent scarcities as in our economic-rent-of-land example, or other economic conditions discussed in this book. If there are no such barriers, then in the market depicted in Figure 1.2 each seller will (as shown in Figure 1.3) confront a horizontal demand curve equal to p even though the market as a whole faces a downward-sloping demand curve (which can be viewed as the sum of a very large number of individual-firm demand curves, each of which is only trivially downward sloping, i.e., approximately horizontal, but the

aggregate of which is steeply sloped).[9] The significance of a horizontal demand curve is that if the seller raises his price, however slightly, above the market price, his sales will go to zero. Raising price and thereby opening a gap between price and marginal cost will create a profit opportunity that another seller will snatch away from him.

§1.2 Value, Utility, Efficiency

The previous section bandied about some pretty highly charged words—value, utility, efficiency—about which we need to be more precise.

The economic *value* of a good or service is how much someone is willing to pay for it or, if he has it already, how much money he demands for parting with it. These are not always the same amounts, and this can cause difficulties, which we shall consider later. *Utility* is most commonly used in economics to distinguish an uncertain cost or benefit from a certain one. Utility (more precisely, "expected utility") in this sense is entwined with the concept of risk. Suppose you were asked whether you'd prefer to be given $1 million or a 10 percent chance of $10 million. Probably you would prefer the former, even though the expected value of the two choices is the same: $1 million (= .10 × $10 million). If so, you are risk averse. Risk aversion is a corollary of the principle of diminishing marginal utility of money, which just means that the more money you have, the less additional happiness you would get from another dollar. Suppose you had a net worth of $1 million: Would you be willing to stake it on a 50-50 bet to win $2 million? If not, it means that your first million dollars is worth more to you than a second million would be.

Risk aversion is not a universal phenomenon; gambling illustrates its opposite, risk preference. This is not because one wins big at gambling only by taking risks (for few activities are actually riskless), but because the expected value of a gamble usually is negative. Suppose you're charged $1 for a lottery ticket, and, because a million lottery tickets are sold, the probability of your winning the lottery is one in 1 million. For it to be a fair gamble the prize for winning the lottery would have to be $1 million, because the expected value of a one in a million chance of winning $1 million

9. There is no need to assume that there is an infinitely large number of sellers in the market—only that entry is immediate if price exceeds marginal cost. This point is explained in Chapter 9. Notice in Figure 1.3 that the firm's marginal cost curve is shown sloping upward, just like the industry's curve in Figure 1.2. The same things that cause the industry's marginal cost to rise will cause the individual firm's marginal cost to do so as well, an additional consideration being the increased cost of information and control as a firm grows larger and more complex. See §15.1 *infra*. Notice that if a firm did not encounter rising marginal costs at some point, its output would be indeterminate. The relation between costs and demand is discussed more fully in Chapter 13.

United States Department of the Interior

OFFICE OF THE SOLICITOR

OCT - 7 2003

M-37010

Memorandum

To: Secretary

From: Deputy Solicitor[1]

Subject: Mill Site Location and Patenting under the 1872 Mining Law

I. Introduction

The Mining Law of 1872 (hereinafter "Mining Law") allows miners to locate and patent lode and placer mining claims, subject to certain restrictions regarding the size of the claims. 30 U.S.C. §§ 23, 29, 35, 36. The Mining Law also allows miners to locate and patent nonmineral lands for mill sites. 30 U.S.C. § 42. A mill site consists of a parcel of nonmineral land that is used or occupied for mining or milling purposes in association with lode or placer claims. *Id.*[2] Under the Mining Law, a mill site may not exceed five acres. *Id.* This provision of the Mining Law will be referred to as the "mill site provision" or "five-acre mill site provision."

In 1997, former Solicitor John D. Leshy issued an opinion, concurred in by former Secretary of the Interior Bruce Babbitt, that concluded that the mill site provision not only limits the *size* of mill sites to five acres, but also limits the *number* of mill sites that may be located and patented to no more than one five-acre mill site in association with each mining claim. *Limitations on Patenting Millsites under the Mining Law of 1872*, M-36988 (Nov. 7, 1997)

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[1] The Solicitor has recused himself from involvement in the matters discussed in this opinion.

[2] Claimants may use mill sites for a wide range of purposes related to mining or milling. The structures and activities on mill sites include, among other things, water treatment facilities, overburden storage, crushing units, warehouses, equipment maintenance buildings, employee parking, top soil storage for reclamation use, mineral processing pads, and air-quality and other environmental monitoring stations. *Alaska Copper* Co., 32 Pub. Lands Dec. 128, 131 (1903); 2 *Lindley on Mines* § 523, at 1178-80 (1914); Terry S. Maley, *Mineral Law* 395-405 (6th ed. 1996). Under the mill site provision, there are two types of mill sites. Independent or custom mill sites are used for quartz mills or reduction works. Dependent mill sites are used for mining or milling purposes in association with mining claims and are the most common type. Unless otherwise noted, future references to mill sites in this opinion are to dependent mill sites.

(hereinafter "1997 Opinion").[3] The 1997 Opinion advised that "the Department should reject those portions of millsite patent applications that exceed" five acres per associated placer or lode claim and "should not approve plans of operations which rely on a greater number of millsites than the number of associated claims being developed unless the use of additional lands is obtained through other means." 1997 Opinion, at 2.

The 1997 Opinion represented a departure from the Department's long-standing administrative practice and interpretation that the mill site provision does not limit mill sites to one per mining claim. The Bureau of Land Management (BLM), which is charged with enforcement responsibility for the mill site provision, issued written guidance in 1954 that clearly provided that more than one mill site could be located for each mining claim. The BLM has consistently followed this written guidance in administering the mill site provision for nearly a half century prior to the 1997 Opinion. Consequently, the 1997 Opinion departed from nearly a half century of settled administrative practice regarding the mill site provision.

Indeed, Congress has recognized that the 1997 Opinion represented a departure from the Department's settled administrative practice and interpretation, and has taken action to restore that administrative practice with respect to prior and pending mining plans and patent applications. In 1999, Congress enacted legislation expressly prohibiting the Department of the Interior from applying the 1997 Opinion to deny patent applications and plans of operation submitted before the date of the law's enactment on grounds that they contain more than one mill site for each mining claim. Pub. L. No. 106-31, § 3006, 113 Stat. 57, 90-91 (1999); Pub. L. No. 106-113, § 337, 113 Stat. 1501, 1501A-199 (1999). According to the Conference Report, the 1997 Opinion was "particularly troubling because both the Bureau of Land Management and the Forest Service have been approving patents with more than one five-acre millsite per patent based on procedures outlined in their operations manuals." H.R. Conf. Rep. No. 106-143, at 90 (1999). As a result of the 1999 enactments, the 1997 Opinion has not been applied as the basis for denying a proposed mining plan or a patent application.

After reviewing the matter, we conclude that the mill site provision does not categorically limit the number of mill sites that may be located and patented to one for each mining claim and that the Department's traditional practice of not applying such a numerical limitation is in

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[3] Strictly speaking, the 1997 Opinion concluded that the mill site provision limits claimants to locating and patenting five acres of nonmineral lands in association with each mining claim, allowing that more than one mill site may be located for each mining claim as long as the aggregate acreage of the mill sites does not exceed five acres. The practical effect of this interpretation in most cases is to limit the number of mill sites to one for each associated claim. In this memorandum, we will often characterize the interpretation of the 1997 Opinion as a categorical or numerical limitation that limits claimants to locating one mill site for each mining claim. In such instances, we are referring to a five-acre mill site. The 1997 Opinion also relied on this shorthand, stating that the statute "imposes a limitation that only a single five-acre millsite may be claimed in connection with each mining claim." 1997 Opinion, at 4-5.

conformity with the requirements of the Mining Law. Accordingly, we conclude that the 1997 Opinion, in reaching the opposite conclusion, does not properly interpret the mill site provision and improperly departs from the Department's traditional practice and interpretation. Our conclusion is based on analysis of the Mining Law, its legislative history, the congressional purpose, and the Department's settled administrative practice and interpretation.

First, although the mill site provision of the Mining Law expressly limits the *size* of mill sites, the provision does not expressly limit the *number* of mill sites that may be located for a mining claim. Absent some other indication of congressional intent, a statute should not be construed as containing an implied limitation that does not appear in the statute itself. The absence of any numerical limitation in the mill site provision is particularly important in light of the fact that, as Congress knew in enacting the Mining Law in 1872, mining companies at that time used many more than five total acres of land for milling purposes to support a single mining claim, as in the case of a Comstock Lode mine in Nevada. If Congress had intended to overturn this existing mining practice by precluding mining companies from locating more than a single five-acre mill site, Congress presumably would have expressly so provided in the Mining Law. The absence of any such language strongly indicates that no such result was intended.

Second, other provisions of the Mining Law limit the size of lode and placer mining claims, and these provisions have been held by the courts not to limit the number of such claims that may be located and patented by an individual claimant. Since these other provisions do not categorically limit the number of lode or placer claims, the mill site provision should not be construed as categorically limiting the number of mill sites that may be located and patented for each mining claim. Under settled rules of statutory construction, the overall context of the Mining Law should be considered in interpreting its provisions, and similar provisions should be construed harmoniously.

Third, the congressional purpose of the Mining Law was to encourage the development of the nation's mineral resources. This congressional purpose is not served by artificially limiting the number of mill sites that may be located and patented with mining claims. Otherwise, mill sites would, in many cases, be inadequate to develop the mineral resources located within the mining claims. It is unlikely that Congress intended to limit categorically the availability of milling capacity to develop the minerals that Congress itself had opened for exploration and purchase. To construe the Mining Law as containing such a restriction would impair the congressional goal of encouraging development of the nation's mineral resources.

Fourth, as noted above, the Department's prevalent administrative practice and interpretation has been in accordance with the view that the five-acre mill site provision does not impose a numerical limitation on mill sites, and under settled rules of statutory construction the interpretation of a statute by an agency charged with its enforcement is relevant in construing the statute.

Although the mill site provision does not preclude locating and patenting multiple mill sites for each mining claim, the provision does restrict the amount of mill site acreage a claimant may locate and patent to that which is "used or occupied . . . for mining or milling purposes . . . ." 30 U.S.C. § 42. This provision of the Mining Law will be referred to as the "use-or-occupancy requirement." Under this provision, the Department of the Interior may limit excessive mill sites by challenging the validity of mill sites that claimants do not actually need for mining or milling purposes.

Based on these factors, we conclude that the mill site provision does not categorically limit the number of mill sites to one for each mining claim, and that the 1997 Opinion erred in concluding otherwise. Accordingly, the Department should return to its prevalent, pre-1997 administrative practice and interpretation, under which the mill site provision was interpreted as not imposing such numerical restrictions.

II. The Mill Site Provision

Under the Mining Law, claimants may locate[4] and patent[5] lode claims and placer claims. 30 U.S.C. §§ 23, 29 (lode claims); *id.* §§ 35, 36 (placer claims). The Mining Law also provides for locating and patenting mill sites that are attendant to lode claims and, as amended in 1960, attendant to placer claims as well. The mill site provision states:

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[4] "Location" is the act of taking or appropriating a parcel of land. *St. Louis Smelting & Refining Co. v. Kemp*, 104 U.S. 636, 649 (1881). The act of "location" includes posting a location notice on the mining claim or mill site, recording the location notice, and marking the mining claim or mill site boundaries on the ground. *Smith v. Union Oil Co.*, 135 P. 966, 968 (Cal. 1913), *aff'd* 249 U.S. 337 (1919). A "lode" claim is a location made upon a vein or lode of quartz or other "rock in place" bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits. 30 U.S.C. § 23. A "placer" claim includes all forms of deposit except veins of quartz or other rock in place and is characterized by mineral deposits formed by sedimentary processes. *Id.* § 35; *United States v. Iron Silver Mining Co.*, 128 U.S. 673, 678-79 (1888). In order to have a valid mining claim location, there must be a discovery of a valuable mineral deposit within the boundaries of the claim. 30 U.S.C. § 23. Before beginning mining activities, a mining claimant must submit a notice for surface disturbance of five acres or less or obtain agency approval of a plan of operation that complies with the BLM's surface management regulations, under which BLM applies the "unnecessary or undue degradation" standard found in the Federal Land Policy and Management Act. 43 C.F.R. subpart 3809; 43 U.S.C. § 1732(b).

[5] A patent is the instrument by which the United States conveys legal title to a parcel of federal land. The Mining Law allows a mining claimant to seek to obtain a patent to mining claims and mill sites. 30 U.S.C. §§ 29, 35, 42. A mining claimant does not need to obtain a patent for a mining claim or mill site before beginning mining activities on the claim or site. *United States v. Locke*, 471 U.S. 84, 86 (1986); *Independence Mining Co. v. Babbitt*, 105 F.2d 502, 509 (9th Cir. 1997).

> (a) Where nonmineral land not contiguous to the vein or *lode* is *used or occupied* by the proprietor of such vein or lode for mining or milling purposes, such nonadjacent surface ground may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but *no location made on and after May 10, 1872 of such nonadjacent land shall exceed five acres*, and payment for the same must be made at the same rate as fixed by sections 21, 22 to 24, 26 to 28, 29, 30, 33 to 48, 50 to 52, 71 to 76 of this title and section 661 of Title 43 for the superficies of the lode. The owner of a quartz mill or reduction works, not owning a mine in connection therewith, may also receive a patent for his mill site, as provided in this section.
>
> (b) Where nonmineral land is needed by the proprietor of a *placer* claim for mining, milling, processing, beneficiation, or other operations in connection with such claim, and is *used or occupied* by the proprietor for such purposes, such land may be included in an application for a patent for such claim, and may be patented therewith subject to the same requirements as to survey and notice as are applicable to placers. *No location made of such nonmineral land shall exceed five acres* and payment for the same shall be made at the rate applicable to placer claims which do not include a vein or lode.

30 U.S.C. § 42 (emphasis added). Subsection (a) establishes requirements for mill sites located in association with lode claims and subsection (b) establishes requirements for mill sites located in association with placer claims. The requirements of the two subdivisions are virtually identical. That is, both subdivisions provide that mining claimants may locate and obtain a patent for mill sites in association with mining claims if (1) the land is nonmineral in character, (2) the land is used or occupied by the claimant for mining or milling purposes, and (3) the location of the nonmineral land does not exceed five acres.[6] Neither subdivision contains any language explicitly limiting the number of mill sites to one for each mining claim.[7]

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[6] Mill sites located in association with lode claims also must be noncontiguous or nonadjacent to a vein or lode. 30 U.S.C. § 42(a).

[7] The 1997 Opinion argued that the use of the word "such" in the mill site provision supports a conclusion that the provision "imposes a limitation that only a single five-acre millsite may be claimed in connection with each mining claim." 1997 Opinion, at 4-5. If we replace the four instances of the word "such" in the provision with the language to which it refers, however, it becomes evident that the mill site provision limits the size but not the number of mill site locations a claimant may locate and patent per mining claim:

> Where nonmineral land not contiguous to the vein or lode is used or occupied by the proprietor of *the noncontiguous* vein or lode for mining or milling purposes, *the nonmineral* non-adjacent surface-ground may be embraced and included in an application

As we now explain, the mill site provision does not categorically restrict the number of mill sites that may be located and patented for each mining claim. This construction is supported by the statutory language, the overall context of the Mining Law, the congressional purposes underlying the statute, and the Department's prevalent, long-standing administrative practice and interpretation.

A. Statutory Language

The mill site provision expressly limits the size of individual mill sites by providing that a mill site may not exceed five acres. 30 U.S.C. § 42. Also, the provision provides that mill sites may be located only for lands that are "used or occupied" for mining or milling purposes. *Id.* The provision does not, however, contain any language limiting the number of mill sites per mining claim. Presumably if Congress had intended to impose such a limitation, it would have added language providing that "no more than one mill site may be located per mining claim." No such language appears in the statute. We are reluctant to construe the statute as containing an implied limitation that does not appear on the face of the statute, at least in the absence of other indications that Congress intended for such a restriction to apply. *Consumer Prod. Safety Comm'n v. GTE Sylvania, Inc.*, 447 U.S. 102, 108-09 (1980) ("Absent a clearly expressed legislative intention to the contrary, th[e] language [of the statute itself] must ordinarily be regarded as conclusive . . . . We are consequently reluctant to conclude that Congress' failure to include [certain language] was unintentional."). As we now explain, we do not believe that Congress either imposed or intended to impose a numerical limitation on the mill sites that may be located and patented for each mining claim.

B. Overall Statutory Context: Lode Claims, Placer Claims and Mill Sites

Under established rules of statutory construction, the provisions of a statute must be construed in light of the overall statutory context and purpose rather than considered in isolation. The "literal language of a provision taken out of context cannot provide conclusive proof of congressional intent, any more than a word can have meaning without context to illuminate its use. In short, 'the meaning of statutory language, plain or not, depends on context.'" *Bell Atl. Tel. Cos. v. FCC*, 131 F.3d 1044, 1047 (D.C. Cir. 1997) (quoting *Bailey v. United States*, 516 U.S. 137, 145 (1995)); *see also Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1164 (9th Cir. 1999) (quoting *Zimmerman v. Or. Dep't of Justice*, 170 F.3d 1169, 1173 (9th Cir. 1999) ("Rather than focusing just on the word or phrase at issue, we look to the entire statute to determine Congressional intent.")); *see also* Sutherland Stat. Const. § 46.05 (6th ed. 2000). Accordingly, the overall context of the Mining Law must be considered in construing the mill site provision. We now consider the overall statutory context by examining the related provisions governing lode claims, placer claims and mill sites.

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for a patent for *the noncontiguous* vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location hereafter made of *nonmineral* non-adjacent land shall exceed five acres.

1. Lode and Placer Claims

The Mining Law contains separate provisions relating to the location and patenting of lode claims and placer claims. Regarding *lode* claims, the Mining Law states that a mining claim located after May 10, 1872, "whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode . . . " and "[n]o claim shall extend more than three hundred feet on each side of the middle of the vein at the surface . . . ." 30 U.S.C. § 23.[8] Regarding *individual placer* claims, the Mining Law states that "no such location shall include more than twenty acres for each individual claimant . . . ." *Id.* § 35. Regarding so-called "*association placer*" claims, the Mining Law provides that "no location of a placer claim . . . shall exceed one hundred and sixty acres for any one person or association of persons . . . ." *Id.* § 36.

Therefore, the Mining Law expressly limits the size of lode and placer claims. Under these limitations, a lode claim may not exceed 1500 feet in length and 600 feet in width (approximately twenty acres), an individual placer claim may not exceed twenty acres, and an association placer claim may not exceed 160 acres.

The Department's contemporaneous construction of the Mining Law was that since the statute does not limit the number of lode or placer claims that may be located, no such numerical limitation should be deemed to exist. In 1873, shortly after the Mining Law's enactment, the Commissioner of the General Land Office concluded that the Mining Law does not limit the number of mining claims that a claimant may locate on a given lode deposit. The Commissioner stated:

> [T]here is no provision of law to prevent parties from locating other claims upon the same lode, outside of the first location made on the lode or vein.
>
> If a lode or vein three thousand feet in length is discovered, two locations may be made, each of fifteen hundred feet, thereon.

Letter from Acting Commissioner, General Land Office, to Messrs. Hoyt and Brothers (June 17, 1873), Henry N. Copp, *Decisions of the General Land Office and Secretary of the Interior* 207 (1873-1874). This conclusion was reaffirmed in the Commissioner's annual report in 1875. That report concluded that although the Mining Law prohibited an individual from locating more than twenty acres and an association from locating more than 160 acres for placer claims, "[t]here is nothing in the mining acts of Congress forbidding one person or an association of persons purchasing as many *separate and distinct locations* as he or they may desire, and embracing in one application for patent the entire claim . . . ." Annual Report of the

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[8] A lode claim that is 1500 feet long and 600 feet wide, as provided for in the Mining Law, amounts to just over twenty acres in size or 20.661 acres exactly.

Commissioner of the General Land Office for the Fiscal Year Ending June 30, 1875, at 97 (1875) (emphasis in original).

In 1881, shortly after the Commissioner of the General Land Office issued his report, the United States Supreme Court held that the Mining Law does not impose numerical limitations on the number of mining claims that a person may locate and patent, at least in cases where the miner purchased the claims from others. *St. Louis Smelting & Refining Co. v. Kemp*, 104 U.S. 636 (1881). There, the St. Louis Smelting & Refining Company brought an action against the defendant, Kemp, arguing that Kemp was interfering with its rightful possession of certain land in Leadville, Colorado. *Id.* As proof of its ownership, St. Louis Smelting produced a United States patent issued in 1879 to Thomas Starr, St. Louis Smelting's predecessor in interest. *Id.* The patent was issued for several placer locations amounting to 164.61 acres. *Id.* at 636-38. The defendant argued that the General Land Office had issued the patent in error because the patent included more acreage–164.61 acres–than could be permissibly patented to one person or association under the Mining Law.

The Supreme Court, reviewing the matter, upheld the patent on grounds that the Mining Law did not impose any limitation on the number of mining claims that may be patented by an individual. *Id.* at 648. The Court stated that the patent "is regular on its face, unless some limitation in the law, as to the extent of a mining claim which can be patented, has been disregarded." *Id.* The Court concluded that:

> [T]here is nothing in the acts of Congress which prohibits the issue of a patent for that amount [164.61 acres]. They are silent as to the extent to a mining claim. They speak of locations and limit the extent of mining ground which an individual or an association of individuals may embrace in one of them. There is nothing in the reason of the thing, or in the language of the acts, which prevents an individual from acquiring by purchase the ground located by others and adding it to his own.

Id. The Supreme Court explained that before the Placer Act of 1870, "Congress imposed no limitation to the area which might be included in the location of a placer claim." *Id.* at 649. After 1870, however, Congress "provided that no location of a placer claim thereafter made should exceed one hundred and sixty acres for one person or an association of persons." *Id.* at 651. Moreover, the Court noted that the 1872 Mining Law "declared that a location of a placer claim subsequently made should not include more than twenty acres for each individual claimant." *Id.* The Court stated that "[t]hese are all the provisions touching the extent of locations of placer claims . . . . A limitation is not put upon the sale of the ground located, nor upon the number of locations which may be acquired by purchase, *nor upon the number which may be included in a patent*." *Id.* (emphasis added). Thus, the Court held that although the Mining Law limited the size of individual mining claims, the statute did not prevent a mining claimant from obtaining a patent for more than one mining claim by purchasing the claims from others.

Addressing the policy reasons for this result, the Supreme Court stated that "it is difficult to perceive what object would be gained, what policy subserved, by a prohibition to embrace in one patent contiguous mining ground taken up by different locations and subsequently purchased and held by one individual." *Id.* at 651-52. The Court stated further that an individual "can hold as many locations as he can purchase, and rely upon his possessory title." *Id.* at 652. The Court also noted that "[e]very one, at all familiar with our mineral regions, knows that the great majority of claims, whether on lodes or on placers, can be worked advantageously only by a combination among the miners, or by a consolidation of their claims through incorporated companies." *Id.* at 654. The Court noted that the "object in allowing patents is to vest the fee in the miner, and thus encourage the construction of permanent works for the development of the mineral resources of the country" and "[r]equiring a separate application for each location . . . where several adjoining each other are held by the same individual, would confer no benefit beyond that accruing to the land-officers from an increase of their fees." *Id.* at 653.[9]

Although the Supreme Court's decision in *St. Louis Smelting* concluded that individual claimants may *purchase* multiple mining locations, later courts made clear that individual claimants may also *locate* multiple mining claims as well. In 1904, the United States Court of Appeals for the Ninth Circuit held:

> The fact that one individual, company, or corporation locates or acquires many such claims is wholly unimportant. Congress has never yet seen proper to put a limit on the number of such claims that one individual, company, or corporation may locate or acquire. Whether, in view of its well-known policy to encourage the development of the mineral wealth of the country, it shall ever deem it wise to do so, rests with Congress, and is a matter with which the courts have nothing to do.

Last Chance Mining Co. v. Bunker Hill & Sullivan Mining & Concentrating Co., 131 F. 579, 583 (9th Cir. 1904), *cert. denied*, 200 U.S. 617 (1906).

Likewise, in 1919, the United States District Court for the Southern District of California held:

> There is so far no law of Congress or regulation made in pursuance thereof limiting the number of placer mining claims an individual or association of individuals may make. On the contrary, the policy of the government seems to be to encourage the development of its mineral resources and to offer every facility for that purpose.

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[9] Although not noted by the Supreme Court, the Mining Law's patenting provision explicitly provides that patent applications may include more than one claim, stating that patent applications must include a "plat and field-notes of the claim *or claims in common* . . . showing accurately the boundaries of the claim *or claims* . . . ." 30 U.S.C. § 29 (emphasis added).

United States v. Cal. Midway Oil Co., 259 F. 343, 351-52 (S.D. Cal. 1919), *aff'd* 279 F. 516, 521 (9th Cir. 1922) ("[S]o far Congress has never fixed any limit to the number of locations that may be made by the same person or persons–its policy having always been to encourage the exploration of the public lands and the discovery and development of such mineral as may be found in them."), *aff'd mem.* 263 U.S. 682 (1923). *See also Consol. Mut. Oil Co. v. United States*, 245 F. 521, 523 (D. Cal. 1917); *United States v. Brookshire Oil Co.*, 242 F. 718, 721 (S.D. Cal. 1917) ("It is true there is no limitation as to the number of mining claims an individual or association of individuals may locate . . . ."); *The Riverside Sand & Cement Mfg. Co. v. Hardwick*, 120 P. 323, 324 (N.M. 1911); 2 *Lindley on Mines* § 450, at 1062-68 (1914).

Thus, the courts have unequivocally held that an individual miner may locate more than one mining claim, whether the claim is acquired by purchase or otherwise. In accordance with these decisions, the Department of the Interior adopted regulations in 1935 declaring that "United States mining laws do not limit the number of locations that can be made by an individual or association." *Mining Claims on the Public Lands*, Circular No. 1278, 55 Interior Dec. 235, 236 (1935).

2. Mill Sites

As noted above, both judicial and administrative authority holds that the Mining Law limits the size of lode and placer locations but does not categorically limit the number of such claims that may be located and patented by an individual. The mill site provision was constructed similarly to the lode and placer claim provisions. The provision states that, for mill sites located along with lode claims, "no location made on and after May 10, 1872 of such nonadjacent land shall exceed five acres . . . ." and that, for mill sites located along with placer claims, "[n]o location made of such nonmineral land shall exceed five acres . . . ." 30 U.S.C. § 42.

Since the mill site provision was constructed similarly to the lode and placer claim provisions, the mill site provision should be interpreted similarly to those provisions. Just as the Mining Law expressly limits the size but not the number of lode and placer claims, the Mining Law should be construed as also limiting the size but not the number of mill sites. Since these provisions are parallel, they should be interpreted in the same way, rather than inconsistently. In construing the lode and placer claim provisions as not imposing numerical limits, the Ninth Circuit in the *Last Chance Mining* case held that Congress has adopted a "well-known policy to encourage the development of the mineral wealth of the country" and said that the responsibility to change the policy "rests with Congress." *Last Chance Mining*, 131 F. at 583. By the same reasoning, the congressional policy of encouraging the "development of the mineral wealth of the country" supports the conclusion that Congress did not intend to restrict mill sites to an unworkably small acreage. Absent a clear indication that Congress intended to differentiate between lode claims, placer claims and mill sites with respect to numerical limitations, we are reluctant to construe these similarly-constructed provisions as imposing different limitations. Thus, the overall context of the Mining Law supports the conclusion that the five-acre mill site

provision does not preclude more than one mill site being located and patented for a mining claim, assuming that the other requirements of the mill site provision are met. This construes parallel provisions of the Mining Law congruently, and harmonizes the various statutory provisions.

Indeed, it would have been illogical for Congress to place no limit on the number of mining claims that a claimant may locate or patent but limit the number of mill sites that may be used to support the mining claims. Congress presumably intended that the lode and placer claims it authorized would be effectively mined, and these claims cannot be effectively mined if there are insufficient mill sites to support the extraction of the minerals from the claims. It makes little sense that Congress would have enacted the Mining Law for the purpose of fostering mineral development on the public lands, only to constrain miners from operating large mines by restricting mill space to an unworkably small area. Congress can hardly have intended to prevent miners from using the number of mill sites necessary to support the mining claims that Congress itself had authorized. Such a result cannot be reconciled with the congressional purpose, as described by the Supreme Court in *St. Louis Smelting*, of "encourag[ing] the construction of permanent works for the development of the mineral resources of the country." *St. Louis Smelting & Refining Co.*, 104 U.S. at 653.

The 1997 Opinion reached the opposite conclusion by focusing on the mill site provision in isolation, and made no attempt to reconcile its conclusion with related provisions governing lode and placer claims. Viewing the mill site provision in isolation, the 1997 Opinion argued that "[c]onstruing the statute to permit multiple millsites without regard to the aggregate size limit would vitiate the five-acre statutory limit on the size of millsites." 1997 Opinion, at 5. On the contrary, since the location of more than one lode or placer claim by a mining claimant does not vitiate the statutory limitations on the size of such claims, the location of more than one mill site for each mining claim does not vitiate the statutory limitation on the size of mill sites. By failing to consider the overall context of the Mining Law, the 1997 Opinion interpreted the various provisions of the statute inconsistently.

Nonetheless, the Mining Law does contain another provision that practically limits the number of mill sites that a claimant may locate and patent. Under the mill site provision, a claimant may locate mill sites only on nonmineral land that is "used or occupied" by the claimant for mining or milling purposes. 30 U.S.C. § 42. This use-or-occupancy requirement precludes a claimant from locating and patenting more mill sites than are used or occupied for mining or milling purposes and authorizes the Department to challenge the validity of mill sites that are not used or occupied for mining and milling purposes.[10] In determining whether a claimant is properly using or occupying a mill site, the Department must verify whether the claimant needs the mill site for mining or milling purposes. *United States v. Swanson*, 14 IBLA 158, 173-74

[10] Nothing in this memorandum is intended to change the way in which administrative and judicial case law has defined what is appropriate mill site use and occupancy under the Mining Law.

(1974) ("[A] claimant is entitled to receive only that amount of land needed for his mining and milling operations" and "the Government is entitled to require efficient usage, so that only the minimum land needed is taken."). The use-or-occupancy requirement is the only provision in the mill site provision that effectively limits the number of mill sites a claimant may locate and patent.

C. Legislative History

The legislative history and congressional purposes of the Mining Law are relevant in construing the mill site provision. "'As in all cases of statutory construction, [a court's] task is to interpret the words of [the statute] in light of the purposes Congress sought to serve.'" *Dickerson v. New Banner Inst., Inc.*, 460 U.S. 103, 118 (1983) (second alteration in original) (quoting *Chapman v. Houston Welfare Rights Org.*, 441 U.S. 600, 608 (1979)). We must "look not only to the particular statutory language, but to the design of the statute as a whole and to its object and policy." *Crandon v. United States*, 494 U.S. 152, 158 (1990). In particular, a statute should not be construed in a way that undermines the manifest purpose of the statute. Sutherland Stat. Const. § 363 (6th ed. 2000). The courts "'must reject administrative constructions of [a] statute . . . that are inconsistent with the statutory mandate or that frustrate the policy that Congress sought to implement.'" *Sec. Indus. Assoc. v. Bd. of Governors of the Fed. Reserve Syst.*, 468 U.S. 137, 143 (1984) (alteration in original) (quoting *FEC v. Democratic Senatorial Campaign Comm.*, 454 U.S. 27, 32 (1981)).

Although the legislative history of the mill site provision is scant and provides little guidance regarding congressional intent, the legislative history of the Mining Law itself is copious and generally clarifies Congress' purpose in enacting the statute. The Mining Law is an exercise of Congress' power under the Property Clause of the Constitution to "dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." U.S. Const. Art. IV, § 3. The primary purpose of the Mining Law, as explained in the congressional debates that led to its passage, is to exercise Congress' disposal authority under the Property Clause "to promote the development of the mining resources of the United States." 45 Cong. Globe, 42d Cong., 2d Sess. 395 (1872). The Supreme Court has recognized the legislative purpose of developing the nation's mining resources, stating that:

> Under the mining laws Congress has made public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes. The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense.

United States v. Coleman, 390 U.S. 599, 602 (1968) (footnote omitted). Congress viewed the nation's mineral resources as an important national resource, and intended to encourage development of this important national resource and to reward those who actually developed it.

The 1997 Opinion cited a 1957 Supreme Court decision for the proposition that "grants of federal land are to be 'construed favorably to the Government, that nothing passes except what is conveyed in clear language, and that if there are doubts they are resolved for the Government, not against it.'" 1997 Opinion, at 15 (quoting *United States v. Union Pac. Ry. Co.*, 353 U.S. 112, 116 (1957)). Subsequently, however, the Supreme Court has construed certain federal land grants more broadly when the congressional purpose is to secure public advantages by inducing individuals to engage in costly operations on the public lands. The Supreme Court has stated:

> [P]ublic grants are construed strictly against the grantees, but they are not to be so construed as to defeat the intent of the legislature, or to withhold what is given either expressly or by necessary or fair implication. . . .
>
> . . . When an act, operating as a general law, and manifesting clearly the intention of Congress to secure public advantages, or to subserve the public interests and welfare by means of benefits more or less valuable, offers to individuals or to corporations as an inducement to undertake and accomplish great and expensive enterprises or works of a *quasi* public character in or through an immense and undeveloped public domain, such legislation stands upon a somewhat different footing from merely a private grant, and should receive at the hands of the court a more liberal construction in favor of the *purposes* for which it was enacted.

Leo Sheep Co. v. United States, 440 U.S. 668, 682-83 (1979) (omissions in original) (emphasis added) (quoting *United States v. Denver & Rio Grande Ry. Co.*, 150 U.S. 1, 14 (1893)).

The Mining Law is such a general law. In order to accomplish its goal of promoting development of the nation's mineral resources, Congress enacted a general law that offers inducements to individuals to undertake enterprises of a *quasi* public character by mining on the nation's public domain lands in order to supply the nation's mineral needs. Under the Mining Law, Congress authorized individuals to acquire property rights by discovering valuable mineral deposits on the federal lands and by complying with certain procedural requirements. *See* 30 U.S.C. §§ 22-54. These self-initiated property rights were for the broad national purpose of encouraging development of the nation's mineral resources. The Mining Law should be construed to effectuate this broad public purpose. If that public purpose is to be changed, the responsibility for making the change belongs to Congress.

We now examine the legislative history of the Mining Law in more detail. As will be explained, earlier versions of the Mining Law included specific limitations on the number of mining claims that could be individually located and patented. The Mining Law adopted in 1872, however, including the mill site provision, contained no such numerical limitations. Since the earlier versions contained numerical limitations and the Mining Law of 1872 did not, the absence of numerical limitations in the 1872 enactment must be regarded as purposeful rather than accidental. It appears that Congress consciously decided not to limit categorically the number of claims and mill sites.

1. 1850 Mining Bill: 30-Foot-Square Placers and One-Acre Lodes

Senator John C. Fremont proposed the first mining bill in 1850. The bill would have provided for two kinds of permits:[11] 30-foot-square placer mineral deposits and, as Senator Fremont described it, one-square-acre "mines" (for gold deposits discovered in lodes or veins). 19 Cong. Globe App., 31st Cong., 1st Sess. 1362, 1370 (1850). The bill also stated that "no person can have two permits at the same time, it being for the public interest to avoid monopolies." *Id.* at 1363. Therefore, the Fremont bill contained a provision expressly limiting the number of mining permits that could be acquired by an individual at any given time.

Senator Fremont explained that his bill would authorize small permits because of the "great value of the land, in order to give an opportunity to all people to get possession of some place to work upon. . . . and if we now give too large a quantity of lands, we may exclude many individuals from the mines by giving so large a space to those that are occupied." *Id.* at 1362. In addition, Senator Fremont stated that "[t]he quantity allowed to each person is ample, considering the privilege he has of changing his location as often as he pleases, and selling his lot when he is offered a good price." *Id.* at 1370. Nonetheless, Senator Fremont acknowledged that the permit size would be inadequate for future development, stating that "[t]he machinery necessary to work a mine will eventually cover a large space; but in the meantime one man may get possession of too much." *Id.* at 1362. He stated further that "[i]n a mineral country, reputed to be of such extraordinary richness, these dimensions were considered abundantly large for the mine itself, and sufficiently so to afford room for temporary buildings in the beginning of operations." *Id.* at 1370. He warned, however, that "when the mineral districts shall be better known, and the locality of the lodes or veins precisely marked out, larger contiguous spaces may be granted to miners for the construction of the buildings absolutely necessary for extensive works." *Id.* Senator Fremont's bill, which would have precluded an individual miner from obtaining more than one mining permit, was not enacted. At the same time, his concern for adequate "machinery" space foreshadowed the adoption of the mill site provision.

2. The 1866 Lode Law: 200-Foot Lode Claims

In 1866, Congress enacted the Lode Law, which provided for lode claims of 200 feet in length along the vein for each locator. The Lode Law allowed the discoverer of the lode or vein to locate an additional claim of 200 feet in length, "together with a reasonable quantity of surface for the convenient working of the same as fixed by local rules . . . ." Lode Law of 1866, ch. 262, sec. 4, 14 Stat. 251, 252 (1866). In addition, the Lode Law expressly limited the number of lode claims that each person could locate and patent by providing that "no person may make more than one location on the same lode . . . ." *Id.* Although the House of Representatives originally

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[11] The term "mining claim" seems not to have entered legislative jargon until 1870, when Congressman Sargent, who, in proposing the Placer Act amendments to the 1866 Lode Law, referred to miners "proving up their preemptions, or 'claims,' as they are called in mining parlance." 42 Cong. Globe, 41st Cong., 2d Sess. 2028 (1870).

considered a bill that would have restricted lode claims to forty acres,[12] Congress ultimately passed the Senate bill that provided for 200-foot lode claims, and that became known as the Lode Law.

The Senate Committee on Mines and Mining stated that one of the purposes of the Senate proposal was "to provide the most generous conditions looking toward further explorations and development." S. Rep. No. 39-105, at 1 (1866). Senator Stewart, one of the bill's principal proponents, argued that the law would grant miners "such reasonable amount of surface as the miners shall determine by local rules to be necessary for the working of the same." 36 Cong. Globe at 3227 (statement of Sen. Stewart). Another senator explained that this allowed "as much land on either side of that lode as is necessary to carry on his operations, which is determined by the local law." *Id.* at 3952 (statement of Sen. Conness). This was viewed to allow a miner to take unlimited amounts of land on either side of the vein, if necessary, to carry on mining operations. *See* 45 Cong. Globe, 42nd Cong., 2d Sess. 534 (1872).[13]

3. The 1870 Placer Act Amendments to the Lode Law: 160-Acre Placer Claims

In 1870, Congress enacted the Placer Act, which amended the Lode Law by adding provisions for locating and patenting placer claims. Placer Act of 1870, ch. 235, sec. 12, 16 Stat. 217 (1870). The 1870 Act provided that "no location of a placer claim" was to "exceed one hundred and sixty acres for any one person or association of persons . . . ." *Id.* The purpose for the Act was to extend the principle of the homesteading preemption laws to placer mines in the same way Congress had applied the principle to lode mines. 42 Cong. Globe, 41st Cong., 2d Sess. 3054 (1870). The Senate floor debates reveal differing opinions regarding the amount of

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[12] The House bill stated that "[n]o person, corporation, or association shall be permitted to purchase at public or private sale more than forty acres of any such mineral lands . . . ." and "no such mining lot shall contain more than forty acres . . . ." 36 Cong. Globe, 39th Cong., 1st Sess. 4049 (1866); *see also* H. Rep. No. 39-66, at 11 (1866).

[13] Senator Stewart also expressed the need to "guard[] against every form of monopoly, and requir[e] continued work and occupation in good faith to constitute a valid possession." 36 Cong. Globe at 3226 (statement of Sen. Stewart). Congress' intent, he argued, was to recognize "the obligation of the Government to respect private rights which have grown up under its tacit consent and approval." *Id.* at 3227. Despite his concerns about monopolies, Senator Stewart objected to specific size requirements in the legislation. He argued that "[i]n exploring for vein mines it is a vein or lode that is discovered, not a quarter section of land marked by surveyed boundaries," *id.* at 3226, and that "[i]n working a vein more or less land is required, depending upon its size, course, dip, and a great variety of other circumstances not possible to provide for in passing general laws." *Id.* Nonetheless, the Lode Law that was finally passed limited both the size and number of claims that a person could locate and patent.

land each placer miner would be able to locate and patent. Senator Cole reminded the Senate that the Lode Law "restricted the amount upon any lode or vein that could be taken by any one person to two hundred feet, and with an additional two hundred feet to the discoverer of the mine, and it restricted associations, no matter how numerous the members of them might be, to three thousand feet." *Id.* He then proposed to "restrict the amount that may be taken in any placer mine to ten acres," which was, in his judgment, "a very large amount to award to any one person in the mining regions." *Id.* Congress ultimately chose a 160-acre size for placer claims because it was equivalent to the acreage allowed to an agricultural entryman under the homestead or preemption laws. *See id.* at 2028, 4402.

4. The 1872 Mining Law: Twenty-Acre Mining Claims and Five-Acre Mill Sites

On January 15, 1872, Congressman Sargent introduced the bill that would, after further amendment, become the Mining Law. 45 Cong. Globe at 395. The proposed maximum size for lode claims was to be the same as that of the Lode Law–200 feet long–but with a width restriction of 300 feet on each side of the middle of the vein at the surface. *Id.* at 532. For placer claims, the bill proposed to keep the 1870 Placer Act, including its claim size requirements, "in full force." *Id.* at 533. Representative Sargent explained that "[t]he bill [as proposed] does not make any important changes in the mining laws as they have heretofore existed. . . . It does not increase or decrease the amount of lands or extent of lands that a miner may acquire under the mining laws." *Id.* at 534.

The Senate substantially amended the House bill in several significant ways. First, the Senate amended the 1870 Placer Act provisions by creating two classes of placer claims: 20-acre individual placer claims and 160-acre association placer claims. For individual placer claims, the Senate's amendment stated that "no such location shall include more than twenty acres for each individual claimant . . . ." *Id.* at 2460; *see also* Mining Law of 1872, ch. 152, sec. 10, 17 Stat. 91, 94 (1872) (codified at 30 U.S.C. § 35). At the same time, the Senate retained the existing, and conflicting, language of the Placer Act which states that "no location of a placer claim . . . shall exceed one hundred and sixty acres for any one person or association of persons . . . ." 30 U.S.C. § 36. In addition, the Senate amendment changed the length of lode claims from 200 feet to 1500 feet, while retaining the width–300 feet on each side–contained in the House bill.

More importantly here, the Senate amendment effectively terminated the restriction that each person could locate and patent only a single mining claim on the same lode. As noted above, the 1866 Lode Law had expressly provided that "no person may make more than one location on the same lode." Sec. 4, 14 Stat. at 252. The Mining Law, as enacted, provided instead that:

> A mining-claim located after the tenth day of May, eighteen hundred and seventy-two, whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a

> mining-claim shall be made until the discovery of the vein or lode within the limits of the claim located.

Sec. 2, 17 Stat. at 91 (codified at 30 U.S.C. § 23). Although the Mining Law imposed size limitations on mining claims, the statute removed the restriction of the Lode Law that "no person may make more than one location on the same lode." One senator recognized that this provision would "allow every individual to take up a claim of fifteen hundred feet" and "any number may afterward combine." 45 Cong. Globe, 42d Cong., 2d Sess. 2458 (1872) (statements of Sen. Cole). The congressman who introduced the bill expressed the belief that "a quartz lode of fifteen hundred feet will be perhaps as much as any company can profitably work." *Id.* at 2898 (statement of Rep. Sargent). Nonetheless, the important point is that the Mining Law removed the 1866 Lode Law's specific restriction against a person locating more than one mining claim on the same lode.

When the bill that became the Mining Law was introduced, the bill contained no provision for mill sites. The Senate added a provision to the bill, now known as the mill site provision, that allows claimants to patent nonmineral land for mill sites in association with lode claims. *Id.* at 2457. The provision stated that where "non-mineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes," the land may be included in the application for a patent for the lode claim, provided that "no location hereafter made of such non-adjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this act for the superficies of the lode." *Id.* This provision established both the use-or-occupancy requirement for mill site locations, and also the requirement that mill sites cannot exceed five acres. Importantly, the provision did not expressly limit the number of mill sites that a person could locate and patent in conjunction with a mining claim, just as the Mining Law did not limit the number of lode and placer claims that a person could locate and patent. The legislative history does not discuss the mill site provision, as the 1997 Opinion notes. 1997 Opinion, at 7 n.15. In fact, Congress did not mention the subject of mill sites in the legislative history until shortly before the Mining Law was enacted, and, except for minor word changes, the mill site provision was enacted in essentially the same form in which it was introduced.

Although the legislative history does not mention the mill site provision, it was well known at the time of the Mining Law's enactment in 1872 that mining companies used more than five total acres of surface land for mill site purposes to support a single mining claim. In 1863, for example, the Gould and Curry Gold and Silver Mining Company recorded a survey of a 272.72-acre claim that it used for milling purposes to support a 608-foot length of the most famous mining lode in the West–the Comstock Lode near Virginia City, Nevada. Elliot Lord, *Comstock Mining and Miners* 124-25 (Howell-North ed., 1959) (1883); Dennis J. Mahoney, *The History of the Comstock Mines: The Gould and Curry*, *in* Individual Histories of the Mines of the Comstock: A Joint Project of the W.P.A. Nevada State Writer's Project and The Nevada State Bureau of Mines, at 94 (Max Crowell & Robert W. Prince eds., 1941); abstract from Comstock Mining Services, April 7, 2001. This demonstrates that, contrary to the 1997 Opinion, mining

companies even in 1872 used more than five total acres for mill-site purposes to develop individual mining claims, and that this practice is not simply a modern phenomenon. In the Mining Law, Congress clearly set the size of individual mill sites at five acres. It is doubtful, however, that Congress intended to preclude mining companies from obtaining more than one mill site per mining claim, in light of the historical fact, as in the case of the Comstock Lode, that mining companies were using much more than five total acres for milling purposes for individual claims. If Congress had intended to stop this existing practice in the 1872 Mining Law, Congress presumably would have made its intent clear in the legislative history, if not the statute itself. The silence of the statutory language and legislative history suggests that Congress did not mean to fundamentally alter this practice.

5. The 1960 Amendment

In 1960, Congress amended the Mining Law to allow mining claimants to locate five-acre mill sites for placer claims. Pub. L. No. 86-390, 74 Stat. 7 (1960) (codified at 30 U.S.C. § 42(b)).[14] As noted, the 1872 Mining Law authorized five-acre mill sites only for lode claims; the 1960 amendment extended the same authorization to placer claims. The 1960 amendment, similarly to the original mill site provision for lode claims, did not expressly limit the number of mill sites that could be located and patented per mining claim.

The legislative history of the 1960 amendment indicates that Congress adopted the recommendations submitted by the Department of the Interior, through the Assistant Secretary for Public Land Management. S. Rep. No. 86-904, at 2 (1959). The Assistant Secretary stated that the amendment was necessary to allow placer claimants to obtain mill sites under the same terms as lode claimants. *Id.* at 3. In addition, the Assistant Secretary recommended deletion of the words "for each individual claimant" in the bill, because "permitting the location of [the originally proposed] 10 acres 'for each individual claimant' would . . . permit a number of individual claimants to band together to receive far more than 10 acres at one site." *Id.* The Senate Committee on Interior and Insular Affairs accepted the recommendation "so as to impose a limit of one 5-acre millsite in any individual case preventing the location of a series of 5-acre

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[14] The 1960 amendment provides:

> (b) Where nonmineral land is needed by the proprietor of a placer claim for mining, milling, processing, beneficiation, or other operations in connection with such claim, and is used or occupied by the proprietor for such purposes, such land may be included in an application for a patent for such claim, and may be patented therewith subject to the same requirements as to survey and notice as are applicable to placers. No location made of such nonmineral land shall exceed five acres and payment for the same shall be made at the rate applicable to placer claims which do not include a vein or lode.

Pub. L. No. 86-390, 74 Stat. 7 (1960) (codified at 30 U.S.C. § 42(b)).

millsites in cases where a single claim is jointly owned by several persons." *Id.* at 2. The Senate Report also explained that modern placer mining "is now primarily concerned with the production of nonmetallic minerals for industrial purposes, such as gypsum, limestone, quartzite, bentonite, and related clay minerals and building materials," and "[t]hese minerals generally require substantial plants for their processing, and the investment in the necessary installations often involves millions of dollars." *Id.* at 1-2.

This legislative history shows that the Assistant Secretary and the Senate committee did not want to allow several placer claimants to "band together" to locate a single mining claim and thereby become automatically entitled to multiple mill sites, without regard to whether the claimants actually needed to use or occupy the mill sites to develop the claim. This history does not indicate, however, that the Assistant Secretary and the Senate committee intended to limit categorically the number of mill sites that could be located and patented per mining claim. In fact, the statutory language contains no explicit restriction on the number of mill sites for each placer claim. Moreover, when the Assistant Secretary recommended that the mill site provision for placer claims be added to the Mining Law, the BLM Manual contained a provision interpreting the Mining Law as authorizing multiple mill sites for lode claims. According to the BLM Manual, "[m]ore than one millsite may be located, provided each tract is of no more than 5 acres of nonmineral land and that each is needed and used for millsite purposes." BLM Manual, ch. 5.2.15 B. (Nov. 19, 1958). It is unlikely that the Assistant Secretary would have supported proposed legislation that would overturn the Department's settled administrative practice, or that Congress would have altered this settled practice without comment. Indeed, since the Senate committee recognized that the development of placer claims "require substantial plants for their processing, and the investment in the necessary installations often involves millions of dollars," *see* S. Rep. No. 86-904, at 1-2 (1959), Congress can hardly have intended to deny claimants the requisite number of mill sites necessary to process their placer claims and protect their investments. Therefore, it does not appear that Congress intended to impose a restriction of one mill site for each placer claim.

The Senate Committee on Interior and Insular Affairs stated that the 1960 amendment "merely grants to holders of placer claims the same rights to locate a 5-acre millsite as has been the case since 1872 in respect to holders of lode claims." *Id.* at 2. This demonstrates that Congress intended to apply the same requirements for placer-related mill sites that already applied under the Mining Law to lode-related mill sites. Since the Mining Law imposed no numerical limits on lode-related mill sites, the 1960 amendment imposed no numerical limits on placer-related mill sites. Since the Department was contemporaneously applying the Mining Law as not categorically restricting the number of lode-related mill sites that could be located and patented, Congress obviously did not intend to adopt a different result for placer-related mill sites, by applying numerical restrictions to the latter that did not apply to the former. Congress intended to conform the mill site requirements for both kinds of claims, and thus did not intend to impose numerical mill site restrictions for either kind of claim.

6. Summary of Legislative History

The legislative history indicates that the Mining Law of 1872 does not categorically limit the number of mill sites that a claimant may locate and patent per mining claim. The fact that the 1866 Lode Law, as well as the original 1850 Fremont bill, contained express provisions limiting the number of mining claims that an individual could locate and patent–but that these limitations did not appear in the Mining Law enacted in 1872–indicates that the Mining Law was not intended to prevent individual claimants from locating and patenting multiple mining claims, as the courts have held. The absence of numerical restrictions in the mill site provision similarly indicates that the provision does not prevent mining claimants from locating and patenting multiple mill sites per mining claim.

To imply that the mill site provision contains a numerical limitation of one mill site per mining claim would frustrate the congressional purpose of the 1872 Mining Law, which was "to promote the development of the mining resources of the United States . . . ." 45 Cong. Globe, 42d Cong., 2d Sess. 395 (1872). Such a numerical limitation would make it difficult in many cases for miners to develop the minerals that Congress itself had opened for exploration and development, because a single five-acre mill site is in many cases inadequate to serve the associated mining claim. For example, most low-grade-ore-deposit mines on the public lands require more than five acres of nonmineral mill site lands in order to develop the mineral deposits encompassed by a twenty-acre mining claim.[15] Thus, much of modern mining could not take place if mill sites were limited to one five-acre site per mining claim. This does not suggest that the Mining Law should be interpreted simply to harmonize with modern mining practices. As indicated earlier, mining practices at the time of the Mining Law's enactment in 1872 relied on more than five acres for milling purposes for individual mining claims, as in the case of the Comstock Lode. The Mining Law should not now be interpreted in a way that makes modern mining practices infeasible and interferes with the congressional goal of promoting development of the nation's mineral resources, unless Congress indicated that it intended this result. No such indication appears in the legislative history of the Mining Law. On the contrary, the legislative history indicates that Congress intended to impose no numerical restriction on locating and patenting either mining claims or mill sites.

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[15] Today, "most of the large mines in this country are operating on ore so low in grade that it would have been back-filled or thrown over the dump not many years ago." J.B. Knaebel, "Land Acquisition for Mining Development," *Symposium on American Mineral Law Relating to Public Land Use* 63 (1966). According to Knaebel, a miner would need 252 acres of surface area to excavate a 23-acre low-grade disseminated-copper ore body from under 400 feet of overburden. *Id.* at 70. Miners have been developing low-grade copper, lead, gold, and iron ore deposits since use of froth flotation began in the early 20th Century. Frederick Merck, *History of the Westward Movement* 495-500 (1978); J.M. Lucas, "Gold," *Mineral Facts and Problems* 323 (Bureau of Mines 1985); Janice L.W. Jolly, "Copper," *Mineral Facts and Problems* 204-05 (Bureau of Mines 1985).

The use-or-occupancy requirement of the mill site provision disallows claimants from locating and patenting more mill sites than are necessary for mining or milling purposes. This requirement authorizes the Secretary to exercise discretion in challenging the validity of mill sites that are unnecessary for mining or milling purposes, while not precluding claimants from locating and patenting multiple mill sites if each site satisfies the use-or-occupancy requirement. This construction furthers the congressional purpose of encouraging mineral development of the public lands and also disallows miners from using the public lands in a wasteful manner or for purposes unrelated to mining or milling. The 1997 Opinion, on the other hand, would preclude the Department from approving a proposed mining plan to develop federal mineral resources if the plan proposes to use more than one five-acre mill site per mining claim, even though the applicant could show that a single five-acre mill site was inadequate to effectuate the mining plan. The 1997 Opinion's categorical approach cannot be reconciled with Congress' goal of promoting development of mineral resources on the public lands.

If the 1997 Opinion were in effect, mining companies apparently would be able to avoid a numerical restriction on mill sites simply by subdividing their mining claims into smaller, contiguous claims, so that they could locate more mill sites to obtain adequate mill site acreage for their proposed operations. This is possible because the Mining Law imposes no automatic *minimum* limitation on the size of a mining claim.[16] Prior to the 1997 Opinion, no mining company in fact subdivided its mining claims for this purpose, obviously because the Department's administrative practice did not limit the owner of a mining claim to a single mill site. After the 1997 Opinion was issued, however, at least one mining company subdivided its maximum-sized lode claims into several smaller contiguous claims so the company could keep all of its otherwise multiple mill sites. The company's effort was successful because the Department has concluded that the subdivided lode claims are valid. BLM Mineral Report for Glamis-Imperial Gold Company (Sept. 27, 2002). Thus, the 1997 Opinion's conclusion that a claimant may locate only a single mill site per mining claim could be easily circumvented, which demonstrates that Congress likely did not intend to impose such a limitation. If Congress were concerned about allowing claimants to locate and patent only one mill site per mining claim, it presumably would have placed a minimum-size limitation on mining claims to prohibit subdividing mining claims to obtain additional mill site acreage. The Mining Law, however, contains no such limitation.

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[16] While the Mining Law provides that the maximum width of a lode claim is six hundred feet, it also allows the Department to limit the width of lode claims to fifty feet. 30 U.S.C. § 23. Assuming a five-acres-per-claim limitation, had the Department ever chosen to exercise this authority, claimants would have automatically gained rights to locate and patent twelve mill sites in association with twelve fifty-foot-wide claims in place of the one mill site in association with one six-hundred-foot-wide claim. Consequently, doling out mill sites based on the number of mining claims makes little sense given the lack of any uniform claim size.

Although the legislative history does not indicate why Congress chose to limit the size but not the number of mining claims and mill sites, Congress presumably intended to require mining claimants to demonstrate that they are entitled to or need more than one mining claim or mill site of a specified size for mineral purposes. By imposing this burden on claimants, Congress required them to establish each claim on a discrete, parcel-by-parcel basis, thus preventing them from attempting to patent huge swaths of federal lands. Under the Mining Law, a mining claimant must demonstrate that the lands included in each mining claim contain a discovery of a valuable mineral deposit, 30 U.S.C. § 23, and a mill site claimant must demonstrate that the lands included in each mill site location are used or occupied for mining or milling purposes. *Id.* § 42. The size limitations adopted by Congress ensure that mining and mill site claimants are able to patent only the minimum amount of public domain land necessary or appropriate to support their claims. Thus, for example, one who proposes to patent a 100-acre parcel for mill site use to support a 500-acre mining parcel must show that *each* 5-acre segment of nonmineral land is necessary for mill site use, rather than claiming the entire 100-acre parcel as a single mill site. This ensures that claimants must demonstrate their good faith while disallowing them from gaining title to huge tracts of public lands for purposes altogether unrelated to mining, such as for agricultural use.[17]

Congress may also have intended to standardize the amount of surface lands conveyed for mining claims or mill sites by preventing conveyances of grossly disproportionate amounts of public lands for individual claims or mill sites. The size limitations altered the practice the Department adopted after the 1866 Lode Law of conveying wildly variant amounts of surface acreage along with the vein or lode. *See* 1 *Lindley on Mines* § 59, at 97-99 (describing various amounts of surface acreage the Department conveyed with a vein or lode, including "around the discovery shaft an amount of ground deemed large enough for the convenient working of the mine, and a narrow strip extending therefrom as the handle of the broom," and lands "covering a few hundred feet of a lode, embraced within irregular surface boundaries which covered an area of several hundred acres").

By requiring claimants to demonstrate their good faith and actual need or entitlement, and by standardizing the size of claims and sites, Congress provided for more efficient administration of the Mining Law. Certainly it is administratively easier, for example, to apply the use-or-occupancy requirement by focusing on discrete, size-limited segments of federal land to determine the actual needs of the claimant, rather than evaluating a claim seeking title to a virtually unlimited expanse of federal lands. There are various plausible explanations for why Congress decided not to place numerical restrictions on mill sites, and these explanations would not, as argued in the 1997 Opinion, "vitiate the five-acre statutory limit on the size of millsites." 1997 Opinion, at 5. We need not determine why Congress reached its decision. The overall

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[17] The Mining Law contains additional provisions that require claimants to demonstrate good faith, such as the requirements that claimants perform at least $100 worth of labor annually to maintain the claim and expend at least $500 worth of labor on each claim before the claim qualifies for patenting. 30 U.S.C. §§ 28, 29.

structure of the Mining Law and its legislative history indicate that Congress decided not to impose numerical limits, and our conclusion is consistent with that congressional intent.

III. The Department's Administrative Practice and Interpretation

The Supreme Court has "long recognized that considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer . . . ." *Chevron, U.S.A. Inc., v. NRDC*, 467 U.S. 837, 844 (1984). Indeed, courts give considerable respect to the interpretation given a statute "'by the officers or agency charged with its administration.'" *Ford Motor Credit Co. v. Milhollin*, 444 U.S. 555, 566 (1980) (quoting *Zenith Radio Corp. v. United States*, 437 U.S. 443, 450 (1978)). The Supreme Court has recognized that "execution of the laws regulating the acquisition of rights in the public lands and the general care of these lands is confided to the Land Department . . . ." *Cameron v. United States*, 252 U.S. 450, 459-60 (1920). As we now explain, the Department of the Interior's prevalent administrative practice and interpretation has been that the mill site provision limits the size of individual mill sites but does not categorically limit the number of mill sites that a claimant may locate and patent per mining claim. The Department has administered the mill site provision in accordance with that view.

A. The Department's Regulations

Turning first to the Department's regulations, the regulations adopted by the Department regarding the mill site provision mirror the statutory language.[18] A patenting regulation, promulgated in 1872 and unchanged since then, describes a mill site as "a piece of nonmineral land not contiguous [to a vein or lode] for mining or milling purposes, not exceeding the quantity allowed for such purpose by section [42 of the Title 30 of the United States Code] . . . ." *See, e.g.*, 43 C.F.R. § 3864.1-1(b) (2002); *id.* § 3864.1-1(b) (1992); *id.* § 3460.1(b) (1969); *id.* § 185.65 (b) (1964); 37 Pub. Lands Dec. 757, 771 (1909); 28 Pub. Lands Dec. 594, 605 (1899); 25 Pub. Lands Dec. 561, 581 (1897); *see also* 1997 Opinion, at 6 n.12. The regulatory subpart that deals with locating mill sites, 43 C.F.R. subpart 3844 (2002), contains two sections, one of which simply quotes the statutory mill site section, *id.* § 3844.0-3, and the other of which requires claimants to use or occupy mill sites for mining or milling purposes "in connection with the lode or placer claim with which it is associated," and also provides that claimants may locate independent mill sites for quartz mills or reduction works. *Id.* § 3844.1. Another regulatory provision, published in 1970, states that "[n]o one millsite may exceed five acres . . . ." for placer

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[18] The Department's first Mining Law regulations stated that the "law expressly limits mill-site locations made from and after its passage to *five acres*, but whether so *much* as that can be located depends upon the local customs, rules, or regulations." Mining Regulations § 91, June 10, 1872, Henry N. Copp, *United States Mining Decisions* 170, 192 (1874) (emphasis in original). This early regulation, since rescinded, clearly limited each mill site location to five acres but did not limit claimants to one mill site per mining claim.

claims, 43 C.F.R. § 3864.1-1(c) (2002). These regulations are broadly written and allow for the Department's past prevalent practice and interpretation of the mill site provision, as described below. The Department has acted appropriately under these regulations to allow claimants to locate and patent more than one mill site per mining claim if each mill site does not exceed five acres in size and is used or occupied for mining or milling purposes.

B. The BLM Guidance and Practice

As we now show, the BLM, which is charged with administering and enforcing the mill site provision, has consistently interpreted the mill site provision as allowing claimants to locate and patent more than one mill site for each mining claim if the mill site is used or occupied for mining or milling purposes. This interpretation is reflected in the BLM's extant written guidance from 1954 to the present and in the BLM's administrative practice through its state offices conforming with the written guidance. In some instances, this interpretation is also reflected in departmental documents that list the statutory requirements for mill sites without mentioning any categorical limit on the number of mill sites. The failure to mention any categorical limitation on the number of mill sites reflects an assumption that the mill site provision does not impose such a limitation.

1. BLM Guidance

For nearly a half century, the BLM's written guidance has reflected the view that the mill site provision does not categorically limit the number of mill sites that may be located and patented for each mining claim. The BLM Manual, adopted in 1954, sets forth three requirements for mill sites to qualify for patenting: (1) the lands must be nonmineral in character, (2) the mill site cannot be contiguous to a vein or lode, and (3) "[t]he mill site does not include an area exceeding 5 acres." BLM Manual, ch. 3.3.2 (Apr. 20, 1954). The 1954 BLM Manual contained no restriction on the number of mill sites that may be located for a mining claim. Additionally, the BLM in 1954 issued a document entitled "Mining Locations, Entries and Patents," which stated, on page 28, that "[i]t has been held that more than one mill site may be embraced in an application for a patent, provided each such tracts [sic] keep within the restriction of 5 acres of non-mineral land and that each is needed and used for mill site purposes." Similarly, a BLM Manual issued in 1958 stated, "More than one millsite may be located, provided each tract is of no more than 5 acres of nonmineral land and that each is needed and used for millsite purposes." *Id.* ch. 5.2.15 B. (Nov. 19, 1958). Thus, the BLM guidance and accompanying documents made clear that the Mining Law imposes no categorical restrictions on the number of mill sites that may be located and patented for each mining claim.

The BLM continued to adhere to this view. In 1966, a BLM minerals specialist prepared a summary of mill site requirements. Under the topic heading "Number of Millsites," the minerals specialist stated, "Although there is no number specified, it has been held that as many millsites as are actually needed for the operation can be located. There must be a clear showing of need and use if more than one millsite is taken. This also applies to custom mills."

Memorandum from Minerals Specialist, PSC, to Chief, Mining Staff, Washington Office, BLM 1 (May 11, 1966). In another 1966 document entitled "Mineral Patents–Information Relative to the Procedure for Obtaining Patent to a Mining Claim," the BLM stated, "Lands entered as mill sites may be for an area of not more than 5 acres for each mill site and must be shown to be nonmineral in character and not contiguous to a vein, lode, or placer." Mineral Patents–Information Relative to the Procedure for Obtaining Patent to a Mining Claim 13 (1966). These documents support the view that the five-acre mill site provision defines the size of individual mill sites but does not limit their number.

In 1976, the BLM Manual stated that a mineral examiner, in conducting a field examination, must make certain determinations regarding mill sites: (1) the lands must be nonmineral in character, (2) the claim must be occupied and used for mining or milling purposes; and (3) there must be a quartz mill or reduction works on the claim if for custom mill. BLM Manual § 3930.14 C (Oct. 8, 1976). The BLM Manual also stated, "The maximum size of a mill site claim is 5 acres. However, several mill site claims may be embraced in a single application, provided the total acreage does not exceed 5 acres per mill site." *Id.* § 3864.11 B (Oct. 6, 1976). Again, the BLM Manual articulated limitations on the size of mill sites but not their number, except to the extent it applied the use-or-occupancy requirement.

In 1980, the BLM Washington Office issued a "Mineral Survey Procedures Guide" that stated, on page 26, "There is no limit to the number of mill sites that may be located, so long as they are necessary for the operation of a mine or mill." Today, BLM's Handbook for Mineral Examiners provides that "[a]ny number of millsites may be located but each must be used in connection with the mining or milling operation." BLM Handbook for Mineral Examiners, H-3890-1, Ch. III § 8 (Mar. 17, 1989). Additionally, the BLM Manual states that "[a] mill site cannot exceed 5 acres in size. There is no limit to the number of mill sites that can be held by a single claimant." BLM Manual § 3864.11 B (1991).

Thus, the BLM has, through its written guidance, consistently interpreted the five-acre mill site provision as limiting the size of individual mill sites but not as precluding claimants from locating and patenting multiple mill sites in association with a single mining claim.

2. BLM Practice: 1996 Survey

In order to assess BLM's ongoing practice, BLM's Deputy Director in 1996 conducted a survey of all BLM state offices to determine the practice of each office regarding patenting and approving plans of operations involving more than one five-acre mill site per mining claim. Memorandum from Mat Millenbach, Deputy Director, BLM, to Assistant Directors and State Directors, BLM (Mar. 5, 1996). Although the 1997 Opinion stated that "BLM's survey responses revealed no general or uniform policy or practice among the BLM State Offices on this question," 1997 Opinion, at 1 n.2, the state office responses in fact reveal that BLM's widely-accepted practice was to treat the five-acre requirement in the mill site provision as a limit on the size of individual mill sites and nothing more. Indeed, the survey responses reveal that the state

offices frequently have patented more than one mill site per associated mining claim. The survey responses also demonstrate that BLM's principal concern regarding mill site validity is in determining whether claimants are using or occupying each mill site for mining or milling purposes.

A summary of the responses of the state offices is provided in the Appendix attached to this opinion. We will now give some examples of the responses to demonstrate the extent to which the state offices have followed a policy of issuing patents or approving plans of operations that involve multiple mill sites when the applicant is able to demonstrate that each mill site is necessary for mining or milling purposes.[19]

The California State Office stated that "[i]t has been common practice in California to issue patents for multiple millsites." Memorandum from Leroy M. Mohorich, Acting Deputy State Director, Division of Energy and Minerals, California State Office, BLM, to Director, BLM 3 (Apr. 10, 1996). The office reported having issued thirty-two patents for 455 mill sites since 1966, and that it had at least fifteen multiple-mill-site patent applications pending. *Id.* The office also reported having approved two plans of operations for large open-pit, heap-leach operations wherein the mill-sites-to-mining-claims ratio was 3 to 1 and 6 to 1. *Id.* According to the California office:

> In the decision *Utah International, Inc.* (36 IBLA 219 (1978)), the IBLA recognized multiple mill sites in a patent application, most of which were approved. Some confusion may have been generated from earlier decisions where the Land Office stated that only one mill site was needed for a particular operation. The decisions were not based on any rule related to one mill site per mining claim, but that only one mill site was needed.

Id at 2.

The Nevada State Office reported having 20 pending multiple-mill-site patent applications. Memorandum from Thomas V. Leshendok, Deputy State Director, Mineral Resources, Nevada State Office, BLM, to Director, BLM Attach. 8-1 (Apr. 23, 1996). According to that office:

> Patenting and use authorizations for multiple millsites is common in Nevada. Use authorizations started on January 1, 1981, the effective date of the 43 CFR 3809

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[19] In describing the state office findings, we will refer to a patent application or a plan of operations that encompasses more than one five-acre mill site in association with each mining claim as a "multiple-mill-site patent application" or "multiple-mill-site plan of operations," respectively.

> regulations. It is not known when the patenting of multiple mill sites first occurred. Available records show that the practice was occurring by June 1, 1964.

Id. at 1. The Nevada State Office stated further that in reviewing patent applications and plans of operations, "the ratio of mill sites to associated mining claims is not determined." *Id.* In mill site patenting review, the state office evaluates "the mineral character, need and current use of each mill site." *Id.* Although not mentioned by the Nevada State Office in its response to the 1996 survey, the Nevada State Office has apparently issued at least nine patents since 1979 that include more mill sites than mining claims. *See Effect of Federal Mining Fees and Mining Policy Changes on State and Local Revenues and the Mining Industry: Hearing Before the House Comm. on Natural Resources*, 106th Cong. 5-6 (2001) (statement of Richard W. Harris, Attorney at Law, Harris & Thompson, based on his own research in the BLM Nevada State Office). The average mill-sites-to-mining-claims ratio in those patents was nearly seven mill sites to one mining claim. *Id.*

The Idaho State Office reported having six pending multiple-mill-site patent applications and having issued a multiple-mill-site patent in 1985. Memorandum from J. David Brunner, Deputy State Director, Resource Services Division, Idaho State Office, BLM, to Director, BLM 1 (Apr. 22, 1996). The office stated that "we do not review patent applications or plans of operation with respect to a strict ratio of millsites to associated claims." *Id.* at 2. It also reported having refused to patent mill sites included in two patent applications because they were not associated with any mining claims and did not meet the requirements for independent mill sites. *Id.*

The Oregon State Office stated that "[p]atenting of multiple millsites has been an accepted practice in this office, as far back as the mid to late sixties." Memorandum from Associate State Director, Oregon & Washington State Office, BLM, to Roger Haskins, Senior Specialist, Mining Law Adjudication, Solid Minerals Group, Washington Office, BLM 2 (Apr. 30, 1996).

Several other state offices affirmed that they examine mill site applications by considering the use-or-occupancy requirement, but that they do not impose any "set ratio" of mill sites to associated mining claims. *See, e.g.*, App. at 1 (Arizona, Colorado), 2 (Montana). Significantly, none of the state offices indicated that they limited mill sites to one per claim.

This survey indicates that BLM state offices charged with enforcement responsibility have interpreted and applied the mill site provision as limiting the number of mill sites to those that are reasonably necessary to support mining operations, but not as categorically restricting the number of mill sites to one for each mining claim. The BLM state offices have applied the mill site provision in conformity with the BLM's extant written guidance since at least 1954, which allows claimants to locate and patent multiple mill sites per mining claim if each mill site is properly used and occupied. Hence, the Department's prevalent interpretation and application of the mill site provision for at least a half century has been that the provision does not preclude

claimants from locating and patenting multiple mill sites so long as each mill site is used or occupied for mining or milling purposes.

3. Forest Service Guidance

The Forest Service's practice and interpretation of the mill site provision has been similar to the BLM's. Under the 1897 Organic Act and the Surface Resources Act of 1955, the Secretary of Agriculture manages the surface of National Forest System lands, including surface disturbance from mining activities. 16 U.S.C. §§ 478, 482, 551; 30 U.S.C. §§ 611-14; 36 C.F.R. Part 228, Subpart A. The BLM manages the mineral estate for purposes of the Mining Law. 16 U.S.C. § 472; 43 U.S.C. § 1457. Under a memorandum of understanding between BLM and the Forest Service dated April 1, 1957, the Forest Service conducts validity examinations for mining claims and mill sites located on National Forest System lands. As a result, the Forest Service has developed a minerals and geology manual for its mineral examiners. Since at least 1990, the Forest Service manual has stated that:

> The number of millsites that may be legally located is based specifically on the need for mining or milling purposes, irrespective of the types or numbers of mining claims involved.

Forest Service Manual § 2811.33 (1990). Therefore, the Forest Service's written guidance recognizes that the mill site provision does not limit mill sites to one per mining claim.

C. The Department's Administrative Decisions

The Department's administrative decisions indicate that–similarly to the BLM written guidance and the practice of the BLM state offices–the Department has relied on the use-or-occupancy requirement to regulate the amount of mill site acreage a claimant may locate and patent. As we have noted, this requirement provides that a mining claimant's mill site acreage for lode claims is limited to the amount of nonmineral land "used or occupied . . . for mining or milling purposes," and for placer claims, the amount of nonmineral land that is "needed . . . for mining, milling, processing, beneficiation, or other operations . . . and is used or occupied . . . for such purposes . . . ." 30 U.S.C. § 42. An early departmental decision recognized the importance of this requirement, stating that the "manifest purpose of Congress [in the mill site provision of the Mining Law] was to grant an additional tract to a person who required or expected to require it for use in connection with his lode; that is, to one who needed more land for working his lode or reducing the ores than custom or law gave him with it." *Charles Lennig*, 5 Pub. Lands Dec. 190, 192 (1886). The Interior Board of Land Appeals has recognized that the "essence of the millsite appropriation is use or occupancy." *United States v. Swanson*, 93 Interior Dec. 288, 299 (1986). The factual controversies involved in administrative mill site validity or patenting cases have, almost without exception, turned on application of the use-or-occupancy requirement, that is, on whether the claimants used or occupied or expected to use or occupy the mill sites for mining or milling purposes. *See, e.g., United States v. Rukke*, 32 IBLA 155, 160 (1977); *United*

States v. Dietemann, 26 IBLA 356, 364-65 (1976); *United States v. Pressentin*, 71 Interior Dec. 447, 458 (1964); *Ash Peak Mining Co.*, 47 Pub. Lands Dec. 580, 581 (1920); *Alaska Mildred Gold Mining Co.*, 42 Pub. Lands Dec. 255 (1913); *Alaska Copper Co.*, 32 Pub. Lands Dec. 128 (1903);*Gold Springs & Denver City Mill Site*, 13 Pub. Lands Dec. 175 (1891); *Peru Lode & Mill Site*, 10 Pub. Lands Dec. 196 (1890); *Rico Town Site*, 1 Pub. Lands Dec. 556, 557 (1882).[20] Over one hundred administrative and judicial decisions have examined the validity of mill sites by determining whether the claimant was properly using or occupying the mill sites at issue. The controversies regarding the mill site provision have almost always focused on the use-or-occupancy requirement, and not on whether the provision imposes numerical limitations on mill sites.

The 1997 Opinion stated that "[t]he Department has never held . . . that a claimant may patent more than five acres of land for a millsite in connection with one mining claim." 1997 Opinion, at 11. In fact, we have seen that the BLM's written guidance clearly takes the view that more than one mill site may be located for each mining claim–assuming that the use-or-occupancy requirement is met–and this written guidance has been followed in actual practice by BLM state offices for nearly a half century, as the 1996 survey shows. Indeed, the 1996 survey reveals that the Department has often patented more than five acres of nonmineral lands in connection with a single mining claim. *See* Appendix. The 1997 Opinion acknowledged that "[v]ery few reported federal or state court cases concern the millsite provision of the Mining Law, and none addresses how many millsites may be located." *Id.* at 8 n.16. The dearth of judicial and administrative cases may be explained by the fact that the patentees have no reason to challenge the Department's view that numerical limitations do not apply. This strengthens the conclusion that the Department has never imposed this requirement in administering the mill site provision.

In support of its argument to the contrary, the 1997 Opinion cited several administrative decisions rendered by the Department of the Interior that purportedly concluded that the mill site provision restricts mill sites to one for each mining claim. 1997 Opinion, at 8-11. Closer examination of these decisions reveals that they do not support this conclusion. As we have seen, most administrative decisions regarding mill site validity turned on whether the mill sites were being properly used or occupied and did not mention a numerical limitation. As will be seen, at least one administrative decision appeared to assume that the claimant could locate and patent more than one mill site per claim, contrary to the 1997 Opinion. Other decisions, particularly some early ones, appeared to assume the opposite, *i.e.*, that the claimant could *not*

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[20] *See also* Richard W. Harris & Richard K. Thompson, *Millsites: Current Law and Unanswered Questions*, 38 Rocky Mtn. Min. L. Inst. § 12.03[3] (1992)) ("The greatest number of IBLA decisions concerning millsite claims center around the doctrine of 'present use and occupancy.'"); Richard W. Harris, *The Law of Millsites: History and Application*, 9 Nat. Res. Law. 103, 122 n.101 (1976) ("Failure to demonstrate present use or occupancy appears to be the leading cause of millsite invalidation, as a brief reading of the *Gower Federal Service -- Mining* will show.").

locate or patent more than one mill site per claim. In the latter decisions, however, the question did not arise factually and the decisions were reached on other legal grounds. Consequently, any statements in the latter decisions regarding the number of mill sites per claim were dicta, in that they were unnecessary to the decisions. Just as the courts are not bound to apply dicta from earlier decisions, the Department is not bound by dicta appearing in its administrative decisions. *George H. Smith (On Review)*, 10 Pub. Lands Dec. 184, 186 (1889) ("Any remarks made by the court upon questions outside the one under consideration, and not necessary to a decision in the case then before it may properly be considered *obiter dicta* and consequently not binding upon other courts or this Department."); *see also U.S. Bancorp Mortgage Co. v. Bonner Mall P'ship*, 513 U.S. 18, 24 (1994) (describing as customary the Supreme Court's refusal to be bound by dicta).

We now examine chronologically the administrative decisions cited by the 1997 Opinion to demonstrate that, outside of dicta appearing in some early decisions, they do not support the conclusion of the 1997 Opinion.

1. *J.B. Hoggin*, 2 Pub. Lands Dec. 755 (1884). The 1997 Opinion stated that *J.B. Hoggin* is the only reported case that "directly addresses the question of how many millsites may be located in connection with a mining claim." 1997 Opinion, at 8. In fact, the combined acreage of the two mill sites at issue in the case did not exceed five acres. 2 Pub. Lands Dec. at 755. The General Land Office Commissioner had canceled the entry for one of the two mill sites. On appeal, the Secretary asked "whether, keeping within the restriction of 5 acres of nonmineral land, more than one mill site may be embraced in an application for a vein or lode and patented therewith." *Id.*[21] The Secretary concluded that "since the amount in both locations does not exceed five acres, I think in this instance both mill-site entries should be permitted to stand." *Id.* at 756. The decision held that patenting two mill sites that do not exceed five acres combined does not violate the Mining Law's requirements. Although the Secretary assumed in the analysis that the law restricts mill site acreage in a patent application to five acres per lode claim, this assumption was irrelevant to the holding, because the two mill sites together did not exceed five acres.

2. *Hecla Consolidated Mining Co.*, 12 Pub. Lands Dec. 75 (1891). The 1997 Opinion stated that *Hecla* "reaffirmed the five-acre millsite limit." 1997 Opinion, at 9. In that case, however, the applicant sought a patent for a mill site that was neither dependent on a mining claim nor used as an independent mill site. The Secretary affirmed the Commissioner's decision cancelling the mill site entry, concluding that the independent mill site clause "makes no

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[21] We note that at the time of this decision and until 1885, the departmental regulations provided that "[n]o [patent] application will be received or entry allowed which embraces more than one lode location." 2 Pub. Lands Dec. at 725. In 1885, the Secretary overruled this regulation and recognized that patent applications may embrace more than one location. *Good Return Mining Co.*, 4 Pub. Lands Dec. 221, 224-25 (1885) (citing *St. Louis Smelting & Refining Co. v. Kemp*, 104 U.S. 636 (1881)).

provision for acquiring land as mill sites additional to or in connection with existing mill sites, but on the contrary expressly limits the amount of land to be taken in connection with a mill to five acres." 12 Pub. Lands Dec. at 77. The Secretary, to be sure, stated that the proprietor of a quartz mill or reduction works may locate only one five-acre independent mill site under the mill site section's second clause, relating to independent mill sites. The Secretary did not rely on this assumption in denying the mill site application, however, and instead denied the application on grounds that a claimant may not locate mill sites that are not dependent on any mining claims or that do not contain a quartz mill or reduction works. *Id.*

3. *Mint Lode and Mill Site,* 12 Pub. Lands Dec. 624 (1891). The 1997 Opinion argued that this decision "took a strict 'one-for-one' view of the relation between a dependent millsite and the mining claim with which it is associated." 1997 Opinion, at 10. Although the decision refers to five lode claims and five mill sites, the case involved the validity of a single mill site that was associated with a single lode claim.[22] Consequently, the mill site, in order to be patented, had to be used or occupied for mining or milling purposes related to the associated lode claim. The Acting Secretary invalidated the mill site on grounds that there was no evidence that the "mill site is used for mining or milling purposes in connection with the Mint lode." *Mint Lode & Mill Site*, 12 Pub. Lands Dec. at 625. He also opined that the statute "evidently intends to give to each operator of a lode claim, a tract of land, not exceeding five acres in extent, for the purpose of conducting mining or milling operations thereon, in connection with such lode." *Id.* Since the latter statement was unnecessary to the conclusion that the mill site was not being used for mining or milling purposes, the statement was dictum.

4. *Alaska Copper Co.*, 32 Pub. Lands Dec. 128 (1903). The 1997 Opinion argued that this decision "adopted a rule that generally allowed only one five-acre millsite in connection with a *group* of lode claims"–which, although not consistent with the 1997 Opinion's view that mill sites are limited to one for each mining *claim*, at least would be contrary to the view that the mill site provision contains no numerical restriction. 1997 Opinion, at 10 (emphasis added). The *Alaska Copper* case, however, turned on whether a mill site could be located on certain lands reserved by Congress for purposes unrelated to mining, and did not turn on an interpretation of the mill site provision. The patent application in the case involved eighteen lode claims and eighteen mill sites. As the 1997 Opinion noted, "[t]he evidence indicated that only one of the millsites was even arguably being used for mining purposes." *Id.* at 11. The Acting Secretary cited numerous objections regarding the validity of the mill sites at issue, including a dispute over interpretation of the mill site provision; "[w]hilst no fixed rule can well be established, it seems plain that ordinarily one mill site affords abundant facility for the promotion of mining operations upon a single body of lode claims." 32 Pub. Lands Dec., at 130. The Acting

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[22] The decision is not clear regarding whether the five referenced lode claims were contiguous to each other or whether the claimant had located them in separate areas. In order to apply for a patent for a group of mining claims, they must be contiguous. *Charles House*, 33 IBLA 308, 309-10 (1978). If a mining claim is not contiguous to any others, a claimant must file a separate patent application for that claim.

Secretary ultimately concluded, however, in the judgment at the end of his decision, "All other considerations aside, the mill-site claims in question should not have been allowed to pass to entry in the positions in which they are located" because Congress had withdrawn the shoreline on which the claimant had located the mill sites. 32 Pub. Lands Dec. at 131. Congress had reserved a roadway for public use along all navigable waters in Alaska, excepting on mineral lands, *id.*, and had reserved the lands on which the mill sites were located. Since the claimant could not properly locate the mill sites on the reserved lands, the Acting Secretary canceled the entry. *Id.*[23] The case did not involve the question whether more than one mill site could be located for each claim. Moreover, the Acting Secretary's extraneous comments suggested only that one mill site is "ordinarily" needed to develop a group of claims and that "no fixed rule can well be established," *id.* at 130, thereby appearing to suggest that the question ultimately turns on the facts of the case rather than a categorical rule limiting a group of claims to a single mill site.

5. *Hard Cash and Other Mill Site Claims*, 34 Pub. Lands Dec. 325 (1905). The 1997 Opinion cited this case for the proposition, with which we agree, that when a patent application includes more than one mill site, the applicant must show that all of the acreage is necessary. 1997 Opinion, at 11. In this case, the Secretary appeared to adopt the view that the mill site provision does not categorically provide that only one mill site may be located for a group of claims. The Secretary considered an appeal from a decision by the Commissioner of the General Land Office canceling entry for four mill sites that were related to four lode claims, because the applicant had not posted a patent application notice on each mill site. *Id.* at 327. The Secretary affirmed the cancellation on different grounds, concluding that "the mill-site claims are not used or occupied for mining or milling purposes in connection with the lode claim as required by law . . . ." *Id.* at 328. Although the decision was based on the use-or-occupancy requirement, the Secretary suggested a flexible interpretation of the mill site provision, stating that "if more than one mill-site is applied for in connection with a group of lode claims, a sufficient and satisfactory reason therefor must be shown." *Id.* at 327. Thus, the Secretary suggested that–assuming that a "sufficient and satisfactory reason" exists–more than one mill site may be located for an operation.

6. *Yankee Mill Site*, 37 Pub. Lands Dec. 674 (1909). The 1997 Opinion cited this case as support for the conclusion that a "single mining claim could support multiple millsite locations only where the combined area of the millsites was five acres or less." 1997 Opinion, at 9. In

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[23] The Department later refused to disallow mill site locations within lands withdrawn under the Act of May 14, 1898. *Alaska Mildred Gold Mining Co.*, 42 Pub. Lands Dec. 255, 258 (1913). In the *Alaska Copper Co.* decision and many other decisions discussed in this section, the decisions from which the appeal arises are decisions canceling the mining claimant's "entry" in the lands. "Entry" is a term used to refer to a step in "the statutory procedure required to obtain the fee simple title from the Government . . . ." *Alaska Copper Co.*, 43 Pub. Lands Dec. 257, 259 (1914). Significantly, while canceling entry serves to reject the patent application, it "does not declare that the mill site claims or locations were invalid nor does it purport to affect the claimant company's possessory rights or ownership in the premises." *Id.*

particular, the 1997 Opinion quoted language from the decision stating that the Mining Law limits mill sites "by acreage and not by dimensions." *Id.* In this case, the Commissioner of the General Land Office had canceled a mill site entry because the mill site was contiguous to one of the four lode claims in the patent application. The Secretary reversed the Commissioner's decision, ruling that a mill site located contiguous to a lode claim is not objectionable if the mill site embraces only nonmineral land. Although the Secretary stated that the law limits mill sites by acreage, the Secretary did not state that a claimant is limited to one mill site per mining claim. According to the Secretary:

> It seems to the Department, upon further consideration, to be but a logical conclusion, that when by the act of 1872, whereunder a definite superficial area was made available in the case of every lode mining location, a new provision for an additional area, "for mining or milling purposes," was made, with a limitation by acreage and not by dimensions, the prohibition in that connection against the contiguity of the so-called mill-site with "the vein or lode" was intended, in the light of the previously existing practice, to prevent the appropriation within any such area of a further segment of the actual vein or lode upon which the mining claim itself was to be predicated.

Yankee Mill Site, 37 Pub. Lands Dec. at 677. The statement that the mill site provision limits mill sites "by acreage and not by dimensions" refers to the lack of any dimensional requirements for mill sites. In other words, the mill site provision does not require mill sites to be, for example, square in shape; rather, the provision limits mill sites by acreage, allowing mill sites to assume various shapes. Accordingly, the Secretary determined only that the contiguity requirement was intended to "prevent the appropriation within any such area of a further segment of the actual vein or lode" that may be mined, and did not address the question whether the mill site provision limits mill sites to one per claim.

7. *United States v. Swanson*, 14 IBLA 158 (1974). The 1997 Opinion quoted from this decision–which was rendered well after BLM adopted written guidance that the mill site provision does not limit mill sites to one per claim–as support for the view that the provision limits mill sites to one per claim. 1997 Opinion, at 11. In fact, this decision holds only that the Mining Law does not automatically allow claimants to patent all five acres of a mill site if the claimant is using or occupying less than five acres. According to the decision:

> The Secretary's interpretation of how the statute should be administered clearly indicates that a claimant is entitled to receive only that amount of land needed for his mining and milling operations, and this amount can embrace a tract of less than five acres. Furthermore, there is nothing within the statute which prevents the Government from granting less than five-acre tracts when need for a lesser amount of surface area is indicated. The statute states that the location shall not "exceed five acres." Webster's New World Dictionary, College Edition (1973) defines exceed as follows: "to go or be beyond (a limit, limiting regulation,

> measure, etc.) * * *." The reference to five acres in the statute is clearly a ceiling measure, not an absolute, automatic grant.

Id. at 173. The decision did not consider whether more than one mill site may be located and patented per claim, if needed. The decision demonstrates that the Department has historically relied on the use-or-occupancy requirement in administering the mill site provision, rather than categorically restricting mill sites to one per claim.

8. *Utah International, Inc.*, 36 IBLA 219 (1978). In this decision, the Department appears to have recognized that the mill site provision does not impose a categorical limitation on the number of mill sites per mining claim. The applicant filed two patent applications for 201 mill sites associated with a uranium mine.[24] *Id.* at 220. The BLM wholly rejected one application, and partly rejected the other one. *Id.* In rejecting the applications, the BLM reasoned that the Secretary has discretion to deny applications even if an applicant has met all patenting requirements. *Id.* at 223, 225. The patent applicant appealed to the IBLA. The IBLA upheld both applications and overturned the BLM decision. *Id.* at 227. The IBLA did not consider whether the applicant was seeking more than one mill site for each associated lode claim. Instead, the IBLA considered only whether the applicant had met other requirements of the mill site provision, *i.e.*, whether the claimant was using or occupying the mill sites for mining or milling purposes and whether the land was nonmineral in character. *Id.* at 225-26. After concluding that the applicant had met these requirements, the IBLA ordered the issuance of the patent. *Id.* at 226.

If the IBLA in *Utah International* had taken the view that an applicant may not locate and patent more than one mill site per claim, the IBLA obviously would have considered, as a threshold matter, whether each of the mill sites included in the applications was associated with a separate mining claim. The fact that the IBLA granted the applications without making this inquiry demonstrates that the IBLA did not consider the issue relevant, and it could have drawn this conclusion only if it believed that the mill site provision does not limit the number of mill sites to one per claim. Indeed, since the applicant had submitted applications for 201 mill sites, the IBLA would have likely held invalid at least some of the mill sites if it had believed that the mill site provision imposed such numerical restrictions. The 1997 Opinion attached little weight to the decision because it did not specifically consider the number of associated mining claims. 1997 Opinion, at 13 n.21. On the contrary, the fact that the decision did not specifically consider the issue is highly significant, because it demonstrates that the IBLA believed that the issue was not relevant since the mill site provision did not impose numerical restrictions.[25]

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[24] In addition to the two applications at issue, the relevant mineral reports also examined 113 mill sites included in two other patent applications filed by Utah International, Inc. *Utah International, Inc.*, 36 IBLA 219, 220 n.1 (1978).

[25] The 1997 Opinion also relied on the concurring opinion of an administrative law judge in *United States v. Collord*, 128 IBLA 266 (1994). 1997 Opinion, at 9. In that case, the IBLA

To summarize, the Department's administrative decisions have not definitively addressed or resolved the legal question whether the mill site provision limits claimants to one mill site per claim. None of the existing administrative case law is based on a factual dispute that raised the issue. Indeed, no administrative decision of which we are aware has denied a plan of operations or a patent application on grounds that the plan or application included more than one mill site for each mining claim, except for the denial of the Crown Jewel mine plan, which occurred after the 1997 Opinion and was later rescinded. *See infra* note 29. These administrative decisions do not establish any kind of cognizable administrative practice or interpretation sufficient to contravene the Department's clear policy--reflected in the BLM's written guidance and consistently followed by BLM state offices--that interprets the five-acre mill site provision as not limiting the number of mill sites that may be located in association with a mining claim.[26]

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heard an appeal from an Administrative Law Judge (ALJ) decision invalidating two lode claims and two mill site claims. *Id.* at 267. The ALJ invalidated the two mill site claims because the claimant failed to use or occupy them for mining or milling purposes. *Id.* at 292. The IBLA, although reversing the ALJ on one of the lode claims, affirmed the ALJ's invalidation of the other lode claim and the two mill sites. *Id.* One of the administrative judges who concurred in the decision stated, as an alternative basis for his decision, that "at least one of the millsites is also invalid as a matter of law, since the applicable statute . . . permits only a single appropriation of additional land, not to exceed 5 acres, per mining claim." *Id.* at 314 (Burski, J., concurring) (citation omitted). This statement by the concurring judge did not represent the IBLA majority decision, was not based on any citation of authority, and in any event was dictum because the IBLA holding was that a claimant must use or occupy a mill site for mining or milling purposes in order to obtain a patent for a mill site.

[26] The 1997 Opinion also refers to a handful of treatises, concluding that "there appears to have been little doubt among miners and mining lawyers that the law allowed no more than five acres" of mill site land per mining claim. 1997 Opinion, at 12. Many of the treatises cited merely reflect the dicta found in the administrative case law that we have already discussed. For example, the 1997 Opinion quotes certain language from *Lindley on Mines* that is merely a restatement of dictum from the *Hoggin* decision. In his treatise, Curtis H. Lindley also restates the dicta from the *Alaska Copper Co.* and *Hard Cash and Other Millsite Claims* cases. 2 *Lindley on Mines* § 520, at 1173-75 (1914). Quoting dicta in legal treatises cannot imbue that dicta with added significance. Some mining lawyers have expressed the view that the Mining Law allows mining claimants to locate more than one mill site per mining claim. As the 1997 Opinion acknowledged, the second edition of *American Law of Mining* stated that "[i]n theory, an unlimited number of millsites might be appropriated by a single mining operator and held or patented as long as each independently meets the requirements of the law." *Id.* at 13 (citing 1 *Am. L. Mining* § 32.06[4] (2d 3d. Rev. 1987). In addition, another commentator stated that "[i]t is first to be noted that the statute does not limit the millsite locator to only one millsite. It merely says that no location may exceed five acres." Gary L. Greer, "Millsites: Nonmineral Mining Claims," 13 *Rocky Mtn. Min. L. Inst.* 143, 169 (1967)). Another mining lawyer has

D. Solicitor's Office Staff Opinions

Prior to the 1997 Opinion, various offices within the Solicitor's Office of the Department of the Interior have on occasion briefly opined on the mill site provision. Although some of the opinions support the view that the provision does not categorically limit mill sites to one for each claim, the language of some other opinions can be construed as taking a contrary view. None of the opinions contains an extensive, authoritative discussion of the issue supported by citations of authority. Therefore, none of the opinions can be construed as altering the Department's long-standing policy of interpreting the mill site provision as imposing no categorical limitation, as this policy is reflected in the BLM's written guidance and followed by BLM state offices in administering the provision. We now examine each of these Solicitor's Office staff opinions more closely.

In 1960, the Field Solicitor in Reno, Nevada, issued a memorandum expressing the view that the mill site provision does not limit the number of mill sites that may be located for each mining claim. The memorandum, sent to the State Supervisor of the BLM's Arizona State Office, stated:

> More than one mill site may be embraced in a single application for patent. There appears to be no requirement that the total acreage of several mill sites, embraced in a single application, may not exceed five acres. A mill site located under the first provision of [30 U.S.C. § 42] . . . must be used and occupied by the proprietor of a vein or lode for mining or milling purposes.

Memorandum from Otto Aho, Field Solicitor, Reno, Nevada, to State Supervisor, Arizona State Office, BLM 2 (Aug. 17, 1960). The Field Solicitor also stated that:

> The cited law speaks of location in the singular. It does not say "no location or a group of locations * * * shall exceed five acres." . . . [I]t is my view that the total acreage of several mill sites, embraced in a single application, may exceed five acres. However, each mill site may not exceed five acres.

Id. at 8.

In 1974, the Field Solicitor in Phoenix, Arizona, also expressed the same view in a memorandum to the Chief of the Branch of Minerals in the BLM's Arizona State Office. The

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stated that "[s]ince the statute does not limit the millsite locator to a single claim, the obvious response is to locate several millsites, thereby acquiring enough land for all present and future needs." Richard W. Harris, *The Law of Millsites: History and Application*, 9 Nat. Res. Law. 103, 121 (1976). More importantly, the viewpoints expressed by lawyers in privately-published treatises and articles, no matter what position they take, do not provide a persuasive basis for changing the Department's prevalent practice and interpretation of the mill site provision.

memorandum listed the requirements for mill site locations and pointedly did not mention any limitation on the number of mill sites per mining claim. Memorandum from the Field Solicitor in Phoenix, Arizona, to the Chief, Branch of Minerals, Arizona State Office, BLM 1 (Mar. 27,1974).[27]

On the other hand, we have discovered a 1962 memorandum from the Regional Solicitor in Portland, Oregon, not mentioned in the 1997 Opinion, that contains language suggesting a contrary view. The memorandum, sent to the Chief of the Division of Lands and Minerals Management in the BLM Oregon State Office, stated:

> "[N]eed" is a governing factor as to how many millsites may be patented to one corporation. Of course, it must be remembered that each millsite application must be linked to a placer patent application so that the number of millsites should not exceed the number of placer claims. Also, it must be shown that each millsite is actually being occupied or used for purposes specified by the statute . . . . It therefore appears that the number of millsites which may be patented by an owner of placer claims must be determined by investigation of the facts as to how many millsites are "needed" by the owner of the placer claims "for mining, milling, processing, beneficiation, or other operations in connection with such claims . . . and whether the millsites are actually "used or occupied" for such purposes by the owner of the claims.

Memorandum from John L. Bishop, Assistant Regional Solicitor, Office of the Regional Solicitor, Portland, Oregon, to the Chief, Division of Lands & Minerals Management, Oregon State Office, BLM 5-6 (May 11, 1962). Although the memorandum stated that "the number of millsites should not exceed the number of placer claims," it cited no authority in support of this conclusory remark. As a result, the opinion lacks probative value regarding whether the mill site provision categorically limits the number of mill sites.

Finally, the Associate Solicitor for the then-Division of Public Lands sent a memorandum in 1963, also not mentioned in the 1997 Opinion, that expressed the view that more than one independent mill site may be located. The memorandum responded to an inquiry from the BLM Director regarding whether it is "permissible to issue [a] patent for two or more contiguous millsites not associated with patented mining claims when the milling operation occupies two or more contiguous millsites." Memorandum from the Associate Solicitor, Division of Public Lands, Office of the Solicitor, to Director, BLM 1 (July 1, 1963). The Associate Solicitor

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[27] Three years earlier, the same Field Solicitor responded to a question from the BLM Arizona State Office regarding the propriety of patenting mill sites located in an area withdrawn for the San Carlos Irrigation Project. Interestingly, although the patent application at issue contained 130 mill sites, the Field Solicitor did not raise any concerns regarding the large number of mill sites. Memorandum from Field Solicitor, Phoenix, Arizona, to Chief, Branch of Minerals, Arizona State Office, BLM (Feb. 11, 1971).

acknowledged that some view the mill site provision as limiting claimants to one five-acre mill site per lode claim, but the Associate Solicitor did not endorse the view for independent mill sites, stating:

> It is sometimes said that under the first sentence [of section 42 of Title 30 of the United States Code], even though multiple nonmineral locations may be permitted, there can be no more than one five-acre nonmineral location for each lode location. Such a restriction can have no applicability to the second sentence [of section 42, pertaining to independent mill sites] since there can be not even one lode location in connection with a mill site sought thereunder. We hold that the second sentence, by incorporating by reference the requirements of the first sentence where not necessarily inconsistent with the explicit words or intent of the second sentence, permits the patenting of two or more contiguous five acre locations where collectively they form a mill site.

Id. at 3-4. In other words, the Associate Solicitor concluded that even if the mill site provision disallows locating more than one five-acre dependent mill site per associated mining claim–a view that the Associate Solicitor did not necessarily endorse–the mill site provision does not so limit the number of independent mill sites, because independent mill sites are not associated with any particular mining claim. *See supra* note 2 (discussing distinction between dependent and independent mill sites).

IV. Congressional Response to 1997 Opinion

Congress recognized that the 1997 Opinion represented a significant departure from the Department of the Interior's established practice regarding the mill site provision. In May 1999, Congress enacted a statute prohibiting the Department from relying on the 1997 Opinion to deny patent applications and plans of operation submitted before the date of the law's enactment. Pub. L. No. 106-31, § 3006, 113 Stat. 57, 90-91 (1999). The Conference Report and several senators objected that the 1997 Opinion constituted an improper amendment of existing law, and was an attempt to change the Department's practice without going through the necessary rulemaking process. According to the Conference Report, the 1997 Opinion "is particularly troubling because both the Bureau of Land Management and the Forest Service have been approving patents with more than one five-acre millsite per patent based on procedures outlined in their operations manuals." H.R. Conf. Rep. No. 106-143, at 90 (1999).[28] The 1999 statute did not explicitly expire at the end of the 1999 fiscal year and apparently remains in effect.

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[28] The Conference Report incorrectly describes the 1997 Opinion as limiting the number of mill sites to one five-acre mill site *per patent*. In fact, the 1997 Opinion would have limited the number of mill sites to one five-acre mill site *per associated mining claim*. The mill site section provides that nonmineral land "may be embraced and included in an application for a patent for such vein or lode." 30 U.S.C. § 42. This has been interpreted to mean that mining claimants may seek to patent mill sites concurrently or subsequently to associated mining claims. *United States v. Shiny Rock Mining Corp.*, 112 IBLA 326, 360 (1990). It does not mean that claimants may include only one mill site in any one patent application.

In November 1999, Congress enacted legislation limiting the 1997 Opinion for fiscal years 2000 and 2001 by prohibiting the Department from expending appropriated funds to deny, based on the 1997 Opinion, any patent application that is grandfathered from the patenting moratorium or any plan of operations that an operator had submitted before November 7, 1997, or that the Department had approved before November 29, 1999. Pub. L. No. 106-113, § 337, 113 Stat. 1501, 1501A-199 (1999). This legislation stated that neither the May 1999 legislation nor the November 1999 legislation could "be construed as an explicit or tacit adoption, ratification, endorsement, approval, rejection or disapproval of the opinion dated November 7, 1997, by the Solicitor of the Department of the Interior concerning millsites." *Id.*

Since Congress has prohibited the Department from denying any plan of operations or patent application submitted before the 1999 law was enacted based on the 1997 Opinion, the Department has not applied the 1997 Opinion to any patent application or plan of operations.[29] This explains the absence of any legal challenge to the 1997 Opinion, as well as the absence of any administrative decision carrying it out.

The 1997 Opinion, if followed by the Department, would effectively subject mining claimants and operators to significant, new requirements respecting their mining operations. Under existing case authority, when federal agencies adopt new substantive rules and policies that represent a significant departure from long-established and consistent administrative practice, the agencies are required to comply with the Administrative Procedure Act (APA), 5 U.S.C. § 553, which requires notice and an opportunity for public comment. *Shell Offshore Inc. v. Babbitt*, 238 F.3d 622, 630 (5th Cir. 2001). If an agency fails to follow these APA requirements in promulgating a rule, the industry cannot be required to follow the rule. *Id.* In *Alaska Professional Hunters Ass'n v. FAA*, 177 F.3d 1030, 1033-34 (D.C. Cir. 1999), the United States Court of Appeals for the District of Columbia Circuit concluded that consistent policy guidance given out by staff in the Federal Aviation Administration's Alaska Region for almost thirty years constituted authoritative interpretation that could be changed only through notice and comment rulemaking. The court stated that "[w]hen an agency has given its regulation a definitive interpretation, and later significantly revises that interpretation, the agency has in effect amended its rule, something it may not accomplish without notice and comment." *Id.* at 1034.

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[29] By letter dated March 25, 1999 (hereinafter "Crown Jewel decision letter"), the Department denied a proposed plan of operations for the Crown Jewel mine in Washington State based on the 1997 Opinion. Shortly thereafter, Congress enacted a law prohibiting the Department from applying the 1997 Opinion to the Crown Jewel project and instructing the Department to apply instead the mill site provisions in BLM's Handbook for Mineral Examiners. Congress also instructed the Department to approve the plan of operations and reinstate the Record of Decision as soon as practicable. Pub. L. No. 106-31, § 3006, 113 Stat. 57, 90-91 (1999). The Department did so. The instant opinion supersedes the Crown Jewel decision letter.

V. Conclusion

Based on the foregoing analysis, we conclude the mill site provision restricts the size of a mill site to five acres, but does not categorically preclude the location of more than one mill site for each associated mining claim. This conclusion is supported by several factors. First, the statutory language expressly limits the size of mill sites but does not expressly limit the number of mill sites per mining claim. Additionally, other provisions of the Mining Law limit the size but not the number of mining claims an individual claimant may locate and patent; since these statutory size limitations are constructed similarly and do not impose numerical limitations on mining claims, the statutory size limitation for mill sites should not be construed as a numerical limitation on mill sites. If the result were otherwise, a claimant would be unable to locate and patent more than one mill site to serve a mining claim, even though the claimant could show that more than one mill site is necessary to develop and process the minerals from the claim. The Mining Law has sufficient flexibility to allow for evolving mining practices,[30] and does not, at least in the mill site provision, impose rigid limitations that would make modern mining practices unworkable. The congressional purpose of the Mining Law was to encourage development of the nation's mineral resources, and a limitation of one mill site per mining claim would frustrate that congressional purpose by obstructing the development of mineral resources in particular areas. If this congressional policy is to be changed, it must be changed by Congress.

In fact, Congress has reaffirmed its historic policy of encouraging development of the nation's mineral resources. In 1970, Congress enacted the Mining and Minerals Policy Act, 30 U.S.C. § 21a, which provides:

> The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in . . . the development of economically sound and stable domestic mining . . . [and] the orderly and economic development of domestic mineral resources . . . .

See also National Materials and Minerals Policy, Research and Development Act of 1980, 30 U.S.C. § 1602.

Finally, an interpretation that the mill site provision categorically restricts the number of mill sites is inconsistent with the Department's prevalent, long-standing interpretation of the provision. The BLM's state offices have consistently followed BLM's written guidance, which provides that the mill site provision limits the size of individual mill sites but does not limit the number of mill sites that may be located for each mining claim. On the other hand, the Department has traditionally used the use-or-occupancy requirement of the mill site provision to

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[30] *See* Karen Hawbecker & Peter J. Schaumberg, *Patent Pending: Department of the Interior Administration of the Mining Laws*, 46 Rocky Mtn. Min. L. Inst. § 16.01 (2000) ("[T]he Secretary's authority over the public lands is broad enough to allow for wide variations in Mining Law administration.").

limit the number of mill sites that may be located for mining claims, by providing that mill sites may be located only where miners demonstrate that they reasonably need the lands for mining or milling purposes. There is no evidence that the Department has acted inconsistently with BLM's written guidance since it was adopted. The Department's prevalent interpretation, from at least the time that the BLM adopted its written guidance in 1954 until the 1997 Opinion was issued, has been that the mill site provision places no numerical limitations on the mill sites that may be located and patented in association with a mining claim.

For these reasons, we believe that the mill site provision authorizes the Department of the Interior to regulate mill sites by requiring claimants to show that they are using or occupying the nonmineral lands for mining or milling purposes, but that the provision does not categorically limit claimants to one mill site for each mining claim. The Department's traditional practice of applying the mill site provision without limiting mill sites to one per mining claim is in conformity with the requirements of the Mining Law. The Department should continue its traditional practice as described in this opinion and as reflected in the BLM's written guidance prior to the 1997 Opinion. This opinion supersedes all previous Solicitor's Office opinions and any other departmental decisions that conflict with this opinion.

Roderick E. Walston
Deputy Solicitor

I concur: Gale A. Norton
Secretary of the Interior

Oct. 8, 2003
Date

Attachment

APPENDIX (1996 SURVEY OF BLM STATE OFFICE PRACTICE)

Alaska. The Alaska State Office indicated that in its practice, it looks "at the current use and occupancy of the millsite to insure it is mining related. If the millsite is not in use (vacant or use other than mining related) we don't consider it valid." Memorandum from Nolan Heath, Deputy State Director, Lands, Minerals, and Resources, Alaska State Office, BLM, to Director, BLM 2 (Mar. 20, 1996). The Alaska State Office stated that it had only one pending multiple-mill-site patent application.

Arizona. The Arizona State Office stated that "patents and use authorization for multiple millsites have always been evaluated based on the appropriate use and need for millsites." Memorandum from Michael A. Ferguson, Deputy State Director, Resource Planning, Use and Protection, Arizona State Office, BLM, to Director, BLM 2 (Apr. 25, 1996). This state office stated further that, in its practice, there "is no set ratio of millsites to associated mining claims. The patent review and plan of operation approval are based on authorized uses and the number of millsites necessary to accommodate the mining and milling needs." *Id.* The Arizona State Office noted that it had nine pending multiple-mill-site patent applications. *Id.* at 1.

California. The California State Office stated that it had at least fifteen multiple-mill-site patent applications pending. Memorandum from Leroy M. Mohorich, Acting Deputy State Director, Division of Energy and Minerals, California State Office, BLM, to Director, BLM 1-2 (Apr. 10, 1996). It stated:

> In the decision *Utah International, Inc.* (36 IBLA 219 (1978)), the IBLA recognized multiple mill sites in a patent application, most of which were approved. Some confusion may have been generated from earlier decisions where the Land Office stated that only one mill site was needed for a particular operation. The decisions were not based on any rule related to one mill site per mining claim, but that only one mill site was needed.

Id. at 2. Moreover, the California State Office stated that "[i]t has been common practice in California to issue patents for multiple millsites." *Id.* at 3. It reported having issued 32 patents for 455 mill sites since 1966. *Id.* It also reported having approved two plans of operations for large open-pit, heap-leach operations wherein the mill-sites-to-mining-claims ratio was 3 to 1 and 6 to 1. *Id.*

Colorado. The Colorado State Office stated that it had one multiple-mill-site patent application pending. Memorandum from Richard Tate, Colorado State Office, BLM, to Director, BLM 1 (Apr. 12, 1996). With regard to reviewing patents and plans of operations for a mill-sites-to-mining-claims ratio, the state office stated that "we do not make such inquiries." *Id.* at 2. It reported having issued a multiple-mill-site patent in 1984. *Id.* at 1.

Idaho. In Idaho, the state office reported having six pending multiple-mill-site patent

applications and having issued a multiple-mill-site patent in 1985. Memorandum from J. David Brunner, Deputy State Director, Resource Services Division, Idaho State Office, BLM, to Director, BLM 1 (Apr. 22, 1996). It stated that "we do not review patent applications or plans of operation with respect to a strict ratio of millsites to associated claims." *Id.* at 2. It also reported having refused to patent mill sites included in two patent applications because they were not associated with any mining claims and did not meet the requirements for independent mill sites. *Id.*

Montana. The Montana State Office similarly reported having patented two multiple-mill-site applications in 1980 and 1987. Memorandum from Larry E. Hamilton, State Director, Montana State Office, BLM, to Director, BLM 4 (Apr. 19, 1996). The state office explained that "discussions with several retired mineral examiners suggest that the practice [of patenting multiple mill sites] was common when they started their careers in the late 1950s." *Id.* at 2. It stated further that:

> [W]e have never looked at a specific ratio of millsites to associated mining claims. We do, however, verify that any lands being sought are, in fact, being used and occupied for mining and milling purposes, and that the land configuration is reasonably compact such that the minimum of land required for the operation to effectively function is patented.

Id.

Nevada. In Nevada, the state office reported having 20 pending multiple-mill-site patent applications. Memorandum from Thomas V. Leshendok, Deputy State Director, Mineral Resources, Nevada State Office, BLM, to Director, BLM Attach. 8-1 (Apr. 23, 1996). It stated:

> Patenting and use authorizations for multiple millsites is common in Nevada. Use authorizations started on January 1, 1981, the effective date of the 43 CFR 3809 regulations. It is not known when the patenting of multiple mill sites first occurred. Available records show that the practice was occurring by June 1, 1964.

Id. at 1. The Nevada State Office stated further that in reviewing patent applications and plans of operations, "the ratio of mill sites to associated mining claims is not determined." *Id.* In mill site patenting review, the state office evaluates "the mineral character, need and current use of each mill site." *Id.* Although not mentioned by the Nevada State Office in its response to the 1996 survey, the Nevada State Office has apparently issued at least nine patents since 1979 that include more mill sites than mining claims. *See Effect of Federal Mining Fees and Mining Policy Changes on State and Local Revenues and the Mining Industry: Hearing Before the House Comm. on Natural Resources*, 106th Cong. 5-6 (2001) (statement of Richard W. Harris, Attorney at Law, Harris & Thompson, based on his own research in the BLM Nevada State Office). The average mill-sites-to-mining-claims ratio in those patents was nearly seven mill sites to one mining claim. *Id.*

New Mexico. The New Mexico State Office reported that it had a mill site patent application pending but that it did not contain multiple mill sites. Memorandum from Robert S. Armstrong, Deputy State Director, Resource Planning, Use and Protection, New Mexico State Office, BLM, to Solid Minerals Group, Washington Office, BLM 1 (Apr. 25, 1996). The state office stated that the "last mill site patents were issued in the early 1970s" and "[t]hey were multiple millsites." *Id.*

Oregon. The Oregon State Office reported two pending multiple-mill-site patent applications. Memorandum from Associate State Director, Oregon & Washington State Office, BLM, to Roger Haskins, Senior Specialist, Mining Law Adjudication, Solid Minerals Group, Washington Office, BLM 1 (Apr. 30, 1996). It stated that "[p]atenting of multiple millsites has been an accepted practice in this office, as far back as the mid to late sixties." *Id.* at 2.

Utah. In Utah, the state office reported six pending multiple-mill-site patent applications. Memorandum from Robert Lopez, Deputy State Director, Natural Resources, Utah State Office, BLM, to Director, BLM 1 (undated). It reported having patented only 40 mill sites since 1962 but does not make clear whether those patents included multiple mill sites.

Wyoming. The Wyoming State Office stated that it had never issued a multiple-mill-site patent, having issued patents for only 13 mill sites since 1962, but "[i]f the applicant could show 'reasonable need' and the mill sites were necessary to the mining and milling operation, the mill sites would most likely have been patented if all other requirements were met." Memorandum from Dale Wadleigh, Wyoming State Office, BLM, to Roger Haskins, Senior Specialist, Mining Law Adjudication, Washington Office, BLM 1-2 (Mar. 21, 1996).

Department of the Interior

October 05, 1981

M-36910 (Supp.)

Opinion By: COLDIRON

Opinion

OPINION BY OFFICE OF THE SOLICITOR

TO: SECRETARY

FROM: SOLICITOR

SUBJECT: THE BLM WILDERNESS

REVIEW AND VALID EXISTING RIGHTS

1. INTRODUCTION

On Sept. 5, 1978, the Solicitor issued opinion *M-36910, 86 I.D. 89 (1979),* interpreting sec. 603 of the Federal Land Policy and Management Act (FLPMA), *43 U.S.C. § 1782.* In addition, two supplementary memoranda have been issued. The first, the memorandum of Aug. **[*910]** 7, 1979 ("Palmer Oil/ Prairie Canyon"), reviewed the "grandfather clause" of sec. 603. The second, **[**2]** the memorandum of Feb. 12, 1980 ("Further Guidance on FLPMA's section 603"), discussed the Bureau of Land Management's Interim Management Plan and valid existing rights in the context of mining claims located pursuant to the general mining laws.

This opinion addresses the relationship between valid existing rights and the wilderness review requirements of sec. 603. [1] It modifies Solicitor's Opinion No. M-36910 and incorporates the memorandum of Feb. 12, 1980.

II. THE NONIMPAIRMENT STANDARD AND ITS EXCEPTIONS AND LIMITATIONS

Congress has delegated to the **[**3]** Secretary general and comprehensive authority to manage the public lands. As the Supreme Court has noted, the Secretary "has been granted plenary authority over the administration of public lands * * * and * * * has been given broad authority to issue regulations concerning them." *Best v. Humboldt Placer Mining Co., 371 U.S. 334, 336 (1963).* See also *Cameron v. United States, 252 U.S. 450, 459-60 (1920); Boesche v. Udall, 373 U.S. 472, 477-78 (1963).* See generally *30 U.S.C. §§ 22,* 189; *43 U.S.C. §§ 2,* 1712. With the enactment of FLPMA, Congress has restricted the Secretary's discretion in managing the public lands by imposing two standards to guide management decisions. The first is a general standard applicable to all management activities: "In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary and undue degradation of the lands." *43 U.S.C. § 1732*(b). The second and more stringent limitation is part of the wilderness review mandated by sec. 603 of FLPMA. *43 U.S.C. § 1782.*

Under sec. 603 of FLPMA, the Secretary is directed to review the public lands and identify those areas that meet the wilderness criteria **[**4]** contained in sec. 2(c) of the Wilderness Act, *16 U.S.C. § 1131*(c). Those areas that have wilderness characteristics are then to be studied to determine their suitability for inclusion in the National Wilderness Preservation System. The Secretary is required to make recommendations on their suitability or

[1] This opinion formalizes and is consistent with the position adopted by the Department on appeal from the decision of *Rocky Mountain Oil & Gas Association v. Andrus, 500 F. Supp. 1338 (D. Wyo. 1980),* appeal docketed, No. 81-1040 (10th Cir. Jan. 5, 1981). Although consistent with the result reached by the court in regard to allowing activities on oil and gas leases issued prior to Oct. 21, 1976 (pre-FLPMA leases) , this opinion does not adopt the court's rationale.

nonsuitability to the President by Oct. 21, 1991. In turn, the President makes recommendations to the Congress which decides which areas will be designated wilderness.

Sec. 603(c) establishes a specific management standard, known as the "nonimpairment standard," applicable [*911] only during this wilderness review:

During the period of review of such [wilderness study] areas and until Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this Act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness, subject, however, to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree in which the same was being conducted on the date of approval of this Act: PROVIDED, That, in managing the public lands the Secretary [**5] shall by regulation or otherwise take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection.

43 U.S.C. § 1782(c) (italics added). See generally *Solicitor's Opinion M-36910, 86 **I.D.** 89, 109-11 (1979).*

There is, however, an exception to and a limitation on the nonimpairment standard. The exception is the section's grandfather clause which authorizes the continuance of existing mining, grazing, and mineral leasing uses, "in the manner and degree" in which they were occuring on Oct. 21, 1976, the date of enactment of FLPMA. This grandfather clause was analyzed in both the initial Solictor's Opinion and the supplemental memorandum of Aug. 7, 1979.

The limitation on the nonimpairment standard, and the subject of this opinion, is the savings clause of sec. 701(h) of FLPMA. This section provides:

All actions by the Secretary concerned under this Act shall be subject to valid existing rights.

43 U.S.C. § 1701 note.

The clause limits the applicability of the nonimpairment standard by specifying that the standard cannot be applied in a manner that would prevent the exercise of any "valid existing [**6] rights. "

III. VALID EXISTING RIGHTS

Although the legislative history is largely silent on the scope of this term, [2] it is not unique to FLPMA. The term has an extensive history both in the Department and the courts.

In defining "valid existing rights, " the Department distinguishes three terms: "vested rights, " "valid existing rights, " and "applications" or "proposals." [3] "Valid existing rights" are distinguished from "applications" because such rights are independent of any secretarial discretion. They are property interests rather than mere expectancies. Compare *Schraier v. Hickel, 419 F.2d 663, 666-67 (D.C. Cir. 1969)* and *George J. Propp, 56 **I.D.** 347, 351 (1938)* with *Udall v. Tallman, 380 U.S. 1, 20 (1965),United States ex rel. McLennan v. Wilbur, 283 U.S. 414, 420 (1931),* and *Albert A. Howe, 26 I.B.L.A. 386, 387 (1976).* "Valid existing rights" are distinguished from "vested rights" by degree: they become vested rights when all of the statutory requirements required to pass equitable or legal title

[2] See generally H.R. Rep. No. 1724, 94th Cong., 2d Sess. 65 (1976), reprinted in Senate Comm. on Energy & Natural Resources, 95th Cong., 2d Sess., Legislative History of the Federal Land Policy and Management Act of 1976 at 871, 935 (Comm. Print 1978)

[3] Each of these terms applies only to third parties. They do not apply to interests of federal agencies, departments, or agents. See, e.g.,*Townsite of Liberty, 40 I.B.L.A. 317, 319 (1979).*

have been satisfied. [4] Compare Stockley v. United States, 260 U.S. 532, 544 (1923) with Wyoming v. United States, 255 U.S. 489, 501-02 (1921) and Wirth v. Branson, 98 U.S. 118, 121 (1878). Thus, "valid existing rights" are those rights short of vested rights that are immune from denial or extinguishment by the exercise of secretarial discretion.

[8]**

Valid existing rights may arise in two situations. First, a statute may prescribe a series of requirements which, if satisfied, create rights in the claimant by the claimant's actions under the statute without an intervening discretionary act. The most obvious example is the 1872 Mining Law: a claimant who has made a discovery and properly located a claim has a valid existing right by his actions under the statute; the Secretary has no discretion in processing any subsequent patent application. Second, a valid existing right may be created as a result of the exercise of secretarial discretion. For example, although the Secretary is not required to approve an application for a right-of-way, if an application is approved the applicant has a valid existing right to the extent of the rights granted. Similarly, the Secretary has discretion to approve, deny, or suspend an application for an oil and gas lease. Once the lease is issued however, the applicant has valid existing rights in the lease.

Valid existing rights are not, however, absolute. The nature and extent of the rights are defined either by the statute creating the rights or by the manner in which the Secretary chose **[**9]** to exercise his discretion. [5] See, e.g., Best v. Humboldt Placer Mining Co., 371 U.S. 334 (1963);Continental Oil Co. v. United States, 184 F. 2d 802, 807 (9th Cir. 1950). Thus, it is not possible to identify in the abstract every interest that is a valid existing right; the question turns upon the interpretation of the applicable statute and the nature of the rights conveyed by approval of an application. Because of the importance of the individual approval and its stipulations, a review of each approval **[*913]** document will be required to determine the precise scope of an applicant's valid existing rights where such rights are created by an act of Secretarial discretion.

[10]**

IV. REGULATION OF VALID EXISTING RIGHTS UNDER SEC. 603 OF FLPMA

The determination that a particular interest is a "valid existing right" is a limitation on the congressionally mandated management standard applicable to activities occurring within wilderness study areas. Although the nonimpairment standard remains the norm, this standard cannot be enforced if to do so would preclude recognition of the right or, in the case of an issued lease, would preclude development under the right. In general, restrictions on the right designed to protect wilderness values may not be so onerous that they unreasonably interfere with enjoyment of the benefit of the right. In other words, regulations may not be "so prohibitively restrictive as to render the land incapable of full economic development." Utah v. Andrus, 486 F. Supp. 995, 1010 (D. Utah 1979).

The resolution of specific cases under these general guidelines is dependent upon an analysis of two variables. The first is the scope of developmental rights actually conveyed by the person's actions under the statute or by the Department's issuance of the lease or other document. The second variable is the site-specific conditions confronting **[**11]** the right holder. In general, however, the nonimpairment standard governs activities unless this would unreasonably interfere with enjoyment of the valid existing rights. When the nonimpairment standard

[4] "Vested rights" has a narrower meaning within public land law terminology than in other areas of the law. In public land law, "vested rights" typically applies to legal or equitable rights to a fee title. See e.g., Wyoming v. United States, supra at 501-02. Oil and gas leases, which do not convey fee title, have not been couched in terms of the traditional "vested right" usage.

[5] For example, there are interests less than leaseholds that are"valid existing rights." These include noncompetitive (preference right) coal lease applications that were preserved by the "valid existing rights" clause of sec. 4 of the Federal Coal Leasing Act Amendments of 1976, 90 Stat. 1085, amending 30 U.S.C. § 201(b) (1970). The Secretary does not have the discretion to reject these applications if the applicant can meet the statutory test for lease issuance. Nevertheless, the right to a lease does not accrue until that determination has been made. NRDC v. Berklund, 609 F.2d 553 (D.C. Cir. 1979); Utah International, Inc. v. Andrus, 488 F. Supp. 962, 969 (D. Utah 1979). The right preserved is to an adjudication and, if that adjudication is favorable, to a lease.

would unreasonably interefere with the use of the rights conveyed, the holder of the rights may exercise the rights although it impairs the area's suitability for preservation as wilderness. For example, under such circumstances a claimant with a valid mining claim under the Mining Law of 1872 may develop the claim even if this impairs the area's suitability for wilderness preservation. Similarly, the holder of an oil and gas lease or a right-of-way authorization issued prior to the enactment of FLPMA may develop the leasehold or right-of-way to the extent authorized by the issuance or approval document.

It is important to note the distinction between pre- and post-FLPMA leases and authorizations. With the enactment of FLPMA on Oct. 21, 1976, the Secretary was required to manage the public lands under wilderness review "so as not to impair the suitability of such areas for preservation as wilderness. " *43 U.S.C. § 1782*(c). Thus applicants who received a lease or other use authorization **[**12]** after Oct. 21, 1976, for lands within an area under wilderness review did not receive an unlimited right to develop since after that date the Secretary had authority **[*914]** only to issue those leases, permits, and licenses that would not impair an area's suitability for preservation as wilderness. See generally *Utah v. Andrus, 486 F. Supp. 995, 1006 (D. Utah 1979).*

The right to develop even if it impairs an area's suitability does not, however, mean that the right is unlimited. The Secretary remains under a statutory mandate to manage these areas and their resources: "in managing the public lands the Secretary shall by regulation or otherwise take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection. " *43 U.S.C. § 1782*(c). [6] By implication, this standard allows the Secretary to authorize uses or activities necessary to the purposes of the valid existing rights subject to reasonable mitigating measures to protect environmental values. The requirement that the Secretary regulate uses and activities to prevent unnecessary and undue degradation and to afford environmental protection is consistent **[**13]** with the power of the Federal Government to regulate property interests. Since the regulation extends at a minimum only to prohibiting activities that are not necessary or that are excessive or unwarranted, the taking issue is not implicated. [7]

[14]**

V. CONCLUSION

Valid existing rights may be created by operation of a statute or an act of secretarial discretion. A valid mining claim, an oil and gas lease, and a right-of-way authorization are examples of valid existing rights. If such rights were created prior to the enactment of FLPMA, they limit the congressionally imposed nonimpairment standard. Although the nonimpairment standard remains the norm, valid existing rights that include the right to develop may not be regulated to the point where the regulation unreasonably interferes with enjoyment of the benefit of the right. Resolution of specific cases will depend upon the nature of the rights conveyed and the physical situation within the area. When it is determined that the rights conveyed can be enjoyed only through activities that will permanently impair an area's suitability for preservation as wilderness, the activities are to be regulated to prevent unnecessary and undue degradation or to afford environmental protection. Nevertheless, even if such activities impair **[*915]** the area's suitability, they must be allowed to proceed.

WILLIAM H. COLDIRON Solicitor

[6] See also*43 U.S.C. § 1732*(b).

[7] These management requirements are compatible with the concept of valid existing rights. First, such rights may constitutionally be regulated and their value diminished for a proper governmental purpose. See, e.g., *Andrus v. Allard, 100 S.Ct. 318 (1979); Penn Central Transp. Co. v. City of New York, 438 U.S. 104 (1978); Goldblatt v. Hempstead, 369 U.S. 590 (1962).* Since the management standard prohibits only "unnecessary and undue degradation, " it does not raise constitutional issues. Second, the rights granted by the United States are often explicitly limited by the government's authority to regulate. For example, the 1872 Mining Law provides that "all valuable mineral deposits in lands belonging to the United States * * * shall remain free and open to exploration and purchase * * * under regulations prescribed by law." *30 U.S.C. § 22.* See generally *30 U.S.C. § 189; Boesche v. Udall, 373 U.S. 472, 477-78 (1963); United States v. Richardson, 599 F.2d 290 (9th Cir. 1979),* cert. denied, *444 U.S. 1014 (1980).*

Department of the Interior

October 20, 1959

M-36584

Opinion By: FRITZ

Opinion

TO THE DIRECTOR, BUREAU OF LAND MANAGEMENT.

You have asked whether a mining claimant, who builds a road to his mining claim across public land, may be charged a fee for the use of such road, where no exclusive right-of-way is applied for or granted by the United States.

In the particular case to which you call my attention it is alleged that mining locations were made on public land more than 50 years ago and the claimant, to provide access to his claims and a way for hauling ore from the claims, constructed a road over public lands. Your inquiry will be discussed in the light of these allegations. Your **[*362]** inquiry results because the regulations in 43 CFR, 1954 Rev., 115.154-179 may be susceptible of the construction that such a charge must be made. These regulations relate only to rights-of-way for train roads granted under the act of January 21, 1895 (28 Stat. **[**3]** 635; 43 U.S.C., 1952 ed., sec. 956), and the act of August 28, 1937 (50 Stat. 874; 43 U.S.C., 1952 ed., sec. 1181a), and apply, primarily at least, to purchasers of timber on the Oregon and California Railroad Grant lands. Unless there is reason for saying that the act of August 28, 1937, contains provisions under which a charge may be made for using a road even though it is not a right-of-way granted under the 1895 act the principle or right to charge for the use of any road on public lands by any user as it is said the regulations applicable to the Oregon and California lands may indicate to be, would apply equally to the public lands generally. Since it has traditionally been customary for mining locators, homestead and other public land entrymen to build and/or use such roads across public lands other than granted rights-of-way as were necessary to provide ingress and egress to and from their entries or claims without charge, the question whether a fee may be charged for such use is not only of broad, general interest but to make such a charge now would change a long practice.

I do not believe that a charge may be made in such cases. The general authority of the Secretary **[**4]** and the Director, Bureau of Land Management, over the public lands (5 U.S.C., 1952 ed., sec. 485; 43 U.S.C., 1952 ed., sec. 7 [see note fol.]) might be construed to permit it, were it not for the fact that legislation providing for the making of entries and locations necessarily presupposes a right of passage as an incident to the other rights granted, and the general rule that free passage over the public lands has always been recognized. Until recent years free use of the public range was the custom. See *Buford v. Houtz, 133 U.S. 320 (1890)* and *McKelvey v. United States, 260 U.S. 353 (1922).* Prior to the enactment of the mining laws, minerals in such lands were freely exploited by the public without hindrance. (1 Lindley, Mines, secs. 46 and 56, 3d ed. 1914, and cases cited.) The Taylor Grazing Act (43 U.S.C., 1952 ed., sec. 315) took away the free grazing privilege previously sanctioned by custom just as the mining laws of 1867 and 1872 took away the implied license to mine. But in both of these cases the changes were made by legislation, not by executive action. The Taylor Grazing Act and subsequent legislation have established a policy of management of the public lands similar, **[**5]** although, with minor exceptions, not as comprehensive or as rigid as that provided by law for certain reservations. Perhaps the control provided by law for national forest reserves more nearly approaches that provided for the Oregon and California Railroad Grant lands, and to a lesser degree the public domain grazing districts. As to such **[*363]** national forest lands, Congress in the act of June 4, 1897 (30 Stat. 36; 16 U.S.C., 1952 ed., sec. 478), expressly reserved the right of ingress and egress to settlers, and to others for "all proper and lawful purposes, including that of prospecting, locating, and developing the mineral resources thereof," subject to compliance with the rules and regulations covering such national forests. The Department of Agriculture in its regulations, 36 CFR, 1949 ed., 251.5(c) (Supp.) does not even require the constructor of a road in such cases (said to have a "statutory right" of access), to obtain a permit, but, with minor exceptions, does require that permission be obtained by others. Thus the practice of that

Department is directly contrary to the proposal discussed here. With respect to public lands in grazing districts the law reserves [**6] the right of ingress and egress and provides that nothing in it "shall restrict" mining activities, in substantially the same language as is used in the 1897 act, supra. The only applicable regulations of the National Park Service relate to Death Valley National Monument, 36 CFR, 1949 ed., 20.26(a)(4) (Supp.) and Mt. McKinley National Park, 36 CFR, 1949 ed., 20.44 (Supp.). Those regulations require only that a miner obtain a permit and as to Death Valley Monument, keep his road in good repair while using it. No fee is charged. Although not so stated as in the national forest regulations, the basis for the free use appears to be the "statutory right" of access.

In general Congress has recognized the right of "free passage or transit over or through public lands; * * *" and has enacted penal legislation to prevent its obstruction. Section 3, act of February 25, 1885 (23 Stat. 322; 43 U.S.C., 1952 ed., sec. 1062). It has also provided relief to the owners of mining claims where access was denied for any reason. Act of June 21, 1949 (63 Stat. 214; 30 U.S.C., 1952 ed., sec. 28b).

The genesis and history of the mining laws make it clear that Congress intended to give the miner free [**7] access to minerals in the public lands and to leave him free to mine and remove them without charge. Congress in the 1860's failed to go along with an executive recommendation for disposing of the minerals by lease in order to raise revenue. It has consistently since then left the miner free and untrammeled so far as his mineral rights are concerned. In recent years it has subsidized the miners of certain strategic and critical minerals. Further, Congress, in effect, confirmed the miner's rights previously exercised under sufferance as much as it granted mining rights. It declared the minerals to be "free," 30 U.S.C., 1952 ed., sec. 22, and by section 38 of that title it is declared, in effect, that a location need not be recorded in order to acquire the right to mine so far as the United States is concerned, adverse possession being sufficient. It has always [*364] been recognized that the policy of Congress is to encourage the development of minerals and every facility is afforded for that purpose. *United States v. Iron Silver Mining Co., 128 U.S. 673 (1888)* and *Steel v. Smelting Company, 106 U.S. 447 (1882).*

Congress knew, when it enacted the mining laws, that miners [**8] necessarily would have to use public lands outside of the boundaries of their claims for the running of tunnels and for roads. In effect, it provided only for a procedure where possession could be maintained and patent to the land could be obtained. Otherwise the clear intent was that the miner should have the right to appropriate the minerals and convey them to market. Lindley in his 3d edition on Mines, volume 2, sections 629 and 631, points out that roadways are necessary as an adjunct to working a claim and as a means toward removing the minerals.

The Department has recognized that roads were necessary and complementary to mining activities. It early adopted the policy of recognizing work done in the construction of roads to carry ore from mining claims as legitimate development work accreditable to the claims as assessment and patent work. *Emily Lode, 6 L.D. 220 (1887).* In *Douglas and Other Lodes, 34 L.D. 556 (1906),* it held that such roadways were not applicable. But in *Tacoma and Roche Harbor Lime Co., 43 L.D. 128 (1914),* after discussing a number of pertinent court and departmental decisions, the Department adopted the rule as stated in Lindley on Mines and allowed [**9] credit toward patent expenditures to a trail subject only to proof of the applicability of the trail work to specific locations. The principle was applied to an aerial tramway in *United States v. El Portal Mining Co., 55 I.D. 348 (1935),* citing the Tacoma case, supra. These cases obviously recognize the right of a mining claimant to construct roads across public lands for necessary use in mining operations even to the point of crediting expenditures made in that connection toward meeting the requirements of the statute. And, as already indicated, it has preserved that right in express terms in at least two general laws providing for Federal use of public lands.

We may reasonably apply here a principle that the courts have frequently applied in cases measuring the powers of the United States to legislate in relation to matters within the exclusive jurisdiction of a State, and the reverse. Executive action along the line proposed could be used to completely destroy the rights granted by Congress under the mining laws. It is true that where a tramway right-of-way is granted under the 1895 act, supra, the Department, for more than 20 years, has charged an annual rental. But that [**10] charge is made under the discretionary power granted by Congress to the Secretary under the act. Such rights when granted in the [*365] past have vested an exclusive right of user in the mining claimant. A road constructed by a mining claimant for purposes connected with his claim, without the benefit of such a grant is not exclusive and there is no specific law

giving the Secretary discretionary authority to grant that right-of-way "under general regulations" as under the 1895 act.

It appears that the presumed authority to charge a fee is based on 43 CFR, 1954 Rev., 115.171(b) (Supp.) providing for the payment by a permittee for the use of a road "constructed or acquired" by the United States. There is also authority to charge for tramroad rights-of-way, granted pursuant to 43 CFR, 1954 Rev., 244.52, in section 244.21 (Supp.). But both sections 115.171(b) and 244.21 pertain to granted rights-of-way. They do not apply to roads constructed by an entryman or locator solely to provide access to his entry or claim. The road was not built by the United States nor can it be deemed to have been acquired by it in the sense contemplated by section 115.171(b). Even if the word "acquired" **[**11]** as there used is given its broadest possible meaning it is not believed that it would encompass an access road of the kind discussed here. It is true that the title to the land is in the United States but the road is in the nature of a "private road" across another's land which is primarily used by one or more persons but which may be used by anyone. The United States can no doubt use such a road or permit its permittees or licensees to do so at least to the extent that it does not unduly interfere with its use for the legitimate purpose for which it was built. If it is abandoned for that purpose it falls in the public domain if used as a public road, otherwise it is the sole property of the United States.

In practice the Bureau of Land Management has granted tram road rights-of-way on the public domain elsewhere than on the Oregon and California Grant lands only where miners or others have desired an exclusive right of user. On the Oregon and California Grant lands, and interspersed public lands, the need for the use of such granted rights-of-way by a class of persons no doubt is such as to require all users to participate in their maintenance and this may well be justified, **[**12]** if not under the 1895 act certainly under the 1937 act, but this may be done without extending the fee principle to roads constructed under clearly implied statutory authority as ways of necessity, unless such extension is required or authorized by law.

With respect to timber roads on the Oregon and California Railroad Grant lands, it is noted that the regulation governing the grant of rights-of-way under the 1895 act also cites the 1937 Timber Management Act, supra, as statutory authority. The latter act gives the Secretary **[*366]** broad authority in the management and sale of timber whereas the later act of April 8, 1948 (62 Stat. 162), extends the mining laws to the area with only two qualifications: (1) that the ownership and management of the timber is reserved to the United States and (2) that mining claimants must record their locations and assessment work affidavits in the land office. Beyond this the law vests no discretionary authority over such claims in the Secretary. This is a further reason for believing that Congress intended that, except as provided in the law, miners' rights on such land would be the same as on other public domain land. It is true that neither **[**13]** the 1937 act nor the 1948 act contains language respecting the right of passage similar to that in the National Forest and Taylor Grazing Acts. But this is far from conclusive of a different intent. In the light of the history of the 1948 act it seems likely that Congress did not then feel that it had intended in 1937 to affect mining rights in those lands at all. They had been consistently protected everywhere else. The 1948 act clearly intended to restore the status quo and to give to miners everything they enjoyed on public lands except as otherwise expressly provided.

I cannot agree with the State supervisor in his belief that the act of August 31, 1951 (65 Stat. 290; 5 U.S.C., 1952 ed., sec. 140), applies here. That act requires Federal agencies to charge for --

any work, service, publication, report, document, benefit, privilege, authority, use, franchise, license, permit, certificate, registration, or similar thing of value or utility performed, furnished, provided, granted, prepared, or issued by any Federal agency * * *. (Italics added.)

The grant of the minerals with all incidents thereunto pertaining is direct from Congress to the miner. The act contains no **[**14]** language that could be construed to authorize a Federal agency to make a charge in such case. The act does not require that the Department examine all grants made by Congress and amend them so as to impose charges for rights freely granted, whether expressly as the right to locate and mine, or by reasonable, if not necessary, implication, as the right of passage.

The Bureau of Land Management has made no grant nor performed any service. The miner built the road by implied authority from Congress. He is liable in damages if he unnecessarily causes loss or injury to the property of the United States and, as previously stated, his right to use the road, even though he built it, is not exclusive but his right to use it for mining purposes is as evident as his right to mine.

Although no charge may be made on a road as constructed and used as a necessary incident to the maintenance of a mining location and its development, a miner who wishes to use a road built or acquired by the United States must comply with the applicable regulations. And, if he applies for and obtains a right-of-way under the 1895 act he must **[*367]** pay whatever fee is required by the regulations. And, of **[**15]** course, any person who uses public land within the Oregon and California Grant lands area must comply with all applicable and reasonable regulations issued under the act of August 28, 1937, supra, as amended, for the management of the area, but that act does not supersede the mining laws.

EDMUND T. FRITZ,

Acting Solicitor.

A TREATISE

ON THE

AMERICAN LAW RELATING TO MINES AND MINERAL LANDS

WITHIN THE

PUBLIC LAND STATES AND TERRITORIES

AND

GOVERNING THE ACQUISITION AND ENJOYMENT OF MINING RIGHTS IN LANDS OF THE PUBLIC DOMAIN

BY

CURTIS H. LINDLEY
Of the San Francisco Bar

THIRD EDITION

IN THREE VOLUMES

VOLUME I

"I hold every man a debtor to his profession; from the which, as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereto."

Bacon's Tracts.

"Et opus desperatum, quasi per medium profundum euntes, cœlesti favore jam adimplevimus."

—From Dedication of Justinian's Institutes.

SAN FRANCISCO
BANCROFT-WHITNEY COMPANY
1914

many mining properties, rights to which attached prior to its repeal. To this extent it is still operative.[3]

§ 54. Essential features of the act.—No one has ever claimed that this act was a model piece of legislation. It is faulty and crude in the extreme, and the embarrassments surrounding its proper interpretation are still encountered in the courts, where property rights arising under it come in conflict with those acquired under the later laws. Yet the mining communities accepted it as being a step in the right direction. Mr. Yale says of it:—

> As the initial act of the legislation which must necessarily follow, it is more commendable as an acknowledgment of the justice and necessity which dictated it, and its expediency as a means to the advancement of the material interests of the state and nation, than for the perfection of its provisions or their exact adaptation to the accomplishment of the object intended. We must not, however, find fault with the law on account of its imperfections or the introduction of objectionable features in the mode to be followed in acquiring a title under it. These imperfections can be remedied, the rights of the parties amplified in many particulars, and the system so changed as to work with more facility than now anticipated.[4]

It is certainly due to Senators Stewart and Conness, the authors of the bill, to explain that at the time of its passage it was extremely difficult to secure the consideration of any measure touching the subject of mineral lands. Eastern sentiment was divided on questions of governmental policy, and the delegations from the western states were not harmonious. If subsequent experience has shown defects to exist in the law, the authors and friends of the measure are entitled to

[3] The full text of the act will be found in the appendix.
[4] Yale on Mining Claims and Water Rights, pp. 9, 10.

the gratitude of those engaged in the mining industry for the establishment of at least three important and beneficent principles:—

First—That all the mineral lands of the public domain should be free and open to exploration and occupation.

Second—That rights which had been acquired in these lands under a system of local rules, with the apparent acquiescence and sanction of the government, should be recognized and confirmed;[5]

Third—That titles to at least certain classes of mineral deposits or lands containing them might be ultimately obtained.

§ 55. **Declaration of governmental policy.**—By the first of these provisions, the government, for the first time in its history, inaugurated a fixed and definite legislative policy with reference to its mineral lands. It forever abandoned the idea of exacting royalties on the products of the mines,[6] and gave free license to all its citizens, and those who had declared their intention to become such, to search for the precious and economic minerals in the public domain, and, when found, gave the assurance of at least some measure of security in possession and right of enjoyment. What had theretofore been technically a trespass became thenceforward a licensed privilege, untrammeled by governmental surveillance or the exaction of burdensome conditions. Such conditions as were imposed were no more onerous than those which the miners had imposed upon themselves by their local systems. That such a declaration of governmental policy stimulated and encouraged the

[5] Jennison v. Kirk, 98 U. S. 453, 458, 25 L. ed. 240; Blake v. Butte S. M. Co., 101 U. S. 274, 25 L. ed. 790.

[6] Ivanhoe M. Co. v. Keystone Cons. M. Co., 102 U. S. 167, 173, 26 L. ed. 126.

development of the mining industry in the west is a matter of public history.

§ 56. Recognition of local customs and possessory rights acquired thereunder.—As was observed in the preceding chapter, the federal government had practically acquiesced from the beginning in the system of local rules established in the various mining districts. That is to say, no overt act was done by the government to overthrow or repudiate the system. No attempt was made to interfere with mining upon the public domain. The process by which these primitive systems came to be recognized, first by the states, and then by the national government, was natural. When mineral discoveries were made in other territories and states, the system inaugurated in California was adopted to govern and regulate the new mining districts.[7]

Local legislatures and local courts followed the precedent set in California, by enacting and upholding laws confirming the right in the newly discovered mineral districts to establish rules governing the mining industry. As the supreme court of the United States said, before the act of 1866 was passed:—

> We cannot shut our eyes to the public history which informs us that under the legislation (state and territorial), not only without interference by the national government, but under its implied sanction, vast mining interests have grown up, employing many millions of capital and contributing largely to the prosperity and improvement of the whole country.[8]

The unqualified legislative recognition of these local systems was a simple act of justice. Any other course would have involved a practical confiscation of prop-

[7] St. Louis Smelting Co. v. Kemp, 104 U. S. 636, 650, 26 L. ed. 875.

[8] Sparrow v. Strong, 3 Wall. 97, 104, 18 L. ed. 49. See, also, Del Monte M. Co. v. Last Chance Mi Co., 171 U. S. 55, 62, 18 Sup. Ct. Rep. 895, 43 L. ed. 72.

erty acquired and developed by the tacit consent of the government. That this act was such unqualified recognition has been abundantly established by the highest judicial authority.[9]

§ 57. **Title to lode claims.**—It may seem strange that the first mining law under which title to mining property could be absolutely acquired was limited in its operation in this direction to lode, or vein, claims. All mineral lands, whatever the forms in which the deposits therein occurred, were thrown open to exploration; but only lode claims could be patented. We are at a loss to understand the reason for this, unless it is accounted for by the state of the industry at the time the act was passed. Placer mining, which had occupied the attention exclusively of the early miners of California, was on the decline, and the quartz, or lode, mining was in the ascendency. The auriferous quartz veins of California were being developed to an important extent. Nevada, with its great Comstock lode, was attracting the attention of the civilized world. Much expensive litigation had arisen there,[10] and the necessity for some law giving a degree of certainty to mining titles was urgent. In addition to this, important quartz veins of great value had been discovered in other portions of Nevada, and in Colorado, Idaho, Montana, and other of the precious metal bearing states and territories. All these facts considered,

[9] Jennison v. Kirk, 98 U. S. 453, 459, 25 L. ed. 240; Broder v. Natoma Water Co., 101 U. S. 274, 25 L. ed. 790; Chambers v. Harrington, 111 U. S. 350, 352, 4 Sup. Ct. Rep. 428, 28 L. ed. 452; N. P. R. R. Co. v. Sanders, 166 U. S. 620, 629, 17 Sup. Ct. Rep. 671, 41 L. ed. 1139; Titcomb v. Kirk, 51 Cal. 288, 289, 294.

[10] The surveyor-general for the state of Nevada, in his report for 1865, expressed the belief that one-fifth of the output of the Comstock, estimated up to that date by Mr. J. Ross Browne at forty-five millions of dollars, was spent in litigation. (Mineral Resources of the West, 1867, p. 32.)

CHAPTER V.

FOURTH PERIOD: FROM THE ENACTMENT OF THE LAW OF MAY 10, 1872, TO THE PRESENT TIME.

§ 68. The act of May 10, 1872.
§ 69. Declaration of governmental policy.
§ 70. Changes made by the act—Division of the subject.
§ 71. Changes made with regard to lode claims.
§ 72. Changes made with regard to other claims.
§ 73. New provisions affecting both classes of claims.
§ 74. Tunnels and millsites.
§ 75. Legislation subsequent to the act of 1872.
§ 76. Local rules and customs since the passage of the act.
§ 77. Accession to the national domain during the fourth period.

§ 68. The act of May 10, 1872.—On May 10, 1872, congress passed a law entitled "An act to promote the development of the mining resources of the United States," which reaffirmed the policy of the government as to the exploration, development, and purchase of its mineral lands by its citizens, or those who had declared their intention to become such, yet, particularly with respect to lode claims, it made a radical departure. This act is embodied in the Revised Statutes of the United States, and, to all intents and purposes, constitutes the present system. It is printed in full in the appendix, where will also be found the various sections of the revision embodying its terms. It is not our purpose here to deal with it analytically. The entire treatise will practically be devoted to a discussion and exposition of it. It is our present purpose to simply outline its salient features, draw attention to the changes in the law made by the act, and give it its proper place in the history of mining legislation.

§ 69. Declaration of governmental policy.—With reference to the declaration of governmental policy, it

embodies the spirit of the preceding enactments, making such changes in expression as were necessitated by substituting one enactment, embracing all classes of mineral lands, for two practically separate ones, dealing with two distinct classes.

The act of 1866 declared that the mineral lands of the public domain should thenceforward be free and open to exploration and occupation by all citizens and those who had declared their intention to become such, and granted the privilege to the claimants of a vein, or lode, of obtaining title to the *mine*. The act of 1870 extended like privileges to the owners of placer and other forms of deposit. The act of May 10, 1872, declares that all *mineral deposits* in land belonging to the United States are hereby open to exploration and purchase, and the *lands in which they are found to occupation and purchase.*[1] The language in italics, particularly the last sentence, "the lands in which they are found," seems to disclose the intent of the act in its radical departure from the method theretofore in vogue of locating lode claims. As a declaration of policy, however, we can see no essential difference in the spirit of the old and that of the new. The latter was, to all intents and purposes, a reaffirmance of the former. Let us briefly examine and discuss the changes made by the act in other respects, bearing in mind that it is not our present intention to critically discuss the latter law in all its aspects. We simply wish to invite attention to the principal modifications of the old system, and enumerate the salient features of the new.

[1] Campbell v. Ellet, 167 U. S. 116, 119, 17 Sup. Ct. Rep. 765, 42 L. ed. 101; Calhoun G. M. Co. v. Ajax G. M. Co., 182 U. S. 499, 508, 21 Sup. Ct. Rep. 885, 45 L. ed. 1200; Doe v. Waterloo M. Co., 54 Fed. 935, 937; Parrot S. & C. Co. v. Heinze, 25 Mont. 139, 64 Pac. 326, 329.

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drawal discussed in the previous section. If the withdrawal was invalid, the location heretofore assumed to have been made was valid, and congress could not by retroactive legislation destroy the property right arising from a perfected valid location.[87]

Construing the acts either as *in pari materia* or as distinct and unrelated enactments, there is no serious ground for the contention that they or either of them were intended to confirm, ratify or declare valid the previous withdrawals.

ARTICLE IX. HOMESTEAD AND OTHER AGRICULTURAL CLAIMS.

§ 202. Introductory.
§ 203. Classification of laws providing for the disposal of the public lands.
§ 204. Manner of acquiring homestead claims.
§ 205. Nature of inceptive right acquired by homestead claimant.
§ 206. Location of mining claims within homestead entries.
§ 207. Proceedings to determine the character of the land.
§ 208. When decision of land department becomes final.
§ 209. The reservation of "known mines" in the pre-emption laws.
§ 210. Timber and stone lands.
§ 211. Scrip.
§ 212. Desert lands.

§ 202. Introductory.—We have no particular concern with the manner of acquiring title to lands of the public domain, other than those falling within the purview of the mining laws, except in so far as the administration of the public land system requires the adjustment of controversies between mineral claimants and those asserting privileges under the homestead and other laws applicable to public lands which are nonmineral in character. Incidentally, we are called upon to investigate the general scope of the latter class of laws, the character of lands to which they relate, the

[87] *Post*, § 539.

rules governing the determination of conflicts arising between mineral and other claimants, and the point of time in the proceedings seeking the transmission of title when these controversies are to be finally determined.

§ 203. Classification of laws providing for the disposal of the public lands.—The existing laws providing for the disposal of the public domain may be thus classified:—

(1) Those regulating the acquisition and enjoyment of rights upon public mineral lands, including in this designation laws applicable to coal and salines;

(2) The townsite laws;

(3) The homestead laws;

(4) Laws regulating the sale of lands chiefly valuable for timber or stone;

(5) Laws applicable to desert lands;

(6) The appropriation of lands by "covering" with bounty land warrants, agricultural college, private land, and other classes of "scrip," or lieu selections under special laws.

The pre-emption laws which, in one form or another, existed from an early period of our history until March 3, 1891, were repealed on that date,[88] and no longer form a part of our public land system, except so far as may be necessary to preserve and perfect rights accruing prior to the passage of the repealing act.

The timber-culture laws, originally enacted March 3, 1873,[89] a substitute for which was passed June 14, 1878,[90] were abrogated by section 1 of the same act, which effected the repeal of the pre-emption laws.

As to sales at public auction, they are no longer per-

[88] 26 Stats. at Large, p. 1093; Comp. Stats. 1901, p. 1531.
[89] 17 Stats. at Large, p. 605.
[90] 20 Stats. at Large, p. 113.

mitted,[91] except in cases of abandoned military or other reservations, isolated and disconnected fractional tracts authorized to be sold by section twenty-four hundred and fifty-five of the Revised Statutes,[92] and other lands under special acts having local application.[93]

Since March 2, 1889, with the exception of lands in the state of Missouri and in other specified localities, no sales or locations by private entry are allowed.[94]

As to the townsite laws, we have in a preceding article[95] fully discussed their provisions, and it is unnecessary to further consider them.

For the purposes announced in the introduction to this article, we need devote our attention only to those branches of the public land system which deal with homesteads, timber and stone lands, desert lands, and scrip locations. For certain illustrative purposes, we may also include in the category deserving consideration the repealed pre-emption laws.[96]

§ 204. Manner of acquiring homestead claims.—The homestead laws secure to the head of a family, of lawful age, who is a citizen of the United States, or who has declared his intention to become such, the

[91] Act of March 3, 1891, §§ 9, 10; 26 Stats. at Large, p. 1099; Comp. Stats. 1901, pp. 1443, 1617; 6 Fed. Stats. Ann. 331.

[92] Amended June 27, 1906, 34 Stats. at Large, 517; Comp. Stats. (Supp. 1911), p. 627; Fed. Stats. Ann. (Supp.), p. 543; Instructions, 39 L. D. 10; 40 L. D. 363.

[93] See act of March 28, 1912, permitting land too rough or mountainous for cultivation to be sold even if not isolated. Circular Instructions, 40 L. D. 584.

[94] 25 Stats. at Large, p. 854; Comp. Stats. 1901, p. 1445; 6 Fed. Stats. Ann. 334.

[95] *Ante*, art. v, §§ 166–177.

[96] Act of May 18, 1898, abolishes the distinction previously obtaining between offered and unoffered lands. All are to be treated hereafter as unoffered (Missouri excepted). 30 Stats. at Large, p. 413; Comp. Stats. 1901, p. 1446; 6 Fed. Stats. Ann. 335.

right to settle upon, enter, and acquire title to not exceeding one hundred and sixty acres of unappropriated nonmineral public lands, by establishing and maintaining residence thereon, and improving and cultivating the land for the continuous period of three years,[97] reduced recently from five years.[98]

[97] Rev. Stats., §§ 2289–2294; 6 Fed. Stats. Ann. 285–304; 10 Fed. Stats. Ann. 358; Rev. Stats., §§ 2296–2302; 6 Fed. Stats. Ann. 307–321; Act of March 3, 1879; 20 Stats. 472; Comp. Stats. 1901, p. 1401; 6 Fed. Stats. Ann. 315; Act of May 14, 1880; 21 Stats. 140; Comp. Stats. 1901, p. 1392; 6 Fed. Stats. Ann. 300; Act of June 8, 1880; 21 Stats. 166; Comp. Stats. 1901, p. 1395; 6 Fed. Stats. Ann. 302; Act of March 3, 1881; Act of March 2, 1889; 25 Stats. 854; Comp. Stats. 1901, p. 1445; 6 Fed. Stats. Ann. 334; Act of August 30, 1890; 26 Stats. 391; Comp. Stats. 1901, p. 1404; 6 Fed. Stats. Ann. 313; Act of March 3, 1891; 26 Stats. 1095; Comp. Stats. 1901, p. 1535; 6 Fed. Stats. Ann. 497; Act of June 3, 1896; 29 Stats. 197; Comp. Stats. 1901, p. 1409; 6 Fed. Stats. Ann. 318; Act of May 17, 1900; 31 Stats. 179; Comp. Stats. 1901, p. 1618; 6 Fed. Stats. Ann. 320; Act of June 5, 1900; 31 Stats. 267; Comp. Stats. 1901, p. 1405; 6 Fed. Stats. Ann. 319; Act of June 6, 1900; 31 Stats. 683; Comp. Stats. 1901, p. 1393; 6 Fed. Stats. Ann. 301; Act of January 26, 1901; 31 Stats. 740; Comp. Stats. 1901, p. 1620; 6 Fed. Stats. Ann. 320; Act of May 22, 1902; 32 Stats. 203; Comp. Stats. (Supp. 1911), p. 733; 6 Fed. Stats. Ann. 321; Act of March 4, 1904; Act of April 28, 1904; 33 Stats. 527; Comp. Stats. (Supp. 1911), p. 597; 10 Fed. Stats. Ann. 359; Act of March 3, 1905; Act of February 8, 1908; 35 Stats. 6; Comp. Stats. (Supp. 1911), p. 600; Fed. Stats. Ann. (Supp.), p. 547; Act of May 29, 1908.

The acts of February 19, 1909, 35 Stats. 639, Comp. Stats. (Supp. 1911), p. 601, Fed. Stats. Ann. (Supp.), p. 560, and June 17, 1910, 36 Stats. 531, Comp. Stats. (Supp. 1911), p. 602, 1 Fed. Stats. Ann. (Supp.), p. 316, provide for enlarged homesteads in certain states of three hundred and twenty acres of arid land suitable for "dry farming." See, also, Instructions, 37 L. D. 546; Id. 697; 38 L. D. 361.

§§ 2304, 2305, 2307, 2309, Rev. Stats., 6 Fed. Stats. Ann., pp. 322, 323, 327, 328, provide for soldiers and sailors' homesteads.

Consult various circulars and instructions concerning homesteads issued from time to time by the department of the interior, especially "Suggestions to Homesteaders," approved September 24, 1910; 40 L. D. 39 (amending Circular, 39 L. D. 232); Circular No. 46, dated August 18, 1911, and Circular No. 142, dated July 15, 1912.

Agricultural lands in forest reserves may be taken up as homesteads under certain conditions. See Circular, 38 L. D. 278.

[98] Act of June 6, 1912.

To obtain an inceptive right to a homestead, the applicant files with the register of the local land office an application, stating his qualifications, and describing the land he desires to enter. If it appears from the tract-books that the land is of the character subject to entry under the law, and is clear,—that is, unappropriated,—the applicant is permitted to make entry of the land;[99] the receiver of the land office issues a receipt for the fees paid for filing the application, a record is made in the local office, and the fact reported to the general land office. If the lands are returned as mineral, and borne on the tract-books as such, the homestead claimant will not be permitted to initiate his right until a hearing is had for the purpose of determining the character of the land. To use the common expression, the mineral must be "proved off," before any right to the land can be inaugurated under the agricultural land laws.[100] If there has been one hearing and an adjudication that the land is mineral, it is improper to allow a homestead application to be filed until a hearing has been had as to conditions arising subsequent to the former adjudication.[1] The prior adjudication is conclusive, and the department will not order another hearing as to the conditions existing prior to first adjudication.[2] If, upon a hearing, land is adjudged to be agricultural, the burden is upon a

[99] As to practice in this regard, see Germania Iron Co. v. James, 89 Fed. 811, 32 C. C. A. 348.

[100] The report of the United States Geological Survey determining lands to be mineral in character has been accepted and such report given the effect of a surveyor general's return. Instructions, 37 L. D. 17.

[1] Coleman v. McKenzie, 28 L. D. 348; S. C., on review, 29 L. D. 359; Caldwell v. Gold Bar M. Co., 24 L. D. 258.

[2] Mackall v. Goodsell, 24 L. D. 553; Leach v. Potter, 24 L. D. 573.

mineral claimant thereafter asserting the mineral character to prove that fact.[3] Whatever may be the effect of the surveyor-general's return as evidence in litigated cases involving the character of the land,[4] the land officers in administering the land laws accept such return as controlling their action in the first instance.

Exceptions to the general rule governing the character of land which may be taken up as a homestead are found in the act of June 22, 1910,[5] which provides that surface rights to coal lands which have been withdrawn or classified as coal may be acquired by homesteaders, and the act of August 24, 1912,[5a] which permits similar entries on oil and gas lands, the latter act, however, being limited in its application to the state of Utah. Of course, no rights to the underlying minerals of these classes are obtained by such filings, the title to such minerals remaining in the United States subject to disposal in such manner as congress may determine. These exceptions are the result of the general policy of conservation which has assumed such prominence in the past few years.

§ 205. Nature of inceptive right acquired by homestead claimant.—It would seem that the estate acquired by a homestead claimant who has filed his application and received his preliminary receipt from the receiver of the land office is similar to that acquired by filing a declaratory statement under the pre-emption laws.[6] By the pre-emption laws the United States did

[3] Majors v. Rinda, 24 L. D. 277.

[4] *Ante*, §§ 105–107.

[5] 36 Stats. 583; Comp. Stats. (Supp. 1911), p. 614; 1 Fed. Stats. Ann. (Supp.), p. 317.

[5a] 37 Stats. at Large, —.

[6] Shiver v. United States, 159 U. S. 491, 495, 16 Sup. Ct. Rep. 54, 40 L. ed. 231; Norton v. Evans, 82 Fed. 804, 807, 27 C. C. A. 168.

A TREATISE

ON THE

AMERICAN LAW RELATING TO MINES AND MINERAL LANDS

WITHIN THE

PUBLIC LAND STATES AND TERRITORIES

AND

GOVERNING THE ACQUISITION AND ENJOYMENT OF MINING RIGHTS IN LANDS OF THE PUBLIC DOMAIN

BY

CURTIS H. LINDLEY
Of the San Francisco Bar

THIRD EDITION

IN THREE VOLUMES

VOLUME II

"I hold every man a debtor to his profession; from the which, as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereto."

Bacon's Tracts.

"Et opus desperatum, quasi per medium profundum euntes, cœlesti favore jam adimplevimus."

—From Dedication of Justinian's Institutes.

SAN FRANCISCO
BANCROFT-WHITNEY COMPANY
1914

ARTICLE III. THE DISCOVERY.

§ 335. Discovery the source of the miner's title.
§ 336. What constitutes a valid discovery.
§ 337. Where such discovery must be made.
§ 338. The effect of the loss of discovery upon the remainder of the location.
§ 339. Extent of locator's rights after discovery and prior to completion of location.

§ 335. Discovery the source of the miner's title.—Discovery in all ages and all countries has been regarded as conferring rights or claims to reward. Gamboa, who represented the general thought of his age on this subject, was of the opinion that the discoverer of mines was even more worthy of reward than the inventor of a useful art. Hence, in the mining laws of all civilized countries the great consideration for granting mines to individuals is *discovery*. "Rewards so bestowed," says Gamboa, "besides being a proper return for the labor and anxiety of the discoverers, have the further effect of stimulating others to search for veins and mines, on which the general prosperity of the state depends."[98]

While in some of the older countries of Europe, as in France and Belgium, the nature of the reward to the discoverer was something less than an absolute preference in the right of enjoyment, yet in Spain and Spanish-America there was guaranteed to him "an absolute right of property in the mine which he discovers if he will take the proper measures to denounce

98. Halleck's De Fooz on the Law of Mines, p. xxvi. Text quoted in Creede & Cripple Creek M. & M. Co. v. Uinta T. M. & T. Co., 196 U. S. 337, 343, 25 Sup. Ct. Rep. 266, 49 L. ed. 501; Lawson v. United States Mining Co., 207 U. S. 1, 13, 28 Sup. Ct. Rep. 15, 52 L. ed. 65; Rapp v. Heirs of Healey, 38 L. D. 387.

it and have it duly registered. No one can have any preference over him, and he loses the rights which result from his discovery only through his own neglect to make it publicly known in the manner in which the law directs."[99]

This wise and liberal policy which pervaded the Mexican system at the time of the conquest and the acquisition of California by the United States became the recognized basis of mining rights and privileges as they were held and enjoyed under the local rules and regulations established by the miners occupying the public mineral lands within the newly acquired territory, and in all subsequent legislation, whether congressional, state, or territorial, discovery is recognized as the primary source of title to mining claims.[100]

As was said by Halleck in his introduction to De Fooz on the "Law of Mines,"[1] "*Discovery* is made the source of title, and *development*, or working, the condition of the continuance of that act."

Whatever may be the rule governing the acquisition of title to "claims usually called placers, including all forms of deposit, excepting veins of quartz or other rock in place," of which we treat in a subsequent chapter, there can be no valid appropriation of a lode claim unless there has been an antecedent discovery. "No location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located."[2]

[99] Halleck's De Fooz on the Law of Mines, p. xxvii.

[100] Erhardt v. Boaro, 113 U. S. 527, 535, 5 Sup. Ct. Rep. 560, 28 L. ed. 1113, 15 Morr. Min. Rep. 472.

[1] San Francisco, 1860.

[2] Rev. Stats., § 2320; Comp. Stats. 1901, p. 1432; 5 Fed. Stats. Ann. 8; Chrisman v. Miller, 197 U. S. 313, 321, 25 Sup. Ct. Rep. 468, 49 L. ed. 770; Garabaldi v. Grillo, 17 Cal. App. 540, 120 Pac. 425, 426.

Calendar No. 559

84TH CONGRESS, 1st Session | SENATE | REPORT No. 554

AMENDING THE ACT OF JULY 31, 1947 (61 STAT. 681), AND THE MINING LAWS TO PROVIDE FOR MULTIPLE USE OF THE SURFACE OF THE SAME TRACTS OF THE PUBLIC LANDS

JUNE 15 (legislative day, June 14), 1955.—Ordered to be printed

Mr. ANDERSON, from the Committee on Interior and Insular Affairs, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany S. 1713]

The Committee on Interior and Insular Affairs, to whom was referred the bill (S. 1713) to amend the act of July 31, 1947 (61 Stat. 681), and the mining laws to provide for multiple use of the surface of the same tracts of the public lands, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill, as amended, do pass.

Public hearings were held on the measure, and a number of witnesses, representing mining, lumbering, conservation, and wildlife and sportsmen's groups, were heard. All but one of the witnesses expressed support for the basic principles and purposes of the proposed legislation, although several urged amendment. All proposals for amendment were carefully considered, and a number were adopted.

In addition, the committee received and considered scores of communications from all parts of the country on the bill. By far the greater part were favorable. The executive agencies that would have responsibility for carrying out the provisions of the measure strongly urge passage, and the attention of the Senate is directed to their reports which are set forth in full.

PURPOSE OF THE MEASURE

The purpose of S. 1713 is to permit multiple use of the surface resources of our public lands, to provide for their more efficient

administration, and to amend the mining laws to curtail abuses of those laws by a few individuals who usually are not miners.

At the same time, the measure faithfully safeguards all of the rights and interests of bona fide prospectors and mine operators. In no way would it deprive them of rights and means for development of the mineral resources of the public lands of the United States under the historic principles of free enterprise and private ownership of the present mining laws.

To achieve these objectives, the bill would—

(1) Provide that deposits of common varieties of sand, building stone, gravel, pumice, pumicite, and cinders on the public lands, where they are found in widespread abundance, shall be disposed of under the Materials Act of 1947 (61 Stat. 681), rather than under the mining law of 1872.

(2) Amend the Materials Act to give to the Secretary of Agriculture the same authority with respect to the common, widespread mineral materials (including, but not limited to, common varieties of the following: sand, stone, gravel, pumice, pumicite, cinders, and clay) and vegetative materials (including, but not limited to yucca, manzanita, mesquite, cactus, and timber or other forest products) located on lands under his jurisdiction as that which the Secretary of the Interior has with respect to lands under the jurisdiction of the Secretary of the Interior.

(3) Amend the general mining law to prohibit the use of any hereafter located unpatented mining claim for any purpose other than prospecting, mining, processing, and related activities for development of mineral resources.

The bill would vest in the responsible United States administrative agency authority to manage and dispose of vegetative surface resources on such locations, to manage other surface resources thereof (except minerals subject to the mining laws), and to use so much of the surface as is necessary for management purposes or for access to adjacent lands.

Any such surface use, however, is limited in specific terms to those activities which do not endanger or materially interfere with mining operations or related activities; it is the intent of the proposed legislation that mineral resource development shall remain the dominant use of lands under mining claim.

(4) Establish, with respect to mining claims located prior to enactment of S. 1713, particularly as to invalid, abandoned, dormant, or unidentifiable claims, an in rem procedure in the nature of a quiet-title action, whereby the United States could expeditiously resolve uncertainties as to surface rights on such locations.

The holder of any claim in existence at the time of enactment of this legislation could retain all present rights to any and all surface resources on the claim by establishing, under prescribed procedures, his need for such surface resources for development of the claim's mineral resources. On a claim located after enactment, the locator would have full right to all surface resources of the claim which may be needed for carrying on mining activities.

His rights to subsurface resources remain unchanged on claims located both before and after enactment. Upon proceeding to patent, he would have full title in fee simple absolute as heretofore to both surface and subsurface.

BACKGROUND OF THE LEGISLATION

The broadest possible use of all of the resources of our public lands and forests for the benefit of the American people is a matter of great national import. The rapidly expanding population and economy of our Nation, and of the Western States in particular, have been accompanied by an ever-growing need for more general and more intensive use of our natural resources. The high tempo of our housing industry has brought about heavy demands for timber; stock growers need more grazing area to meet the increasing consumption of meat, leather and wool; our mining industry is under the constant necessity of exploring for and developing additional sources of new and old minerals to meet the ever-increasing requirements of our national security and industrial economy; and our growing population requires expanded recreational areas.

Conflict between surface and subsurface uses of our publicly owned lands is as old as the West itself, where most of the remaining public domain lies. Surface uses include stock grazing, forestry, soil-erosion control, watershed purposes, fish and wildlife preservation, and recreational areas. The subsurface use is that of development of the minerals that have been a basis for our great industrial and economic development.

As long as there was plenty of land that could be dedicated to each use, separately, the results of conflicts between surface and non-surface uses were generally local and minor in character.

However, in recent years our security needs, the growth of our population, and the expansion of our economy have brought about a situation in which it is no longer in the national interest that the public domain should be used for one of the uses to the exclusion of the other. This developing situation has been greatly intensified within the past few years by our incalculable needs for domestic sources of uranium and other fissionable "source materials" for atomic energy.

Historically, the mining law of 1872 has encouraged individual prospecting, exploration, and development of the public domain. The incentive for such activity has been the assurance of ultimate private ownership of the minerals and lands so developed. Under these laws, a prospector can go out on the public domain not otherwise withdrawn, locate a mining claim, search out its mineral wealth and, if discovery of mineral is made, can then obtain a patent which gives him full title to both the surface and subsurface of the land and its resources. The property, with issuance of patent, becomes the individual's to develop or sell, according to his initiative or desire.

A statement of the historic approach of Congress to this development of our mineral resources is to be found in section 1 of the act of May 10, 1872 (17 Stat. 911; 30 U. S. C. 22):

> * * * all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

ABUSES UNDER THE MINING LAWS

Over the past several years, the committee has received an increasing number of reports of growing abuses of the mining laws by persons whose primary interest in filing claims was not mining. The most serious of these abuses is that relating to mining claims in national forests whereby claimants have been able to obtain a color of title to hundreds of thousands of acres of valuable timber belonging to the people of the United States at virtually no cost to themselves and subject to little or no control, in fact, by the Forest Service.

The attention of the Senate is directed to the following extract from the report of the Department of Agriculture on S. 1713, which is set forth in full at the end of this report:

As of January 1, 1952, there were 36,600 mining patents on the national forests, covering 918,500 acres. Only about 15 percent of these mining patents have been or are commercially successful mines. As of the same date, there were approximately 84,000 claims, covering 2.2 million acres. Only 2 percent of these claims were producing minerals in commercial quantities and probably not more than 40 percent could be considered valid under the requirements of the mining laws. Yet, on these national-forest claims, there was tied up over 8 billion feet of commercial sawtimber, valued at about $100 million which the Government could not sell without consent of the claimant. In other words, national-forest timber exceeding in quantity and value that cut from all national forests in any one year is tied up on mining claims and cannot be sold by the Government. The two tables attached to this report supply these basic statistics by States.

The effect of this situation is increased costs of administration, obstruction of orderly management and competitive sale of timber, and obtaining high-value, publicly owned surface resources by a few individuals at nominal cost.

In the last 3 years there has been a tremendous increase in the number of mining claims on the national forests, principally as the result of prospecting for uranium and other fissionable materials. For example, as of January 1, 1955, it is estimated that there were 166,000 claims on the national forests, covering nearly 4 million acres or about a 100-percent increase in the past 3 years. At the rate claims are currently being filed, we estimate that by the end of this calendar year there will be about 225,000 mining claims on the national forests. It is also estimated conservatively that there are now over 10 billion board-feet of timber tied up on national-forest mining claims, having a current stumpage value of $112 million.

* * * * * * *

The number of claims is "snowballing" so fast that the situation on the national forests is rapidly getting out of hand. The above summary, for example, shows that there are nearly 7 times as many mining claims in Arizona as 3 years ago, and nearly 4 times as many in New Mexico and Utah. The increase has been large in other States, too. Equitable corrective action as would be provided by S. 1713 is urgently needed. It is needed quickly because new claims are being filed at the rate of about 5,000 per month.

Similarly, the Department of the Interior states in its report:

S. 1713 is designed to meet a situation which has arisen because of more intensive Federal use of the public lands in recent years. Under the existing mining laws various abuses have been possible. For example, it has been possible for persons who have unpatented claims under the mining laws to prevent orderly management and disposition of valuable timber and other surface resources, and also to block access to such resources on unlocated Federal land while paying little or no attention to mining. Moreover, many claims have been based on deposits of the mineral materials listed in section 1 which, although technically of sufficient value to justify a location, are actually of minor worth as compared to other natural resources of the land Another example of these abuses may be seen in the fact that it has been possible to acquire a color of right, through a mining location for nonmining purposes, such as summer homesites.

This bill is designed to strike at these abuses, which violate the spirit of the mining laws. The bill provides that deposits of common minerals such as ordinary varieties of sand, stone, gravel, pumice, pumicite, and cinders shall not be deemed valuable mineral deposits within the meaning of the mining laws. Secondly, it

prohibits the use of a claim for any nonmining purpose prior to the issuance of patent.

The type of practice against which this bill is directed has drawn the disapproval of the mining industry generally, conservation groups, and other public land users. The national interest in encouraging the discovery of minerals dictates that the mining industry should have a continued opportunity to locate mining claims, to mine minerals found there, to discover and develop commercial deposits, and, if fortunate, to make a profit, but the national interest is not served by preventing the use of the surface of unpatented claims for other desirable uses which do not substantially interfere with mining operations and related activities. This legislation is based upon this sound premise, in our view.

At the same time as the proposed legislation would meet the wishes of the mining industry, it would also give full recognition to the vital importance of the forest and range resources of the public lands and the national forests, for the bill provides for the multiple use of the surface of mining claims and thus permits the conservation and wise use of all surface resources in the public interest.

As pointed out, even on perfectly valid mining claims in national forests, such claims often have the effect, even though unintended, of blocking access to adjacent tracts of mature and merchantable Federal timber resulting in waste of this resource and loss to the local and national treasuries.

On nonforest lands, mining locations made under existing law may, and do, whether by accident or design, frequently block access to water needed for grazing on public lands, to valuable recreational areas, and to agents of the Federal Government desiring to reach adjacent lands for purposes of managing wild-game habitat or improving fishing streams so as to thwart the public enjoyment and proper management of fish and game resources on the public lands generally, both on the located lands and on adjacent lands.

The evidence shows that some locators, in reality, have filed mining claims solely for commercial enterprises such as filling stations, curio shops, cafes, or for residence or summer camp purposes, and as private hunting and fishing preserves. If application is made for residence or summer camp purposes under Federal law other than the mining laws, sites usually embrace small tracts, that is, 5-acre tracts; on the other hand, mining locations provide for control and utilization of approximately 20-acre tracts. Fraudulent locators can get color of title to 20 acres instead of 5 acres.

The effect of nonmining activity under color of existing mining law results in uncontrolled waste of valuable resources of the surface on lands embraced within claims which might satisfy the basic requirement of mineral discovery, but which were in fact, made for a purpose other than mining. The activities of a relatively few individuals have reflected unfairly on the legitimate mining industry.

The committee has received convincing evidence that the present situation, with the vastly more numerous and complex problems that have arisen from the widespread search for domestic uranium, requires the type of new legislative approach provided by S. 1713.

EXISTING REMEDIES INADEQUATE

Strict Federal enforcement of existing laws over the past several years could, in theory at least, have eliminated many of the abuses outlined above. But the existing legal and administrative machinery has been slow and cumbersome, and personnel for adequate enforcement insufficient.

Problems raised by abuses under the mining laws have for some time been recognized by the mining industry, by the Federal agencies

responsible for administration of the public's resources, and by private groups and individuals sincerely interested in wise conservation and utilization of all of our surface and subsurface resources.

If fradulent locations are made, under present law the United States has the right to refuse patents (if application is made), or to contest such locations by individual administrative action, or attack them in court.

Modification of presently authorized administrative action alone does not appear the answer. Presently available remedies are time-consuming, are costly, and, in the end, are sometimes not conclusive. Where a location is based on discovery, it is extremely difficult to establish invalidity on an assertion by the United States that the location was, in fact, made for a purpose other than mining.

The American Mining Congress, a national organization composed of both large and small producers of all metals and minerals mined in the United States, included the following statement in its declaration of public land policy adopted at the annual meeting in San Francisco in September 1954:

> We believe * * * that suitable amendments can be made in the general mining laws which, with proper use of available procedures, will simplify enforcement and minimize bad-faith attempts through pretended mining locations to serve objectives other than the discovery and development of minerals. We believe that this can be accomplished in a manner which will protect the incentive and reward now inherent in the mining laws.

The nonprofit, noncommercial, educational American Forestry Association, with more than 25,000 members, echoes this position of the mining industry. With some 800 natural-resource leaders present, the Fourth American Forest Congress, in October 1953, adopted by an overwhelming referendum vote of the association as section III D of its new program for American forestry, under the heading "Mining on Public Lands," this language:

> Efficient management of many millions of acres of Federal public lands, including the discovery and development of new or known mineral resources, is in the public interest. The ligitimate miner and prospector should be encouraged to carry on such work. However, widespread abuses under the existing mining laws as a means of acquiring Government lands for other than mining purposes should be stopped. We therefore recommend that Congress revise the Federal mining laws to prevent their abuse by claimants or patentees who use their claims to tie up more valuable timber or other resources than they legitimately need to develop the minerals.

The committee is convinced that enactment of S. 1713, as amended, would be of great assistance in solving the growing problems outlined above. It cites, as a precedent for the handling of a somewhat similar problem in some respects, its bill in the 83d Congress that became Public Law No. 585 (68 Stat. 708). This law permits multiple use of the subsurface of public domain, permitting development of mineral deposits to go forward under the mining laws and the mineral leasing acts on the same tracts at the same time. S. 1713 is similar in philosophy and purpose with respect to surface and subsurface uses, and adopts some of the procedural mechanisms set up in Public Law 585, 83d Congress.

SECTIONAL ANALYSIS OF S. 1713

1. Amendment of Materials Act

Section 1 of S. 1713, with section 3, would amend section 1 of the act of July 31, 1947 (61 Stat. 681; 43 U. S. C. 1185), to provide for disposal of common varieties of sand, common stone, gravel, pumice, pumicite, cinders, and clay under the Materials Act of 1947. Section 3 provides that, in the future, these commonly occurring materials cannot be the object of location and removal under the general mining law.

The committee amendments extend the provisions of the section to the revested Oregon and California railroad grant lands, and the Taylor Grazing Act is specified as being included among the laws under which disposal of materials is not to be affected by S. 1713.

The Secretary of Agriculture is given, by section 1, the same authority with respect to mineral materials and vegetative materials located on lands under his jurisdiction as that which the Secretary of the Interior has with respect to lands under his jurisdiction.

The provisions of section 1 of the 1947 act, as thus amended, will, by the terms of this bill, apply in the future to national forest and title III Bankhead-Jones lands.

The provisions of section 1 of the 1947 act will remain inapplicable to national parks and national monuments or to Indian lands, or lands set aside or held for the use or benefit of Indians, including lands withdrawn for Indian use by Executive order.

Section 1 of the bill does not affect rights under existing valid mining claims.

2. Receipts from materials disposal

Section 2 would amend section 3 of the 1947 act (43 U. S. C. 1187) to provide that moneys received from the disposal of materials thereunder shall be subject to disposition under the same provisions as moneys received from the sale of public lands, except that moneys received from the disposal of materials by the Secretary of Agriculture would be disposed of in the same manner as are other receipts from the lands from which the materials are removed. The committee amendment to this section provides that receipts under the Materials Act from the O. and C. lands will be disposed of as are other receipts from those lands.

Receipts from disposal of materials from Alaska school section lands will be treated as income from such lands presently is treated.

3. Removal of common materials from mining location

Section 3 of the bill specifically states that a deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders shall not be deemed a valuable mineral deposit within the meaning of the mining laws so as to give validity to any mining claim hereafter located under such mining laws.

Attention is called to two additional clauses contained in this section.

The proviso in this section reading—

> * * * nothing herein contained shall affect the validity of any mining location based upon discovery of some other mineral occurring in or in association with such a deposit—

has been incorporated in the bill to make clear the committee intent to not preclude mining locations based on discovery of some mineral other than a common variety of sand, stone, etc., occurring in such materials, such as, for example, a mining location based on a discovery of gold in sand or gravel.

The last sentence of this section declares that—

"Common varieties" as used in this act does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value * * *.

This language is intended to exclude from disposal under the Materials Act materials that are commercially valuable because of "distinct and special" properties, such as, for example, limestone suitable for use in the production of cement, metallurgical or chemical-grade limestone, gypsum, and the like.

Section 3 of the bill applies only to locations made after enactment, does not affect rights under existing valid mining claims.

4. Rights of future locators to surface resources

Section 4 of the bill delineates the rights, limitations, and restrictions which would apply to any unpatented mining claim located after the effective date of the act.

Subsection (a) specifically provides that, prior to issuance of patent, no mining claim hereafter located could be used for any purpose other than prospecting, mining, or processing operations and uses reasonably incident thereto. This subsection states affirmative rights—mining claims can, in the future, be used for activities related to prospecting, mining, processing and related activities, though not for unrelated activities.

Subsection (b) of section 4 provides that hereafter located claims under the mining laws shall be subject, prior to patent issuance, to the right of the United States to manage and dispose of the vegetative surface resources thereof and to manage other surface resources thereof, so long as such management and disposition does not endanger or materially interfere with the prospecting, mining, or processing operations, or uses reasonably incident to such mineral development activities.

This subsection would also make such claims subject, prior to issuance of patent, to the right of the United States, its permittees and licensees, to use so much of the location surface as may be necessary for access to adjacent land.

With respect to the reservations in the United States to use of the surface and surface resources as set out in the two preceding paragraphs attention is called to the proviso which qualifies them:

* * * any use of the surface of any such mining claim by the United States, its permittees, or licensees, shall be such as not to endanger or materially interfere with prospecting, mining, or processing operations or uses reasonably incident thereto.

This language, carefully developed, emphasizes the committee's insistence that this legislation not have the effect of modifying longstanding essential rights springing from location of a mining claim. Dominant and primary use of the locations hereafter made, as in the past, would be vested first in the locator; the United States would be authorized to manage and dispose of surface resources, or to use the surface for access to adjacent lands, so long as and to the extent that

these activities do not endanger or materially interfere with mining, or related operations or activities on the mining claim.

The first committee amendment to the subsection provides that mining operations shall not suffer because the Federal Government has sold off the timber on a claim in accordance with the authorization in the bill. Up to the amount of timber of the same type and quantity removed from the claim, the claim holder has a right to other Federal timber which he needs in his mining operations.

The second proviso endeavors to make plain the committee's intent that no provision of S. 1713 shall be construed as relating in any way to control under State law of surface waters on mining claims heretofore or hereafter located.

Subsection (c) of section 4 of the bill specifically imposes restrictions on the locator's use of surface resources not related to mining or related activities.

It prohibits removal or use, by the mining claimant, of timber or other surface resources made subject, by subsection (b) of section 4, to management and disposition by the United States; again, it will be noted—

> Except to the extent required for the mining claimant's prospecting, mining, or processing operations and uses reasonably incident thereto, or for the construction of buildings or structures in connection therewith, or to provide clearance for such operations or uses, or to the extent authorized by the United States * * *.

This language, read together with the entire section, emphasizes recognition of the dominant right to use in the locator, but strikes a balance, in the view of the committee, between competing surface uses, and surface versus subsurface competing uses.

Finally, subsection (c) requires that any timber cutting by the mining claimant, other than that to provide clearance, shall be done in accordance with sound principles of forest management.

The foregoing rights, reservations, limitations, and restrictions apply only to claims hereafter located, and operate only prior to issuance of patent.

After patent, the patentee, as under traditional law which has existed since 1872, with respect to most lands acquires full title to the mining claim and its resources, surface, and subsurface. Acquisition of patent requires compliance with the mining laws as to location, payment to the United States of the purchase price, and a determination by the Department of the Interior as to claim validity and full compliance with the law.

5. Procedure for resolving title uncertainties on claims located prior to date of the act

At the present time, agencies administering federally owned lands encounter many difficulties in the administration of lands under their jurisdiction because of the presence of unpatented mining claims concerning the very existence of which there are grave doubts and uncertainties. This undesirable situation would be alleviated by the procedure provided in section 5 for the expeditious determination of title uncertainties resulting from mining claims located prior to the enactment of the bill. Not only is it necessary that some means be established for an expeditious determination of claims, but also, if section 4 of S. 1713 is to have the desired effect upon the management and use of the surface resources of unpatented mining claims, a

procedure to identify which unpatented claims will be subject to the restrictions of section 4 is necessary. The in rem procedure which would be established by section 5 answers this need, for it would permit a determination of those valid claims existing prior to the enactment of the bill with respect to which surface rights are asserted adverse to those established in the United States by this measure.

The committee understands that this section does not impair authority under existing law to declare mining claims null and void for failure to comply with provisions of law governing such claims, and that nothing in this section or elsewhere in the bill would prevent the taking by the United States of any mining claim under the right of eminent domain.

Proceeding in a manner similar to that provided in the act of August 13, 1954 (Public Law 585, 83d Cong., 2d sess.; 68 Stat. 708), the Secretary of the Interior, at the request of the Federal department or agency having the responsibility for administering the surface of United States lands in a given area, shall initiate action for a determination of surface rights thereto. Under this procedure, a holder of a claim located prior to enactment could assert and establish his rights in the lands covered by his claim, and the claim would be unaffected by the proceeding.

If such a claimant fails to establish his rights, or fails to assert his rights, or if he voluntarily waives his rights to the surface, he will be in the same position as a holder of a claim located after enactment of this bill.

The procedure does not affect the right of a claimant to apply for patent, and if patent is granted he would acquire the same title as he would under the existing law.

Initiating proceedings.—Subsection (a) of section 5 would permit setting in motion this chain of events: The responsible Federal administrator would file with the Secretary of the Interior a request for publication of notice to mining claimants for the determination of surface rights to a described area.

The bill requires that such request be accompanied by affidavits of persons who had examined the lands involved in an effort to ascertain whether or not any persons were in possession of, or engaged in working, the lands. The affidavit would state the names and addresses of all persons so found, or if none were found, a statement to that effect.

It is further required that there accompany such request the certificate of an attorney, a title abstractor, or a title or abstract company, based upon an examination of tract indexes in the county office of record, setting forth the name of any person appearing in those records as having an interest in the lands involved under an unpatented mining claim.

Notice by publication, and registered mail, or in person.—Upon receipt of such request, accompanied by the required affidavits and certificate of records abstract, the Secretary of the Interior, at the expense of the requesting department or agency, will publish notice to mining claimants in a newspaper of general circulation in the county in which the lands involved are situated.

If published in a daily newspaper, the bill requires publication in the Wednesday issue for 9 consecutive weeks; if in a weekly paper, in 9 consecutive issues; if in a semiweekly or triweekly paper, in the issue of the same day of each week for 9 consecutive weeks.

In addition, each person shown by name and address in the affidavits required will by registered mail or in person receive, within 15 days after first publication, a copy of the published notice; so too will persons whose names and addresses are set out in the required certificate of records abstract, and those filing requests for such notices under subsection (d) of section 5.

Summary of notice requirements.—Summarized, the detailed requirements of subsection (a) of section 5 as to notice of pendency of the "quiet title" proceeding would require a preexamination of the lands, to ascertain, if possible, any parties in possession. Notice must be published in a newspaper of general circulation in the county in which the lands involved are situated. A copy of the notice must be personally delivered or sent by registered mail: (1) To each person found to be in possession or engaged in working the lands involved in the proceeding, and (2) to each person who has filed in the county office of record a request for such notice as contemplated under subsection (d), and a copy of the notice must be mailed by registered mail to each person who is shown by a title search to have an interest in the lands.

Effect of failure to assert rights.—Subsection (b) of section 5 establishes a time deadline for assertion of rights to lands involved, and spells out the consequences of failure on the part of claimants to act.

Any person asserting rights under an unpatented mining claim in lands involved would be required to submit, within 150 days from the date of first publication, a statement setting forth pertinent information as to his claim. The filing of such a statement gives him a statutory right to a hearing on any rights to surface uses about which there is any doubt.

Any claimant failing to submit such a statement would be conclusively deemed, except as provided in subsection (e) of section 5:

(1) to have waived and relinquished any right, title, or interest under such mining claim contrary to or in conflict with the limitations or restrictions specified in section 4 of the act as to hereafter located unpatented mining claims;

(2) to have consented that such mining claim, prior to issuance of patent therefor, shall be subject to the limitations and restrictions specified in section 4 as to hereafter located unpatented mining claims; and

(3) to have precluded any right in himself to thereafter, prior to issuance of patent, assert any right or title to, or interest in or under, such mining claim contrary to or in conflict with the limitations or restrictions specified in section 4 of the act as to hereafter located unpatented mining claims.

Hearing on determination of rights.—Subsection (c) of section 5 provides that if a mining claimant asserts rights contrary to or in conflict with the provisions relating to the use and management of surface resources, as set forth in section 4 of this bill, the Secertary of the Interior shall hold a hearing to determine the validity of such rights.

Such hearings would, under the bill, follow the established general procedures and rules of practice of the Department of the Interior with respect to contests or protests affecting public lands.

To limit the length of the hearing and cost of transcripts, the bill limits any single hearing to a maximum of 20 mining claims, unless the parties otherwise stipulate.

Assurance of receiving notice.—Subsection (d) of section 5 permits a mining claimant to assure himself in advance of receiving notice of a proposed proceeding affecting his claim if the claimant files in the county office of record a request for a copy of any such notice, giving his name, address, and certain data as to each unpatented mining claim under which he asserts rights.

Effect of failure to notify.—Subsection (e) of section 5 provides that the publication of notice shall be wholly ineffectual as to any person entitled to be served with, or to be mailed a copy of, the published notice, if the notice is not in fact so served upon or mailed to him.

6. Waiver or relinquishment of surface rights

Section 6 has as its objective permitting and encouraging cooperation and avoidance of controversy.

It permits the owner of any unpatented mining claim, heretofore located, if he so desires, to waive and relinquish all rights thereunder which are contrary to or in conflict with the limitations and restrictions specified in section 4; effect of such waiver and relinquishment would, in other words, result in such a claim having a surface rights status applicable to mining claims hereafter located.

This section specifically declares that such a waiver or relinquishment will not constitute any concession as to the validity of the owner's claim, or as to the date of priority of rights under the claim.

7. General construction section

Section 7 restates the scope of the proposed legislation, setting forth affirmatively that—

1. The bill shall not be construed to limit or restrict, now or in the future, any valid existing rights under the mining law except those surface rights not necessary to mineral development which may be subject to actions under section 5, or as the result of waiver under section 6.

2. No patent issued under the mining laws for any mining claim, whether located prior to or subsequent to enactment of the bill, shall contain any reservation, limitation, or restriction not otherwise authorized by law. That is, S. 1713 will not impose, and does not authorize imposition, of any restriction or reservation in any patent to a mining claim.

3. However, existing law under which such reservations may now be made, such as with respect to patents on claims in certain forest lands, is not repealed by the bill, nor is the reservation to the United States of minerals subject to the leasing acts, as provided in Public Laws 250 and 585, 83d Congress, affected.

THE COMMITTEE AMENDMENTS

All of the amendments adopted by the committee to S. 1713 are perfecting or clarifying of the intent and purpose of the bill as introduced. None change the substance or philosophy of the measure.

The changes recommended by the Departments of the Interior and Agriculture, as set forth in their reports printed herein, were adopted for the reasons given. In addition, the committee adopted several amendments the need for which developed from the hearings.

Attention is directed to the amendment to section 4 (b), page 5, providing that a locator on a claim on which the timber has been

disposed of under this act must be supplied with other timber, of like kind and quantity, that he needs to develop the mineral resources of his claim, up to the amount of timber of the same type disposed of by the Federal agency. As stated previously, S. 1713 would make no change in the full ownership of the surface and all of its resources, as well as the resources of the subsurface, of a mining claimant who proceeds to patent his holdings.

The purpose of the amendment set forth in the second proviso to section 4 (b) on page 6 is to make certain that surface rights to waters reserved to the United States, as well as those assured to mining claimants, will continue to be regulated and controlled by the provisions of State law to the same extent and degree as they are at present.

With respect to the last amendment in section 7, the committee wishes to make clear its intent that S. 1713 shall leave unaffected the rights of reservation to the United States and the multiple mineral development under the mining laws and the leasing acts established by Public Law 250 and Public Law 585 of the 83d Congress.

SUPPORT FOR S. 1713

The language of the bill, as reported, has been developed with the active support and cooperation of both the Departments of Agriculture and the Interior, and of the mining and lumbering industries as well as conservationist and sportsmen's groups.

Included in a long list of National, State, and local groups and individuals supporting this legislation are the following:

American Mining Congress; American Federation of Labor; Independent Timber Farmers of America; The American Forestry Association; Western Lumber Manufacturers; National Wildlife Federation; Sports Afield; National Lumber Manufacturers Association; National Farmers Union; Wildlife Management Institute; the Izaak Walton League of America; the National Grange; Northwest Mining Association; Northern Rocky Mountain Sportsmen's Association; Western Forest Industries Association; Western Forestry and Conservation Association; United States Chamber of Commerce; Society of American Foresters; and the American Nature Association.

Three States—California, Oregon, and Arizona—through conservation organizations, have endorsed its enactment, along with numerous other industry, labor, civic, educational, conservation, and hunting and fishing organizations and individuals.

EXECUTIVE AGENCY REPORTS

The favorable reports of the Departments of the Interior and Agriculture, and that of the Bureau of the Budget, are set out following.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., May 17, 1955.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.

MY DEAR SENATOR MURRAY: This is in reply to your request for the views of this Department on S. 1713, a bill to amend the act of July 31, 1947 (61 Stat. 681), and the mining laws to provide for the multiple use of the surface of the same tracts of the public lands and for other purposes.

We recommend that S. 1713 be enacted, and suggest that it be amended as indicated hereinafter.

S. 1713, if enacted, would make a number of significant changes in existing laws governing mining and the disposal of materials on the public lands particularly insofar as surface uses and rights are concerned. Briefly summarized, the bill may be said to provide as follows: (1) The first three sections would exclude certain minerals from among those on which claims under the mining laws may be based, and would provide a means for the disposal of the materials so excluded; (2) section 4 would limit the rights of a holder of an unpatented mining claim hereafter located to the use of the surface and surface resources; and (3) sections 5 and 6 would provide a procedure for the clarification of surface rights appurtenant to mining claims existing at the time of the bill's enactment. Existing rights would be protected by section 7.

Section 1 of the bill would amend section 1 of the act of July 31, 1947 (61 Stat. 681; 43 U. S. C., sec. 1185), to add certain common minerals to the materials subject to disposition under that act. Also, the Secretary of Agriculture would be given the same authority with respect to mineral materials, including, but not limited to, sand, stone, gravel, pumice, pumicite, cinders, and clay, and vegetative materials, including, but not limited to, yucca, manzanita, mesquite, cactus, and timber or other forest products, located on lands under his jurisdiction as that which the Secretary of the Interior has with respect to lands under his jurisdiction. The provisions of that section would remain inapplicable to national parks and monuments and to Indian lands, but would in future be applicable to national forests.

Section 2 would amend section 3 of that act, as amended (43 U. S. C., sec. 1187), to provide that moneys received from the disposal of materials thereunder would be subject to disposition under the same provisions as moneys received from the sale of public lands, except that moneys received from the disposal of materials by the Secretary of Agriculture would be disposed of in the same manner as are other receipts from the lands from which the materials are removed. Moneys received from the disposal of materials from school section lands in Alaska would be treated as income from such school section lands is ordinarily treated.

Section 3 specifically states that a deposit of common varieties of sand, stone, gravel, pumice (except block pumice), pumicite, or cinders shall not be deemed a valuable mineral deposit within the meaning of the mining laws so as to give effective validity to any claim located thereunder.

Section 4 provides that, prior to the issuance of patent, no mining claim located subsequent to the enactment of S. 1713 could be used for any purpose other than prospecting, mining, or processing operations, and uses reasonably incident thereto, and all rights under the claim would be subject to the right of the United States to manage and use the surface; moreover, prior to the issuance of patent, no claimant could sever, remove, or use vegetative or other surface resources, except to the extent required by mining operations or uses reasonably incident thereto.

At the present time, agencies administering federally owned lands encounter many difficulties in administering the lands under their jurisdiction because of the presence of unpatented mining claims of the existence of which they may not even be aware. This undesirable situation would be alleviated by the procedure which section 5 of S. 1713 would provide for determining expeditiously title uncertainties resulting from the existence of abandoned, invalid, dormant, or unidentifiable mining claims, located prior to the enactment of the bill. Not only is it necessary that some means be established for the expeditious determination of these uncertainties resulting from the existence of such claims, but, if section 4 of this bill is to have the desired effect upon the management and use of surface resources of unpatented mining claims, a procedure to identify which unpatented claims will be subject to its provisions is necessary. In our opinion, the procedure to be established by section 5 would answer this need for it would permit a determination of those valid claims existing prior to the enactment of the bill with respect to which claimants are asserting surface rights adverse to the United States. We do not interpret the provisions of section 5 as impairing authority under existing law to declare mining claims null and void for failure to comply with provisions of law governing such claims. We have also assumed that nothing in the bill would prevent the taking by the United States of any mining claims under the right of eminent domain.

The procedure which section 5 would establish would commence with the secretary of any Federal department, responsible for administering the surface resources of any lands belonging to the United States, filing with the Secretary of the Interior a request for publication of notice to mining claimants for the determination of surface rights. The filing of a request of that nature would be accom-

panied by affidavits of persons who had examined the lands involved in an effort to ascertain whether or not any persons were in possession of or engaged in working the lands; the affidavits would state the names and addresses of all persons so found or, if none were found, would state that fact.

The request would also be accompanied by the certificate of an attorney, a title abstractor, or a title or abstract company, based upon an examination of tract indexes in the county office of record, setting forth the name of any person appearing in those records as having an interest in the lands involved under an unpatented mining claim. The Secretary of the Interior would, upon the receipt of such a request, publish notice to mining claimants in a newspaper having general circulation in the county wherein the lands involved are situated. Any person asserting an unpatented mining claim in those lands would be required to submit, within 150 days, a statement setting forth pertinent information as to his claim, and any claimant failing to submit such a statement would be conclusively deemed to have waived any rights to his claim which would be contrary to the limitations set forth in section 4 of the bill with respect to the use of the surface and to have consented to the subjection of his claim to the provisions of that section. Upon publication of notice in a newspaper, a copy of that notice would be delivered, either in person or by registered mail, to each person whose name and address appear in the affidavits and certificates submitted with the request for publication.

The bill also would provide a method by which any person desirous of receiving notice with respect to any particular lands might file a request for such notice in the appropriate county office of record. If any statement should be filed by a claimant in response to the publication or delivery of notice, the Secretary of the Interior would hold hearings to determine the validity and effectiveness of any right or title to that mining claim, or interest in or under that claim, which is contrary to or in conflict with the provisions relating to the use and management of surface resources, set forth in section 4 of the bill. Such hearings would follow the established general procedures and rules of practice of the Department of the Interior with respect to contests or protests affecting public lands. If, with respect to any person, the requirements as to personal delivery or mailing of notice should not be complied with, that person's rights would be affected in no way by the publication of notice.

Section 6 provides that, while any owner of an unpatented mining claim may waive or relinquish all rights thereunder contrary to or in conflict with the restrictions of section 4, such a waiver or relinquishment will not constitute any concession as to the validity of his claim or as to the date of priority of rights under that claim.

Section 7 provides that the bill will in no way limit or restrict existing rights under any valid mining claim except insofar as those rights are limited or restricted in actions taken pursuant to sections 5 and 6, nor will the bill authorize the inclusion in patents thereafter issued for mining claims of any limitations or restrictions not otherwise authorized by law.

S. 1713 is designed to meet a situation which has arisen because of more intensive Federal use of the public lands in recent years. Under the existing mining laws various abuses have been possible. For example, it has been possible for persons who have unpatented claims under the mining laws to prevent orderly management and disposition of valuable timber and other surface resources, and also to block access to such resources on unlocated Federal land while paying little or no attention to mining. Moreover, many claims have been based on deposits of the mineral materials listed in section 1 which, although technically of sufficient value to justify a location, are actually of minor worth as compared to other natural resources of the land. Another example of these abuses may be seen in the fact that it has been possible to acquire a color of right, through a mining location, for nonmining purposes, such as summer homesites.

This bill is designed to strike at these abuses, which violate the spirit of the mining laws. The bill provides that deposits of common minerals such as ordinary varieties of sand, stone, gravel, pumice, pumicite, and cinders shall not be deemed valuable mineral deposits within the meaning of the mining laws. Secondly, it prohibits the use of a claim for any nonmining purpose prior to the issuance of patent.

The type of practice against which this bill is directed has drawn the disapproval of the mining industry generally, conservation groups, and other public land users. The national interest in encouraging the discovery of minerals dictates that the mining industry should have a continued opportunity to locate mining claims, to mine minerals found there, to discover and develop commercial deposits, and, if fortunate, to make a profit, but the national interest is not served by preventing

the use of the surface of unpatented claims for other desirable uses which do not substantially interfere with mining operations and related activities. This legislation is based upon this sound premise, in our view.

At the same time as the proposed legislation would meet the wishes of the mining industry, it would also give full recognition to the vital importance of the forest and range resources of the public lands and the national forests, for the bill provides for the multiple use of the surface of mining claims and thus permits the conservation and wise use of all surface resources in the public interest.

We have discussed above the need for a procedure for establishing the existence of unpatented mining claims and for determining the respective rights of the United States and holders of unpatented mining claims. Certainly, the procedure which section 5 would establish would eliminate many of the problems relating to ownership and management of surface resources which arise in the case of Government timber sales, grazing permits, and watershed and recreational development. Under the procedure which would be provided by this bill, it is hoped that an area in which a timber sale, for example, was contemplated could be subjected to a conclusive determination of surface rights within a reasonably short time.

We believe that the bill should be amended so that the provisions of sections 1 and 2 would be specifically applicable to the revested Oregon and California Railroad grant lands and the reconveyed Coos Bay Wagon Road grant lands. The other sections of S. 1713 are already applicable to these lands, and there is no reason why these lands should not be subject to the same provisions of law as other public lands in these respects. We suggest, therefore, that there be inserted immediately after "United States," at page 2, line 2, the following: "including for the purposes of this Act land described in the Acts of August 28, 1937 (50 Stat. 874) and of June 24, 1954 (68 Stat. 270),". For the same reason, we also suggest that there be inserted, immediately after "except" at page 3, line 22, the following: "that revenues from the lands described in the Act of August 28, 1937 (50 Stat. 874) and the Act of June 24, 1954 (68 Stat. 270) shall be disposed of in accordance with said Acts and except".

It is also suggested that the language used at the beginning of Section 5 requires clarification. Though the later language of section 5 clearly indicates that its provisions apply to all departments and agencies, the phraseology in the first sentence of the section could well be interpreted as limiting the section's scope to the executive departments only. We suggest, therefore, that all of line 3, page 6, be deleted and the following substituted in its place: "The head of a Federal department or agency."

Certain existing statutes limit or restrict mining activities upon lands owned by the United States, as, for example, the act of April 8, 1948 (62 Stat. 162), which opened the revested Oregon and California Railroad grant lands and the reconveyed Coos Bay Wagon Road grant lands to exploration, location, entry, and disposition under the general mining laws, but which limited, with respect to the timber on those lands, the rights of persons making entry on those lands. We believe it essential that nothing in S. 1713 be interpreted as repealing or amending any of those laws imposing such special limitations or restrictions. Though the existing language of the bill may afford such a guaranty, we suggest that the period at the end of section 7 be replaced by a comma and the following added: "or to limit or repeal any existing authority to include any limitation or restriction in any such patent."

The Bureau of the Budget has advised that there is no objection to the presentation of this report to your committee.

Sincerely yours,

FRED G. AANDAHL,
Assistant Secretary of the Interior.

DEPARTMENT OF AGRICULTURE,
Washington, D. C., May 17, 1955.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate.

DEAR SENATOR MURRAY: Reference is made to your request of April 20 for a report on S. 1713, a bill to amend the act of July 31, 1947 (61 Stat. 681), and the mining laws to provide for multiple use of the surface of the same tracts of the public lands and for other purposes.

We strongly recommend early enactment of S. 1713 with one clarifying amendment as subsequently described.

S. 1713 is identical to H. R. 5561, 5563, 5572, 5595, 5742, and almost identical to H. R. 5577.

This bill would apply to all lands of the United States subject to the general mining laws. Its major provisions are—

(1) Common varieties of sand, stone, gravel, pumice, pumicite, and cinders would be removed from the purview of the United States mining laws and made subject to disposal only under the provisions of the Materials Act of July 31, 1947 (61 Stat. 681), by the Secretary of Agriculture for lands under his jurisdiction and by the Secretary of the Interior for other public lands of the United States.

(2) Mining claims located after enactment of the bill could not, prior to patent, be used for other than mining purposes without authorization from the United States, and such locations would be subject to the right of the United States to manage and dispose of the vegetative surface resources, to manage other surface resources thereof (except minerals subject to the mining laws) and to use so much of the surface as necessary for such purposes or for access to adjacent land; provided that any use of the surface by the United States, its permittees or licensees, could not endanger or materially interfere with mining uses. Mining claimants could not use surface resources subject to management and disposal by the United States except to the extent required for mining purposes, and any timber cut for such purposes, except for clearance, must be in accordance with sound principles of forest management.

(3) Under a procedure similar to that provided in Public Law 585 of the 83d Congress, the Secretary of the Interior shall, at the request of the Federal department having the responsibility for administering the surface of lands of the United States, initiate action for a determination of surface rights as to a given area. Under this procedure, a holder of a claim located prior to enactment of this bill could assert and establish his rights in the lands covered by his claim, and such claim would be unaffected by the proceedings. If such a claimant fails to establish his rights, or fails to assert his rights, or if he voluntarily waives his rights to the surface, he will be in the same position as a holder of a claim located after enactment of this bill. The procedure does not affect the right of a claimant to apply for patent, and if patent is granted he would acquire the same title as he would under the existing law.

We believe S. 1713, if enacted, would go far toward correcting some of the very difficult problems confronting this Department in its administration of those national forests and title III Bankhead-Jones lands subject to the general mining laws of the United States. We also believe that for the first time an area of agreement has been reached on this problem between the administrators of public lands under the jurisdiction of both the Departments of the Interior and Agriculture, representatives of the mining industry, and conservation groups.

The Department of Agriculture desires to encourage legitimate prospecting and effective utilization and development of mineral resources of the national forests and title III lands. We would not favor legislation which would interfere with such development of minerals nor work hardship on the bona fide prospector or miner. We also recognize that the mining industry does not condone the use of mining claims on the public lands for other than mining purposes.

However, on the national forests the mining laws are sometimes used to obtain claim or title to valuable timber, summer home sites, or lands blocking access to Government timber and to water needed in the grazing use of the national forests.

As of January 1, 1952, there were 36,600 mining patents on the national forests, covering 918,500 acres. Only about 15 percent of these mining patents have been or are commercially successful mines. As of the same date, there were approximately 84,000 claims, covering 2.2 million acres. Only 2 percent of these claims were producing minerals in commercial quantities and probably not more than 40 percent could be considered valid under the requirements of the mining laws. Yet, on these national-forest claims, there were tied up over 8 billion feet of commercial sawtimber, valued at about $100 million which the Government could not sell without consent of the claimant. In other words, national-forest timber exceeding in quantity and value that cut from all national forests in any 1 year is tied up on mining claims and cannot be sold by the Government. The two tables attached to this report supply these basic statistics by States.

The effect of this situation is increased costs of administration, obstruction of orderly management and competitive sale of timber, and obtaining high-value, publicly owned surface resources by a few individuals at nominal cost.

In the last 3 years there has been a tremendous increase in the number of mining claims on the national forests, principally as the result of prospecting for uranium and other fissionable materials. For example, as of January 1, 1955, it is estimated that there were 166,000 claims on the national forests, covering nearly 4 million acres, or about a 100-percent increase in the past 3 years. At the rate claims are currently being filed, we estimate that by the end of this calendar year there will be about 225,000 mining claims on the national forests. It is also estimated conservatively that there are now over 10 billion board feet of timber tied up on national-forest mining claims, having a current stumpage value of $112 million.

Following is an estimate of the number of claims and included acreage by States in the national forests as of January 1, 1955:

State	Thousand claims	1955 claims as multiple of 1952 claims	Thousand acres	1955 acreage as multiple of 1952 acreage
Arizona	34.3	6.9	684	6.2
California	21.0	1.1	602	1.0
Colorado	16.7	1.8	375	1.5
Idaho	18.4	1.2	408	1.2
Montana	14.6	2.1	282	2.1
Nevada	5.2	1.8	108	2.3
New Mexico	8.7	3.7	223	2.8
Oregon	6.7	.9	215	.8
South Dakota	4.8	1.9	103	2.0
Utah	28.4	3.6	583	3.2
Washington	5.3	1.8	94	1.3
Wyoming	2.1	2.5	78	2.4
Total	166.2	2.0	3,755	1.7

The number of claims is "snowballing" so fast that the situation on the national forests is rapidly getting out of hand. The above summary, for example, shows that there are nearly 7 times as many mining claims in Arizona as 3 years ago, and nearly 4 times as many in New Mexico and Utah. The increase has been large in other States, too. Equitable corrective action as would be provided by S. 1713 is urgently needed. It is needed quickly because new claims are being filed at the rate of about 5,000 per month.

We suggest the following be added after the word "except" in line 22, page 3: "that revenues from the lands described in the act of August 28, 1937 (50 Stat. 874), and the act of June 24, 1954 (68 Stat. 270), shall be disposed of in accordance with the provisions of such acts, and except".

The purpose of this amendment is to make it clear that revenues from O. and C. lands under the administration of the Department of the Interior and lands administered by the Department of Agriculture under the 1954 act will be placed in the O. and C. fund.

To effectively implement the provisions of S. 1713, particularly those of section 5, it is estimated that about $750,000 to $1 million would be needed annually by this Department for roughly a 10-year period, after which costs would drop to a relatively small amount. After claims located prior to enactment of the bill had been processed in accord with section 5, costs relating to this bill would be limited primarily to costs of issuing permits for disposal of materials under the Materials Act. Such costs would be offset in whole or in part by revenues from such permits.

In summary, this Department recommends enactment of S. 1713 since it will do much to solve the serious problems presented by mining claims in the management of public lands and resources. It will correct deficiencies in the mining laws and prevent many of the abuses by other than bona fide miners, but it will not obstruct or interfere with bona fide mineral prospecting, mining, and development. The Department is anxious to see these measures taken and strongly endorses the bill. However, S. 1713 does not include all of the changes in the mining laws which would be desirable from a good public land management standpoint and some problems would remain with respect to mining on the national forests and title III lands that this bill would not correct.

The Bureau of the Budget advises that, from the standpoint of the program of the President, there is no objection to the submission of this report.

Sincerely yours,

TRUE D. MORSE, *Under Secretary.*

Estimated number of unpatented mining claims on the national forests (as of Jan. 1, 1952)

State	Number of claims	Acres	Estimated percent which are producing minerals in commercial quantities	Estimated percent considered valid under the mining laws	Timber on claims	
					Volume (thousand feet, board measure)	1951 value
Arizona	5,000	95,400	9.0	22	70,000	$700,000
California	19,640	582,700	.8	30	3,460,000	50,177,000
Colorado	9,450	256,000	1.0	37	80,000	368,000
Idaho	15,840	355,100	4.3	42	1,170,000	8,425,000
Montana	6,860	132,600	1.7	48	85,000	440,000
Nevada	2,940	50,700	2.0	60		
New Mexico	2,350	81,700	3.0	24	225,000	2,000,000
Oregon	7,780	267,300	1.8	55	2,301,000	35,307,000
South Dakota	2,600	52,500	4.5	30	81,000	542,000
Utah	7,810	185,300	2.0	50	7,000	40,000
Washington	2,920	71,700	2.2	52	751,000	4,111,000
Wyoming	860	32,900	.6	55	36,000	417,000
Total	84,050	2,163,900	2.0	40	8,256,000	103,527,000

Patented mining claims on the national forests (as of Jan. 1, 1952)

State	Number of claims	Acreage	Estimated percent which are or have ever been commercial mining operations
Arizona	1,110	53,370	5
California	3,068	134,807	14½
Colorado	17,000	300,000	12
Idaho	3,203	80,802	28
Montana	5,124	116,675	17½
Nevada	675	12,205	50
New Mexico	706	24,496	16
Oregon	1,370	26,634	22
South Dakota	1,000	74,000	7
Utah	1,359	57,210	10
Washington	1,184	20,738	8
Wyoming	761	17,687	1½
Total	36,560	918,526	14¾

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., May 17, 1955.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.

MY DEAR MR. CHAIRMAN: This is in reply to the request from your committee for the views of the Bureau of the Budget with respect to S. 687, to authorize the Secretary of Agriculture to protect the timber and other surface values of lands within the national forests, and for other purposes, and S. 1713, to amend the act of July 31, 1947 (61 Stat. 681), and the mining laws to provide for multiple use of the surface of the same tracts of the public lands, and for other purposes. It is our understanding that S. 1713 supersedes S. 687, therefore, our remarks are directed to S. 1713.

This bill would remove common varieties of sand, stone, gravel, pumicite, and cinders from the purview of the United States mining laws and make them subject to disposal only under the provisions of the so-called Materials Act of July 31, 1947 (61 Stat. 681). Disposal of such materials would be by the Secretary of Agriculture for lands under his jurisdiction and by the Secretary of the Interior for other public lands.

Mining claims located after enactment of the bill could not, prior to patent, be used for other than mining purposes and such locations would be subject to the right of the United States to manage and dispose of the vegetative surface re-

sources, to manage other surface resources (except minerals subject to location under the United States mining laws) and to use so much of the surface as necessary for such purposes or for access to adjacent land. However, any use of the surface by the United States, its permittees and licensees, must not endanger or materially interfere with mining uses. Locators of mining claims could not use surface resources subject to management and disposal by the United States except to the extent required for mining purposes, and any timber cut for such purposes, except for clearance, must be in accordance with sound principles of forest management. Upon issuance of a patent the owner of the claim would receive the same title to the land, including timber if any, as he would under existing law.

The bill would set forth a procedure whereby the Secretary of the Interior shall, at the request of the Federal Department having the responsibility for administering the surface of the lands, initiate action for a determination of surface rights. Under this procedure, a holder of a claim located prior to enactment of this bill could assert and establish his rights in the lands covered by his claim, and such claim would be unaffected by the proceeding. If the claimant fails to establish his rights, or fails to assert his rights, or if he voluntarily waives his rights to the surface, he will be in the same position as a holder of a claim located after enactment of the bill.

It is our understanding that general agreement has been reached among the mining industry, some conservation groups, and the Federal agencies concerned, and that this general agreement is reflected in the provisions of the bill, which would be of material aid in the management of public lands and their resources in the future.

This Bureau would have no objection to the enactment of S. 1713.

Sincerely yours,

DONALD R. BELCHER,
Assistant Director.

CHANGES IN EXISTING LAW

In compliance with the Cordon rule (subsec. (4) of rule XXIX of the Standing Rules of the Senate), changes in existing law made by the bill, S. 1713, as reported, are shown as follows (existing law proposed to be repealed is enclosed in black brackets, additions to existing law are italicized; existing law in which no change is proposed is shown in roman):

SECTION 1 OF THE ACT OF JULY 31, 1947 (61 STAT. 681)

[That the Secretary of the Interior, under such rules and regulations as he may prescribe, may dispose of materials including but not limited to sand, stone, gravel, yucca, manzanita, mesquite, cactus, common clay, and timber or other forest products, on public lands of the United States if the disposal of such materials (1) is not otherwise expressly authorized by law, including the United States mining laws, (2) is not expressly prohibited by laws of the United States, and (3) would not be detrimental to the public interest. Such materials may be disposed of only in accordance with the provisions of this Act and upon the payment of adequate compensation therefor, to be determined by the Secretary: *Provided, however*, That, to the extent not otherwise authorized by law, the Secretary is authorized in his discretion to permit any Federal, State, or Territorial agency, unit or subdivision, including municipalities, or any person, or any association or corporation not organized for profit, to take and remove, without charge, materials and resources subject to this Act, for use other than for commercial or industrial purposes or resale. Where the lands have been withdrawn in aid of a function of a Federal department or agency other than the Department of the Interior or of a State, Territory, county, municipality, water district, or other local governmental subdivision or agency, the Secretary of the Interior may make disposals under this Act only with the consent of such Federal department or agency or of such State, Territory, or local governmental unit. Nothing in this Act shall be construed to apply to lands in any national forest, national park, or national monument or to any Indian lands, or lands set aside or held for the use or benefit of Indians, including lands over which jurisdiction has been transferred to the Department of the Interior by Executive order for the use of Indians.]

The Secretary, under such rules and regulations as he may prescribe, may dispose of mineral materials (including but not limited to common varieties of the following:

sand, stone, gravel, pumice, pumicite, cinders and clay) and vegetative materials (including but not limited to yucca, manzanita, mesquite, cactus, and timber or other forest products) on public lands of the United States, if the disposal of such mineral or vegetative materials (1) is not otherwise expressly authorized by law, including the United States mining laws, and (2) is not expressly prohibited by laws of the United States, and (3) would not be detrimental to the public interest. Such materials may be disposed of only in accordance with the provisions of this Act and upon the payment of adequate compensation therefor, to be determined by the Secretary: Provided, however, That, to the extent not otherwise authorized by law, the Secretary is authorized in his discretion to permit any Federal, State, or Territorial agency, unit or subdivision, including municipalities, or any person, or any association or corporation not organized for profit, to take and remove, without charge, materials and resources subject to this Act, for use other than for commercial or industrial purposes or resale. Where the lands have been withdrawn in aid of a function of a Federal department or agency other than the Department headed by the Secretary or of a State, Territory, county, municipality, water district, or other local governmental subdivision or agency, the Secretary may make disposals under this Act only with the consent of such other Federal department or agency or of such State, Territory, or local governmental unit. Nothing in this Act shall be construed to apply to lands in any national park, or national monument or to any Indian lands, or lands set aside or held for the use or benefit of Indians, including lands over which jurisdiction has been transferred to the Department of the Interior by Executive order for the use of Indians. As used in this Act, the word "Secretary" means the Secretary of the Interior except that it means the Secretary of Agriculture where the lands involved are administered by him for national forest purposes or for the purposes of title III of the Bankhead-Jones Farm Tenant Act or where withdrawn for the purpose of any other function of the Department of Agriculture.

SECTION 3 OF THE ACT OF JULY 31, 1947 (61 STAT. 681), AS AMENDED BY THE ACT OF AUGUST 31, 1950 (64 STAT. 571)

[SEC. 3. All moneys received from the disposal of materials under this Act shall be disposed of in the same manner as moneys received from the sale of public lands, except that moneys received from the disposal of materials from school section lands in Alaska, reserved under section 1 of the Act of March 4, 1915 (38 Stat. 1214; 48 U. S. C., sec. 353), shall be set apart as separate and permanent funds in the Territorial Treasury as provided for income derived from said school section lands pursuant to said Act.]

All moneys received from the disposal of materials under this Act shall be disposed of in the same manner as moneys received from the sale of public lands, except that moneys received from the disposal of materials by the Secretary of Agriculture shall be disposed of in the same manner as other moneys received by the Department of Agriculture from the administration of the lands from which the disposal of materials is made, and except that moneys received from the disposal of materials from school section lands in Alaska, reserved under section 1 of the Act of March 4, 1915 (38 Stat. 1214), shall be set apart as separate and permanent funds in the Territorial treasury, as provided for income derived from said school section lands pursuant to said Act.

INDIVIDUAL VIEWS OF SENATOR RICHARD L. NEUBERGER, OF OREGON

I have joined in the committee's report on S. 1713, which I believe makes some long-needed improvements in public-land administration in areas where prospecting is prevalent. I want to make it clear, however, that in my own view the bill fails to go far enough and should not be mistaken for a permanent solution to the problems of the multiple use of the surface and subsurface of the public lands.

This bill fails to correct one glaring defect in the mining laws. It will still be legal, by proving a mining patent to public land, to convert to commercial gain the timber growing on that land—even though the timber has no relation to the mineral deposits, the discovery and development of which are the justification of the patent.

The committee report recognizes that this practice is against the public interest and deters sound conservation practices, and that in a number of national forests the separation of surface rights from mineral rights has by law been extended to mining patents as well as mining claims. I believe this loophole should be closed by general legislation for all federally owned timberlands.

RICHARD L. NEUBERGER.

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Calendar No. 559

84TH CONGRESS, 1st Session | SENATE | REPT. 554 Part 2

AMENDING THE ACT OF JULY 31, 1947 (61 STAT. 681), AND THE MINING LAWS TO PROVIDE FOR MULTIPLE USE OF THE SURFACE OF THE SAME TRACTS OF THE PUBLIC LANDS

JUNE 22, 1955.—Ordered to be printed

Mr. MALONE, from the Committee on Interior and Insular Affairs, submitted the following

MINORITY VIEWS

[To accompany S. 1713]

The purpose of the amendment to the 1872 mining law set forth in S. 1713 is, according to its sponsors, to prevent:

1. Clearly invalid mining locations, unsupported by any semblance of discovery, and
2. Mining locations having mineral disclosures which might satisfy the basic requirement of discovery, but which were in fact made for a purpose other than mining.
3. To make it easier for the Federal bureaus to bring up for review claims and claimants which in their judgment includes land more valuable for another purpose.

That is the statement of the principal witness, Mr. Raymond B. Holbrook, an attorney employed by the United States Smelting Refining & Mining Co. for 17 years, and who is the chairman of the public lands committee of the American Mining Congress. Mr. Holbrook was the nearest approach to a mining man who appeared for the bill.

LEGITIMATE OBJECTIONS COVERED BY MINING LAWS AND DECISIONS

The first purpose is amply covered by the present mining law as interpreted over the years by the Supreme Court of the United States. Both the public and the prospector are fully protected, with recourse to the courts.

The second and third are clearly an imposition on the rights of the prospector since they open the door for the first time in more than 80 years for a Government bureau employee to allege that the land is more valuable for another purpose than mining and bring the case before his own bureau where the only appeal is to a higher employee or official in that same bureau.

CONGRESS COULD DESTROY INCENTIVE

Since it is even conceivable that evidence might show that the value for other purposes might temporarily be greater than the immediate value of a small mining property, it is inconceivable that the Congress would allow a bureau official, in no way connected with mining, such as the Forest Service or the Bureau of Land Management, and having no first hand knowledge of the industry, to be the complainant, judge, and jury.

The history of mining is clear that you must have prospects before you have small mines and you must have small mines before you can have big mines—and that it often requires many years before the larger bodies of ore can be developed, even after they are known to exist.

FIRST LOCATOR SELDOM PROFITS

History also shows that the property may change hands many times through the first locators "going broke" and either relinquishing the claim to another locator or selling out for what they can get because of their inability to continue working the property, or because of lack of "assessment" work simply losing to another locator. Rarely does the first locator profit from the discovery.

There used to be a byword in the ranching business—that it was the third or fourth homesteader of a homestead that made it stick. The mining business is even tougher.

GOVERNMENT BUREAUS

The principal witness, Mr. Holbrook, further testified that—

> We have had the pleasure of working with the Forest Service and the Bureau of Land Management and understand their position is that these problems could not be entirely met by effective administration of existing laws for the following reasons:
>
> 1. The available remedies are slow, expensive and not conclusive, and
> 2. There is great difficulty in establishing the invalidity of a location, supported by discovery, on the basis that the location was made for a purpose other than mining.

The weight of evidence of the witnesses called—all but one holding some Government position—was that the Government bureaus should be given the clear power to determine the validity of a mining location within their own department.

This power in the hands of the bureau officials would destroy the prospector and reverse the Supreme Court decisions for more than 80 years.

They would also have the authority to determine whether or not the land is more valuable for another purpose than mining.

OBJECTIVE—LEASING SYSTEM

It is clear that the Government bureaus are still moving toward a leasing system which they have continually advocated for two decades.

DESTROY LAW INTENT AND COURT DECISION

The prospector can be moved under the 1872 law if he has not complied with it, which is the intent and the extent of the original law.

The Supreme Court decisions, for more than 80 years, have clarified and established the law.

It has been established that if the prospector has complied with the law in setting up his monuments—in filing with the county recorder—and has done the required "assessment" work that a Government department cannot move him or interfere with his work by alleging that "a reasonably prudent man would not expend his money and his effort in the hopes of developing a mine" (Holbrook, p. 91, May 18, 1955).

The amended act opens the door for continual interference by Government officials.

It limits the locators' inherent rights prior to patent—since when patent issues there is no change in the fee-simple ownership—and the timber, forage, and all other assets go to the patentee. It does not make sense to allow the Government to deplete his claim in accordance with their judgment before patent.

There may have been abuses under the law—but when investigated it will generally be found that the Government has not met its responsibilities under existing law and that the law itself or court decisions provide the remedy.

PROSPECTOR ON THE DEFENSIVE

As it now stands the Government must initiate any proceedings to prove the location invalid—which is exactly what was intended and must be maintained—under the proposed law the prospector will be on the defensive and will be continually harried and tormented by inexperienced and irresponsible bureau officials.

HEARINGS IN MINING AREAS

It is abundantly clear that hearings should be held in the mining areas of this Nation before any action is taken, since no real miners were heard and the mining associations of the several States were clearly intimidated through threats of more severe legislation unless they accepted the proposed legislation as written.

LAST STAND OF SMALL CAPITAL

The present simple location system for acquiring prospecting ground for mining is the last stand for the man of small capital.

It requires no money—just a sack of beans and some coffee and many of them have been known to dispense with the coffee until they can show enough to acquire a "grubstake" from someone who is willing to gamble with them.

They can build a rock mound or stick up a stake and lodge the location notice on it—then set up the corners within 30 days and start the location work.

The ground is then his own as long as he does the required annual assessment work and files proof of it in the county recorder's office of his county.

It is not necessary to have a surveyor or an accurate placing of the corners of his property. If he inadvertently takes in too much territory then, when there is a conflict, which there will most certainly be

when and if he makes a strike, he can only hold the 1,500 by 600 feet of the regulation mining claim.

MINING IS A GAMBLE—NO PRUDENT MAN

Mining is a gamble—it is also a disease, which once acquired means that they will "hit" a mine or die broke. Where a very limited few develop a mine, thousands die broke, but it is the incentive of "striking it rich" that keeps them in the hills where the ore is to be found.

Probably 90 percent of the digging done by prospectors is on ground where no prudent man would dig—and this Nation can thank God that they have continued to dig on such ground, because most of the prospects developing into mines are discovered by these miners confirmed in the faith.

The testimony by Government witness, and witnesses inexperienced in the actual prospecting operation, was to the effect that many mining claims are located on ground where no prudent man would dig—prospectors are not prudent men.

ONLY ONE MINING MAN HEARD

There was only one mining man at the hearing who testified and his testimony was emphatically against the bill unless modified—and he recommended that hearings be held in the mining areas before it was reported to the Senate floor. The witness was Mr. Robert S. Palmer, Secretary-Treasurer of the Colorado Mining Association, which is one of the largest and most important of such associations in this Nation.

NO PRECEDENT

Several witnesses have testified that a precedent for this proposed legislation was set in the passage of Public Law No. 250, 83d Congress, amending the 1872 Mining Act.

There could have been no precedent set in the previous legislation for this type of bill since it only dealt with coordinating the use of the same mining claims for different minerals—petroleum, uranium, and other minerals. The amended act provided that you could mine uranium on an oil claim but the petroleum producer had the priority and you could not interfere with him, and that you could develop and produce oil on a uranium claim but that you could not interfere with the operation of the prior locator.

PRECEDENT WOULD BE SET

It positively had nothing to do with timber or forage or sagebrush. It had absolutely nothing in common with S. 1713, which does set a precedent for leasing ground for materials.

HEARINGS IN MINING AREAS

Certainly hearings should be held in the mining areas. Let the miners have a chance to help work it out.

CAN BE WORKED OUT

I believe that if this is done a satisfactory piece of legislation can be worked out that will benefit all concerned, and that will not curb the prospector, and that will not discourage independent investors and "grubstakers" interested in locating, developing and producing minerals.

SHOULD BE CONFINED TO FOREST AREAS

If the legislation is to be voted on today as set up without hearings in the mining areas of the country, then its application should certainly be confined to the forest reserve areas where most of the testimony before the committee applied.

GEORGE W. MALONE.

O

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

APR 12 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs-Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants-Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
District of Arizona,
Prescott

ORDER

Based on the representation that modification is limited to updating citations to the supplemental excerpts of record, the motion of appellees EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. (Docket Entry No. 28) for leave to

file a substitute answering brief is granted. The Clerk will file the movants' substitute answering brief (Docket Entry No. 29) and will strike the previously filed brief (Docket Entry No. 25).

The optional reply brief is due within 21 days after the date of this order.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Terri Haugen
Deputy Clerk
Ninth Circuit Rule 27-7

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

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MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The answering brief submitted by EFR Arizona Strip LLC and Energy Fuels Resources (USA), Inc. on April 8, 2021 is filed.

Within 7 days of this order, appellees are ordered to file 6 copies of the brief in paper format with red covers, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website, at http://www.ca9.uscourts.gov/forms.

The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Liora Anis
Deputy Clerk
Ninth Circuit Rule 27-7

Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

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June 1, 2021

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INTRODUCTION

A plain reading of the precedent for identifying valid mining claims under the Mining Law leads to the conclusion that all mining costs count when answering under the "marketability test" whether a mineral deposit can be "extracted, removed and marketed at a profit." *United States v. Coleman*, 390 U.S. 599, 600 (1968). That intuitive reading—a reading backed by the statute's text and purpose—is the one the Forest Service advanced when, in *United States v. Mannix*, it first litigated the question presented here: Do mining costs count if incurred before the government examines the validity of a mining claim? *See* 50 IBLA 110, 119 (1980). In this appeal, the agency has reversed course, repeating reflexively the Interior Department's *ipse dixit* in *Mannix* directing "earlier expenses" to be disregarded. *Id.* When that holding is scrutinized, it cannot be squared with the Mining Law's text, purpose, or past precedent. This Court should deliver that scrutiny and overrule the Department's statutory interpretation. And because the record precludes a finding that the Forest Service would have deemed the Canyon Mine claims valid in 2012 had it considered pre-2012 costs, the validity determination at issue here should be set aside.

ARGUMENT

I. The Plaintiffs have Article III standing.

A. Revisiting standing would defy the law of the case.

When this lawsuit was last on appeal, this Court held that the Plaintiffs[1] have Article III standing to challenge the validity determination. *See Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1162 n.3 (9th Cir. 2018) ("[W]e are satisfied that the plaintiffs have suffered injuries in fact that are fairly traceable to the Service's actions and that could be redressed by a favorable judicial determination."). That holding was an essential prerequisite to the Court's ruling on the merits. *See Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 93–102 (1998) (holding that Article III standing must be verified before deciding whether a cause of action exists). And, as the district court correctly concluded, 1-ER-9–10, that holding is "both the law of the case and binding precedent…." *Nordstrom v. Ryan*, 856 F.3d 1265, 1270 (9th Cir. 2017); *accord Cal. v. U.S. Dep't of Health & Human Servs.*, 941 F.3d 410, 421 (9th Cir. 2019), *vacated on other grounds*, 141 S. Ct. 192 (2020). The Forest Service did not address this law-of-the-case

[1] To simplify, this brief refers to all the plaintiffs as "the Trust."

precedent, let alone argue for departing from it. *See* Fed. Appellees' Answering Br. 20–21, ECF 23 (Apr. 5, 2021) ("Feds.' Br."). On this basis alone, the Trust's standing should be affirmed.

B. The requirements for Article III standing are met.

The Trust has standing in any event. The validity determination injured, and continues to injure, the Trust's interests by unlawfully declaring the Canyon Mine claims to be valid, and thereby approving of the mine's operation despite the Grand Canyon withdrawal. Because of the withdrawal, the Forest Service took the position that the mine could not operate absent a determination that Energy Fuels' mining claims were valid. *See Havasupai Tribe*, 906 F.3d at 1163 (holding that the validity determination was a "practical requirement to the continued operation of Canyon Mine"). By deeming the claims valid and consenting to the mine's operation despite the withdrawal, the validity determination injured the Trust's aesthetic, recreational, and comparable interests. *See* 1-FER-6–16 (2d Supp. Clark Decl. ¶¶ 3–28); 1-FER-32–40 (2d Supp. Silver Decl. ¶¶ 2–20); 1-FER-143–46 (Crumbo Decl. ¶¶ 4–11). And because the Forest Service on remand can again foreclose mining unless and until the claims are deemed valid, an order

correcting the agency's erroneous interpretation of the law, vacating the validity determination, and remanding to the Forest Service to lawfully exercise its authority would redress the Trust's injuries. *See Fed. Election Comm'n v. Akins*, 524 U.S. 11, 25 (1998) (holding that redressability requirement is satisfied when a "discretionary agency decision" that is based on "an improper legal ground" may be vacated so that the agency may "exercise[e] its discretionary powers lawfully").

The Forest Service argues that the Trust lacks standing for two related reasons. First, it contends that the validity determination did not "authorize[]" mining operations and therefore did not cause the Trust's injuries. Feds.' Br. 20. But, again, this Court previously held that the validity determination was a "practical requirement to the continued operation of Canyon Mine" after the mineral withdrawal. *See Havasupai Tribe*, 906 F.3d at 1163. Regardless of whether the Forest Service was legally obliged to halt mining pending a determination of claim validity, it chose to do so. *See* 1-FER-147 ("A mineral exam is scheduled to determine that your company has valid existing rights for the Canyon Mine location. This is a requirement for any public domain lands managed by the Forest Service that have been withdrawn from

mineral entry…."); 2-ER-212 ("It is Forest Service policy (FSM 2803.5) to only allow operations on mining claims within a withdrawal that have valid existing rights…."). The agency's subsequent determination that mining could go forward thus injured the Trust.

Second, the Forest Service asserts that the Trust's injuries cannot be redressed because, on remand, the Forest Service "would be under no duty to complete a new" validity determination and could not oust Canyon Mine from the national forest until the Interior Department prevailed in a claims contest. Feds.' Br. at 21. But the Supreme Court has rejected the argument that the presence of agency discretion defeats a finding of causation and redressability. "Agencies often have discretion about whether or not to take a particular action[,]" the Court has held, "[y]et those adversely affected by a discretionary agency decision generally have standing to complain that the agency based its decision upon an improper legal ground." *Akins*, 524 U.S. at 25. Correcting the error and remanding for the agency to lawfully exercise its "discretionary powers" is sufficient to redress a plaintiff's injury. *Id.* That the Forest Service could again require mining to cease absent a legally adequate validity determination is sufficient to satisfy the

causation and redressability requirements. *See Desert Citizens Against Pollution v. Bisson*, 231 F.3d 1172, 1178 (9th Cir. 2000) (reversing order on standing when the "district court placed an unreasonable burden" on the plaintiffs by requiring them to "show not only that a court's decision would invalidate a particular [land exchange] but also that no subsequent exchange would take place.").

It is not speculative, furthermore, to expect vacatur and remand to forestall Canyon Mine's operation. For mining claims to be valid, the present-marketability test must be satisfied whenever a validity determination or claims contest is completed. *See Lara v. Sec'y of Interior*, 820 F.2d 1535, 1542 (9th Cir. 1987); Feds.' Br. 41 n.9 ("Energy Fuels must maintain its discovery in order to continue to assert a valid existing right."). In recent years, the spot price of uranium has averaged below $30 per pound. *See* 1-FER-14. And at that price, the validity determination indicates that Energy Fuels could not reasonably expect to make a profit in the present market, but instead, would suffer a multi-million-dollar, undiscounted net loss, even without accounting for any pre-2012 costs or taxes. If about 1.6 million pounds of uranium can be mined at an operating cost of $17.36 per pound, as the validity

determination forecasted, a uranium price of $27 per pound, for example, would yield revenues of about $43.2 million, while costs would be about $46.9 million ($19.1 million in capital costs, plus $27.8 million in operating expenses). 2-ER-225–227.

When confronted with evidence like this of "unauthorized use of a mining claim," Forest Service policy calls on the agency to complete a mineral examination. 3-ER-338 (instructing district rangers, in the Forest Service manual, to request an examination when unauthorized use "is believed to exist"). And when an examination deems a claim invalid, it is not true that the Forest Service can "at most request" a claims contest, as the agency's lawyers contend. Feds.' Br. 21. The agency's policy is to require the Interior Department to pursue a contest unless the claimant ceases its unauthorized use. 3-ER-337–38 (if negotiation to "terminate unauthorized use" fails, "appropriate legal action is required"); 1-SER-186, 180 (stating, in interagency memorandum at §§ D. and A.5, that Interior's land manager, "will prepare, and proceed with service … of a complaint" upon receiving the Forest Service's contest recommendation); *United States v. Opperman*, 111 IBLA 152, 157–58 (1989) (explaining that Interior lacks authority

to question Forest Service's decision to initiate a contest proceeding).

Thus, given that Canyon Mine is in a withdrawn area, and given the evidence that the deposit at Canyon Mine is not presently marketable if pre-2012 costs are counted, relevant law and Forest Service policies would aim to halt the mine's operation were the validity determination vacated. The Court should reject the Forest Service's redressability argument.

II. Energy Fuels' injunctive-relief argument is irrelevant.

Energy Fuels contends at length that the Trust is not entitled to injunctive relief. *See* Intervenor-Defendants-Appellees' Answering Br. 24–27, ECF 29 (Apr. 9, 2021) ("EFR's Br."). While the Trust disagrees, this argument is, at root, beside the point because the Trust did not appeal the district court's ruling that injunctive relief is unavailable. *See* Appellants' Opening Br. 58, ECF 12 (Dec. 22, 2020) ("Trust's Br.").

The company's argument, in any event, overstates the privileges federal law confers on mining companies, like Energy Fuels. It is not true that the company has "mining rights" that the withdrawal could not affect unless a contest were to extinguish the company's mining claims. *See* EFR's Br. at 25, 19. The Forest Service has the power to

protect national forests from mining while claim validity is determined, which is precisely the course it took at Canyon Mine when completing the validity determination disputed here. *See Clouser v. Espy*, 42 F.3d 1522, 1529–31, 1536 (9th Cir. 1994) (describing Forest Service's broad authority to protect national forests by regulating mining, and affirming agency's denial of motorized access to claim "unless and until claim validity is established").

III. The validity determination should be set aside.

A. That a non-defendant agency proclaimed the sunk-cost interpretation does not insulate it from review.

Resolving the parties' dispute over sunk costs requires the Court to construe the Mining Law's requirements for establishing valid mining claims. The question presented is thus one of law to be reviewed de novo, according deference only if warranted under *Chevron*. Trust's Br. at 25–29.

The Forest Service quarrels with this black-letter principle, asserting that "[t]he validity of Interior's interpretation is … not before this Court" because Interior is not a defendant. Feds.' Br. 24. The only question, the agency maintains, is whether it was "arbitrary and capricious for the Forest Service to apply Interior's interpretation of the

Mining Law….” *Id.* But there is no support in the Administrative Procedure Act, nor any other source of law, for shielding from judicial review a legal interpretation announced by one agency whenever it is applied by another agency.

The “agency action” challenged here—the Forest Service’s validity determination—relied on Interior’s legal conclusion that past costs must be summarily disregarded under the marketability test. To decide under the APA whether the Forest Service acted “in accordance with” the Mining Law, the Court must resolve whether Interior’s interpretation of the law is erroneous, for if excluding past costs was contrary to the law, so too was the Forest Service’s action. 5 U.S.C. § 706(2)(A); *see Osman v. Ribicoff*, 195 F. Supp. 699, 700 (E.D. Mich. 1961) (“We cannot accept the argument that since an administrative agency relies on the interpretation of another agency on a matter of legal interpretation, a judicial review is likewise so bound.”).

The Forest Service has pointed to no text in the APA nor any case that sanctions a departure from this customary method of judicial review. For the notion that the Interior Department must be a defendant for its legal interpretation to be put into question, the Forest

Service cites *White v. Department of Homeland Security*, 2012 WL 4815470, *1 (D.D.C. Oct. 10, 2012). *See* Feds.' Br. at 24. But that decision says nothing about how courts should review one agency's application of another agency's legal conclusions. *Id.* at *1–2. It merely dismissed an APA lawsuit because the plaintiffs failed to name the agency whose action they sought to challenge, a holding that does not reflect the posture here, even if it were otherwise relevant. *Id.*

The Forest Service cites two other cases for the premise that the Court should assume Interior's legal interpretation to be correct and ask only whether it was arbitrary and capricious for the Forest Service to apply it. Feds.' Br. 23. Neither backs up that premise. In each case, one agency applied a regulation that had been promulgated by a different agency, and in each case, the court reviewed the regulation's lawfulness. *See CTIA-Wireless Ass'n v. Fed. Commc'n Comm'n*, 466 F.3d 105, 117–18 (D.C. Cir. 2006) (concluding that the statutory interpretation in question "was reasonable"); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354–55 (1989) (deferring to a regulation when the statute did not mandate a particular result and the agency supplied a "well-considered basis" for its interpretation). True

enough, the courts' review was deferential, but not because each court asked solely whether it was arbitrary to apply the regulation, but because each court reached a deference-bestowing step when judging the regulation's validity under a *Chevron*-like standard of review. *Id.*

What these cases confirm is that the question of deference here is controlled by the *Chevron* framework. And that matters, as discussed further below, because that framework adds steps of analysis when resolving questions of statutory interpretation in APA cases.

B. The minimal-analysis requirement is neither inapplicable nor satisfied.

One of the prerequisites for earning deference under *Chevron* is that an agency must supply a "minimal level of analysis" to support its statutory interpretation. Trust's Br. 29 (citing *Encino Motorcars v. Navarro*, 136 S. Ct. 2117, 2125 (2016)). That requirement is not met here. *Id.* at 29–33.

The Forest Service responds in two ways. First, it suggests that the minimal-analysis prerequisite applies only when an agency changes a previously held position, which did not happen here. Feds.' Br. at 35. But that suggestion misconstrues *Encino Motorcars*, which described the minimal-analysis obligation as a "basic procedural requirement" for

making rules carrying the force of law. 136 S. Ct. at 2125. An agency must always give "adequate reasons" for its statutory interpretations. *Id.* When an agency changes an existing policy, its reasons must acknowledge and explain the change. *Id.* at 2125–26. But that heightened standard does not mean that an agency may interpret a statute without a minimal analysis when it is not changing a prior position.

Second, the Forest Service asserts that Interior's explanation in *Mannix* for the sunk-cost interpretation satisfied the minimal-analysis requirement. Feds.' Br. at 35–37. Yet the explanation the Forest Service sets out and defends in its brief is not what appeared in *Mannix*. Rather, to arrive at the conclusion that the "IBLA's rationale"—IBLA, meaning the Interior Board of Land Appeals—was "based on the premise that a guaranteed profit is not required," the agency's lawyers merged the paragraph in *Mannix* about "earlier expenses" with the opinion's earlier rote statements about the marketability test. Feds.' Br. 36. Yet the Board in *Mannix* did not explain its sunk-cost ruling by pointing to general principles about "guaranteed profit" or "current estimates of costs and prices," as the Forest Service asserts. Feds.' Br.

36–37. The reasoning the Board supplied was confined to the observation that "no case law … compels consideration of [earlier] development costs in determining if an ongoing operation is presently profitable." *Mannix*, 50 IBLA at 119.

The dearth of analysis in *Mannix* likely explains why the Forest Service elsewhere in its brief offers an altogether different rationale for excluding past costs, one having to do with the expense of pre-discovery exploration (discussed further below). *See* Feds.' Br. 30–33. If *Mannix* supplied adequate reasons for Interior's interpretation, one would not expect the Forest Service to present other reasons to the Court.

The Forest Service also asserts that adequate reasons for the Board's interpretation can be found in the hearing officer's opinion the Board affirmed. Feds.' Br. 37. Yet the point of the minimal-analysis requirement is to ensure that binding rules of law are announced with a "satisfactory explanation." *Encino Motorcars*, 136 S. Ct. at 2125. And the hearing officer's decision could not serve that purpose, for it was unpublished, it could not establish binding precedent, and its reasoning was not adopted or discussed by the Board. *See In re Hensley*, 195 IBLA 345, 360 n.87 (2020) ("Decisions of administrative law judges are not

Departmental precedents and are not binding…."); 5 U.S.C. § 552(a)(2) (authorizing only indexed and published orders to be treated as precedential); *Mannix*, 50 IBLA at 119 (no discussion of the hearing officer's analysis).[2]

The Interior Department announced the sunk-cost interpretation in *Mannix* without any reasoned explanation and has since carried it forward mechanically into its handbook and other cases. *See* Trust's Br. 29–30. That interpretation does not deserve deference, and the Court's review should consequently be de novo. *See Encino Motorcars*, 136 S. Ct. at 2127.

C. The sunk-cost ruling is also not a permissible interpretation of the Mining Law.

Because Interior's treatment of sunk costs entails an impermissible construction of the Mining Law, deference is not due under *Chevron* irrespective of the minimal-analysis requirement. The question under *Chevron's* second step is whether an agency has exercised its latitude to construe an ambiguous statute in a way that is

[2] The Forest Service's similar assertion about a concurring opinion in a later Board case, *United States v. Collord*, 128 IBLA 266 (1994), Feds.' Br. 37, is off base for the same reason.

permissible, or reasonable, given the statutory text and purpose. *See Natural Res. Def. Council v. Nat'l Marine Fisheries Serv.*, 421 F.3d 872, 879 (9th Cir. 2005). That standard is not satisfied here because the sunk-cost interpretation extends the legal test for claim validity in a way that is inconsistent with the Mining Law's text and purpose. Trust's Br. 33–35.

The Forest Service answers, first, that the sunk-cost interpretation cannot be inconsistent with the Mining Law's text because that text does not explicitly require sunk costs to be considered. Feds.' Br. 37–38 (arguing that the *Chevron* inquiry should stop at the conclusion that "no language in the statute … requires consideration of sunk costs…"). Yet the text also does not require sunk costs to be disregarded. The absence of the words "sunk costs" in the statute is a reason to conclude, at most, that the statute is ambiguous; it is not a reason to deem Interior's interpretation to be consistent with the statutory text and purpose.

The agency contends, next, that the Trust has failed to identify "any statutory language" that the sunk-cost interpretation contravenes. Feds.' Br. 38. But that is not so. The Mining Law makes the value of the

mineral "deposit" the *sine qua non* of claim validity. 30 U.S.C. § 22; Trust's Br. 20–21; 33–34. Any interpretation of the test for claim validity must be consistent with that statutory text, including an interpretation that, as here, extends the marketability rule the Supreme Court has deemed the law of the land. Yet the Department's treatment of sunk costs does not ascertain the value of the "deposit" in the "lands belonging to the United States." 30 U.S.C. § 22. Rather, it overstates the deposit's value by understating what must be spent to remove and market that deposit.

The Forest Service, last, disputes the Trust's assertion that excluding past costs undermines the Mining Law's purposes by fostering speculative mining operations. Feds. Br. 43–44. The statute's goal, the agency says, is to promote "exploration of minerals, including exploration that is speculative." *Id.* at 43. But exploration and mining are not equivalent. The law may nurture speculative exploration, but it discourages tying up public lands with speculative mining claims. *See Exxon Mobil Corp. v. Norton*, 346 F.3d 1244, 1255 (10th Cir. 2003) (explaining that annual assessment requirement was intended to "prevent the location of mining claims for speculative purposes").

Because the sunk-cost interpretation cannot be squared with the Mining Law's text and purpose, it is not a permissible statutory interpretation, and it is not owed deference under *Chevron*. *See Natural Res. Defense Council*, 421 F.3d at 879.

D. The arguments the Forest Service and Energy Fuels put forward for excluding sunk costs are not sound.

The Forest Service and Energy Fuels offer varying rationales for disregarding sunk costs. Each argument falls short, regardless of whether the Court interprets the Mining Law de novo because the minimal-analysis prerequisite is not satisfied, or whether the Court asks under *Chevron* step two whether *Mannix* adopted a permissible interpretation of the Mining Law.

1. *The Forest Service is mistaken about the role of past costs in* Coleman.

The case that led the Supreme Court to embrace the marketability test as the controlling standard for determining claim validity, *United States v. Coleman*, demonstrates that past mining costs count when resolving whether a deposit can be "extracted, removed and marketed at a profit." 390 U.S. at 600; *see* Trust's Br. 18–19. The Forest Service disagrees, contending that the Interior Department's administrative decision in *Coleman* "did not consider the claimant's capital

expenditures" in applying the marketability test, nor did its "discussion of operating costs … include sunk costs." Feds.' Br. 40–41. But that is not so.

The crux of the Department's analysis was that the expense of Mr. Coleman's past labor so far exceeded the value of the mineral deposit in question that he could not possibly demonstrate present marketability. Appx. to Feds.' Br. at 15a–16a (finding a lack of marketability by comparing revenues of $15,990 to past labor costs of $157,500). That labor expense was a quintessential "sunk cost"—an unrecoverable cost of improvements made in the past. *See* 3-ER-325 (so defining "sunk costs" in the Department's handbook). And the Department's final administrative decision not only included that expense in its discussion of Mr. Coleman's operating expenses, but situated it as the cornerstone of the analysis. Appx. to Feds.' Br. at 16a.

That analysis concluded further that Mr. Coleman's capital costs, for "the use of trucks, bulldozer and blasting equipment" would have only *added* to his losses, even if amortization diminished the effect of those costs on his income. Appx. to Feds.' Br. at 16a (reasoning that these expenses were not included in the labor-cost estimate and that

amortization them would not change the conclusion about profitability).

The subsequent history reinforces how salient *Coleman's* treatment of past costs is. The Ninth Circuit reversed the Interior Department's decision invaliding Mr. Coleman's claims, and it disapproved of the Department's treatment of labor expenses, using language that closely resembled the Board's later statements in *Mannix*. *See Coleman v. United States*, 363 F.2d 190, 202 (9th Cir. 1966) *rev'd*, 390 U.S. 599. "We have found no case authority," the court said, "on the subject of whether the calculated value of a locator's labor in developing the property should be charged as an expense in determining profitability." *Id.* at 202–03. "Academic economics has little meaning for a miner," the court continued, "and his 'profit' is made if his receipts exceed his out-of-pocket expenditures, although he may be grossly underpaid for his labor." *Id.* at 203.

Yet the Supreme Court reversed, reinstating and affirming the Department's analysis of profitability, whose core focus was on past costs. 390 U.S. at 601–02 ("We cannot agree with the Court of Appeals and believe that the rulings of the Secretary of the Interior were proper."). *Coleman* thus demonstrates that past costs not only count but

can be determinative in applying the marketability test.

2. A goal of excluding exploration and investigation expenses does not vindicate the sunk-cost interpretation.

The Forest Service asserts that excluding sunk costs ensures that miners are not penalized for expenses "to explore for and develop minerals" that must be incurred to discover a valuable mineral deposit. Feds.' Br. 30–31. Yet that rationale is not tailored to the blanket rule for omitting past costs that the agency defends.

The holding in *Mannix* and the Interior Department's handbook instruct the government to disregard not just pre-discovery exploration and investigation expenses, but all mining costs incurred before the date of a validity determination. *See, e.g.*, 3-ER-325 (BLM handbook); 2-ER-226 (excluding all costs predating the examination for Canyon Mine). Whether a particular cost is omitted depends solely on the timing of the validity determination, not on the nature or purpose of the expense. The cost of the groundwater well at Canyon Mine, for example, was not an "exploration" cost, but a mine-construction cost incurred in 1986. 1-FER-152. That expense would have counted in a validity determination completed in 1985, but not in 1987. This outcome has nothing to do with the expenditures made to "sufficiently identif[y]" a

uranium deposit at the mine. Feds.' Br. 30.

Indeed, the Trust has not argued that the Forest Service erred by failing to account for whatever exploration expenses were incurred to find the uranium deposit at Canyon Mine. This appeal is entirely about the expenditures necessary to extract, remove, and market the deposit. *See* 2-ER-226 (listing major mine-development costs that were excluded, like building sediment ponds and the main head frame).

3. Economic theory does not justify disregarding sunk costs in validity determinations.

Energy Fuels argues that omitting sunk costs when determining marketability is consistent with the principle of economics asserting that unrecoverable past costs—that is, sunk costs—should be ignored in decisions about future investments in an enterprise. EFR's Br. 42–48; Feds.' Br. 31–32 (endorsing same argument). Yet the prudent-person and marketability tests do not merely recapitulate economic theory about sunk costs, for they do not turn on a simple assessment of whether further investment is economically rational. They depend on the expected *outcome* of future investment.

It is true that economic theory would say it is rational for a miner with a half-built mine to keep mining if future revenues will exceed

future costs, regardless of whether mining the deposit will deliver a profit in the final reckoning. But that is not the legal standard for determining claim validity. If it were, then half the prudent-person test would be lopped off and a deposit would be valuable if it is "of such a character that a 'person of ordinary prudence would be justified in the further expenditure of his labor and means….'" *Coleman*, 390 U.S. at 602 (*quoting Castle v. Womble*, 19 L.D. 455, 457 (1894)). The prudent-person test asks more: whether "further expenditure" is made "with a reasonable prospect of success, in developing a valuable mine." *Id.*

The same is true of the marketability test. Someone who spends $1,000 building a life-sized porcelain elephant and then sells it for its market value of $10—to use the example Energy Fuels quotes—has not made a profit, even if the elephant's sale was economically rational. So too, miners who spend more building a mine than can be recouped by selling the ore they have unearthed may act rationally by continuing to mine if it will cut their losses. That does not mean they can reasonably expect to extract and market the deposit "at a profit." *Coleman*, 390 U.S. at 600.

What the Forest Service and Energy Fuels are arguing for is a

legal test for claim validity that would ask not about prospects for success, but about prospects for somewhat less failure; not about expectations of profit, but expectations of fewer losses; not about developing a valuable mine, but one that is less invaluable. The Court should decline to adopt that test.

Energy Fuels' extended Company A-versus-Company B hypothetical does not salvage its argument. The hypothetical's premise is that a mining claim should be deemed valid even if "Company A" spends $10 million on "exploration and development" of a deposit on the claim that can be sold only for $8 million more than it will thereafter cost to extract and market. EFR's Br. 45. But Energy Fuels' reasoning is unsound. Its hypothetical disregards the outcome-oriented language of the prudent-person and marketability tests. It also assumes without foundation that all $10 million Company A spent would count in determining marketability. The Trust is not arguing that all costs "must be imposed on a subsequent mining claimant regardless of the business rationale," as Energy Fuels contends, EFR's Br. 48, only the costs that are objectively necessary to mine the deposit, Trust's Br. 16, 20, 33–34.

There is nothing "absurd" or "fundamentally unfair," furthermore, about finding the hypothetical claim invalid if the deposit cannot be mined and sold for a profit, regardless of whether Company A sells the claim to Company B for $1 million, as Energy Fuels posits. EFR's Br. 46, 48. Company B would deliver a profit to its shareholders only by exploiting the millions that Company A's shareholders have lost. In that scenario, it is not the deposit that is valuable, but Company A's fire sale. And if the deposit will cost millions more to mine than society is willing to pay for the mine's yields, allowing Company B to mine public lands for those publicly owned minerals would "work an unlawful private appropriation in derogation of the rights of the public." *Cameron v. United States*, 252 U.S. 450, 460 (1920).

Last, the market worth of the claim—to "Company C" or anyone else—is irrelevant. That market value depends on how buyers appraise the likelihood of making an adequate return on their investment, considering projected mining costs, revenues, and risks like the possible invalidation of the claim. If the law of claim validity accounts for past costs, then Company C (if prudent) will not pay $8 million for a claim it cannot expect to lawfully mine. The claim might still have a market

value, owing to speculation that the market will someday pay more for the deposit than it costs to mine. But that market value—whether $800 or $8 billion—does not control whether the plot of earth for which a speculator will pay *presently* contains a valuable mineral deposit.

4. The Forest Service's gloss on Judge Burski's concurrence in Collord *does not withstand scrutiny.*

The Forest Service argues that a concurring opinion in *United States v. Collord*, 128 IBLA 266 (1994), which the Trust discussed in its opening brief, Trust's Br. 37–39, buttresses the rationale for excluding sunk costs. Feds.' Br. 32–33. Yet the agency reads that concurrence in a way that contradicts its text.

According to the Forest Service, the concurrence "theorized that the outcome in *Mannix* would have been different" if two facts had been changed: (1) the lands had been withdrawn, and (2) the expenses had not been incurred before the withdrawal. *Id.* at 33. But the concurrence asserts only that the first of these two hypothetical conditions would have changed the outcome in *Mannix*. 128 IBLA at 304 (explaining that the Board would have counted the "already-made expenditures" if "the land embraced by the claim [had] been withdrawn from mineral entry."). The Forest Service plucked the second condition from a

discussion two paragraphs later addressing the question presented in *Collord*, which was not about sunk costs, but about how future mining costs should be allocated among a group of mining claims. *Id.* at 305 (observing that the "critical distinguishing factor in [*Collord*] is that the expenditures relating to infrastructure development have not yet been made").[3]

5. The words "further expenditure," "guaranteed profit," and "current estimates" do not justify omitting sunk costs.

Both Defendants argue that isolated phrases in the cases fleshing out the law of claim validity call for exclusion of past costs. But each of these assertions overstates the meaning that can be drawn from the words at issue.

The Forest Service and company argue, for example, that the words "further expenditure" in the prudent-person test "make[] clear" that the test does not account for past costs. Feds.' Br. 38; EFR's Br. 29–30. But again, that argument disregards what must result from further expenditure: "a reasonable prospect of success, in developing a valuable

[3] The point was that the claimants had not met their evidentiary burden of showing the disputed mining claims to be "presently valuable" because the profitability of those claims was contingent on future expenditures the claimants had elected not to incur. *Id.*

mine." *See Coleman*, 390 U.S. at 602.

Elsewhere, the Forest Service asserts that excluding sunk costs follows from the idea that "the law does not require a guaranteed profit to constitute a discovery." Feds.' Br. 36. Yet counting all mining costs when determining marketability is not tantamount to demanding a guaranteed profit. The question remains whether it is reasonable to expect a profit considering all mining costs and revenues. And indeed, considering both past and future costs ensures that miners are not deemed to have valid claims when they are facing *guaranteed losses* because their past costs can never be recouped.

In other parts of its brief, the Forest Service stresses that marketability depends on "current estimates" of expected costs, revenues, and other figures. Feds.' Br. 28, 36. Yet what is required is a current estimate of the "expected costs of the extraction, beneficiation, and other essential costs of the operation necessary to mine and sell the mineral, including capital and labor cost." *United States v. McKenzie*, 20 IBLA 38, 45 (1975). It is perfectly natural to read that phrase to ask for an up-to-date estimate of how much has been spent to date, together with a forecast of what will be spent in the future on the "operation

necessary to mine and sell the mineral." *Id.*

6. It is no more impractical to estimate past costs than to forecast future costs.

The Forest Service and Energy Fuels each contend that accounting for past costs would be "exceedingly impractical" because it would be impossible to know how much money may have been spent by some unidentifiable number of prospectors and miners who have explored or partially developed any given mining claim. Feds.' Br. 42–43; EFR's Br. 48 n.15, 51. This argument, however, mistakenly treats the marketability test as a subjective one that depends on the expenditures actually made by all the individuals who have searched for and worked the mineral deposit in question. Because the test for claim validity is objective, the government need only make its best current estimate of all the "essential costs of the operation necessary to mine and sell the mineral." *McKenzie*, 20 IBLA at 45.

Indeed, the government routinely does just that when it examines the validity of mining claims that, unlike Canyon Mine, are not yet partially developed. If the Forest Service had examined the Canyon Mine claims in 1978, it would have forecasted *all* the mining costs in dispute in this appeal. It consequently cannot be prohibitively

impractical to do that today, with the benefit of hindsight.

All told, this argument rings especially hollow given that Energy Fuels in this case supplied the Forest Service with an estimate of pre-2012 costs for developing Canyon Mine. *See* 2-ER-101.

7. The text "absent a prior withdrawal" does not call for exclusion of past costs when there is a prior withdrawal.

Even were the sunk-cost interpretation announced in *Mannix* correct, past costs should still have been counted here due to the Grand Canyon withdrawal, for *Mannix* sanctioned the exclusion of "earlier expenses" only "[a]bsent a prior withdrawal." Trust's Br. 37–39 (citing 50 IBLA at 119).

The Forest Service and Energy Fuels argue that *Mannix* requires "earlier expenses" to be disregarded regardless of whether a withdrawal exists. Feds.' Br. 34; EFR's Br. 53. But if that were true, the words "[a]bsent a prior withdrawal" would serve no purpose. And if there are no circumstances in which "earlier expenses" count, it is not evident why the Forest Service believes it to be germane that "a prospector may relocate mining claims on open lands so that they are unburdened by prior expenditures up until the date such lands are withdrawn." Feds.' Br. at 34. Indeed, that is the reason Judge Burski gave in *Collord* for

counting, rather than disregarding, past costs when there is a withdrawal. *See Collord*, 128 IBLA at 304.

Energy Fuels also points out that the Grand Canyon withdrawal may lapse in 2032, implying that no practical purpose would be served by invaliding its claims. EFR's Br. 54. Yet the withdrawal may be extended, *see* 43 U.S.C. § 1714(a), or may be made permanent, *see* Grand Canyon Protection Act, H.R. 1052, S. 387, 117th Cong. (2021), and regardless, invaliding the company's claims would ensure that the site would remain free of mining operations unless the present-marketability test could be satisfied in the future.

Even were it correct to follow *Mannix*, the Forest Service erred by failing to recognize that it is only "[a]bsent a prior withdrawal" that Department's holding excluding sunk costs applies. Trust's Br. 37–39.

E. The Trust was not "tardy" in arguing about sunk costs.

The Forest Service and Energy Fuels protest that the Trust raised the issue of sunk costs in an untimely way. *See* Feds.' Br. 23 n.2; EFR's Br. 57. Yet the Trust's complaint alleged a failure by the Forest Service to "consider all relevant factors including costs related to Canyon Mine approvals, operations and reclamation," 1-ER-199, an allegation that

includes past costs. And it is untrue that sunk costs "were not at issue in the first merits briefing," as Energy Fuels contends and the Forest Service implies. EFR's Br. 57; *accord* Feds.' Br. 23 n.2. Energy Fuels itself raised the legal principle for disregarding sunk costs as a defense to the Trust's arguments. 1-FER-138 ("Costs … [of] construct[ing] the monitoring well and powerlines were excluded as sunk costs, because they were built before the [validity] determination.").

Regardless, the parties presented the dispute over sunk costs to the district court, the court resolved that dispute, and the pleadings must be construed to conform to the court's judgment. *See* Fed. R. Civ. P. 15(b)(2).

IV. The Forest Service's error was not harmless.

Because accounting for pre-2012 costs may have led the Forest Service to deem the Canyon Mine claims invalid, excluding those costs was not a harmless error. *See* Trust's Br. 39–56.

Neither the Forest Service nor Energy Fuels responds directly to the Trust's main argument: that it is not possible to conclude from the record that excluding pre-2012 costs "clearly had no bearing" on the outcome, considering the evidence about costs through 1987, alongside

the record's silence about costs between 1987 and 2012. *Id.* at 39–44. Instead, both Defendants deal individually with the pre-2012 costs that can be estimated from the record, dispute the conclusions that can be drawn about each fraction of those costs, and assert that each part would not demonstrate a lack of profitability, without regard to the whole, and without regard to what the record omits about past costs.

That approach depends on a recurring, problematic contention: that uncertainties in the administrative record prevent the Trust from showing mathematically that pre-2012 costs exceed the Forest Service's estimate of post-2012 "profit." But that contention misapplies the test for harmless error, which demands that the record demonstrate clearly that the outcome would *not* change on remand, not mathematical proof that the outcome would change. *See Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631 F.3d 1072, 1090 (9th Cir. 2011) (asking whether error "clearly had no bearing" on defective agency decision). Deficiencies in the record are thus a reason for reversal, not affirmance, because they deprive the Court of a basis for concluding that pre-2012 costs were less than post-2012 forecasted "profits."

Both the Forest Service and company assert, for example, that the

declarations to which the Trust pointed cannot be trusted as an accurate measure of pre-2012 costs. *See* Feds.' Br. 48, 50; EFR's Br. 55–56. Yet any purported deficiency in how those sworn statements—made by Energy Fuels and its predecessors—account for pre-2012 costs is not a reason to assume the Forest Service's error was harmless. It is a justification for remand so that the agency can investigate and properly account for those costs.

Similarly, both defendants argue that about half the expenses discussed in the 1987 affidavit to which the Trust pointed were for "exploration" costs that do not count in determining marketability. Feds.' Br. 48; EFR's Br. 55. Yet even assuming that "exploration" expenses should be disregarded, it is unclear from the administrative record when exploration for the deposit at Canyon Mine ceased and work necessary to extract the deposit began. The Forest Service argues that exploration lasted until 1985. Feds.' Br. 48. Yet the validity determination asserts that "drilling completed by Energy Fuels in 1983 identified a major deposit," 2-ER-223, a conclusion repeated in the company's brief, EFR's Br. 19. What followed until 1985 was drilling to delineate the ore body, *id.*, a task necessary to extract the uranium

distinct from the exploratory drilling to find it. Thus, even if "exploration" costs do not count, remand to the Forest Service to distinguish exploration from mining costs would be the proper remedy.

Likewise, the Forest Service and Energy Fuels claim that expenses discussed in a 2013 declaration from the company include some amounts incurred after the validity determination was completed and some amounts incurred to purchase the mine, improperly double counting some mine-construction expenses discussed in the 1987 affidavit. Feds.' Br. 50; EFR's Br. 56. But even if those assertions are true, it is impossible to discern from the record what share of those expenses should count and what share should not (if any). And again, that deficiency justifies remand, not an assumption that the Forest Service's error was harmless.

Two of the Defendants' remaining arguments are misplaced due to mistakes in describing the record. The Forest Service contends that the correct marketability date, and the end point for considering inflation, is July 2009. Feds.' Br. at 48. Yet the Forest Service assessed validity as of two dates: the date of the withdrawal (July 2009) and the date of the examination (early 2012). 2-ER-208 (concluding in April 2012, that

claims were valid as of July 2009 "and continue to be valid at the present time"); 2-ER-209 (same). Had the Forest Service properly accounted for past costs, the question in 2012 would have been whether the deposit at Canyon Mine could then be mined and sold at a profit, considering all expected mining costs as of that date, and the prevailing price of uranium. The Trust did not err by accounting for inflation until early 2012.

The argument about inflation, furthermore, appears to echo a fundamental misreading of the record. The Forest Service's brief asserts several times that the validity determination excluded only costs incurred before July 2009, when the public lands in question were first "segregated" to enable the later withdrawal. Feds.' Br. 3–4, 13. But that is not correct. The costs evaluated in the validity determination came from a spreadsheet Energy Fuels prepared, which forecasted costs only for the years 2012 forward. *Compare* 2-FER-161 (spreadsheet estimating costs for 2012 through 2016) and 3-SER-778 (same) *with* 2-ER-226–28 (identical cost figures in the validity determination). All expenses incurred before 2012 were omitted from the analysis.

The second misstep is one Energy Fuels makes when it argues

that the Trust "double count[ed]" estimates in the 1987 affidavit for future mine work, like preparing the site and digging underground workings. EFR's Br. 55. This is not so. The Trust's arguments were based solely on the affiant's claim that $8.2 million would be incurred by the end of 1987 and did not include the affiant's forecasts for sinking the mineshaft ($3 million), 3-ER-352, and underground development ($4.5 million), 3-ER-353. Trust's Br. 40–41. And Energy Fuels does not supply any reason to conclude that "site preparation" expenses were double counted, given that the expenses described in the 1987 affidavit match closely the "surface development" costs left out of the validity determination. *Compare* 3-ER-351 *with* 2-ER-226 (excluding costs of building sediment ponds, power lines, the main head frame, hoist house, warehouse, shop, and groundwater well).[4]

Last, the Forest Service contends that the validity determination properly accounted for the expense of environmental monitoring and wildlife-conservation measures and that those costs therefore should

[4] Energy Fuels also asserts repeatedly that the validity determination predicted that Canyon Mine would earn $29,350,736 in "profit." EFR's Br. 6–7, 24, 29–30, 39, 54, 56–57. This too is inaccurate. *See* Trust's Br. 52–53.

not be considered in the harmless-error analysis. Feds.' Br. 51. But the claim that these costs were counted is pure say-so. In an administrative record of more than 12,000 pages, all the agency cites for its argument is a fragment of the validity determination listing broad categories of expenses considered, Feds.' Br. 51 (citing 2-ER-226–28), and a letter from Energy Fuels generally describing its cost estimates, *id.* (citing 3-SER-772–78), neither of which mention the expenses in question. That does not supply a reason to second guess the district court's holding that the record cannot support the conclusion that the Forest Service accounted for the disputed costs. 1-ER-21–24.

Energy Fuels similarly spends about one-third of its argument addressing future monitoring and mitigation costs. EFR's Br. 30–40. Yet, again, the company's only citation to the record that is about costs the validity determination accounted for is the same section of the validity determination the Forest Service cites. *Id.* at 33 (citing 2-ER-225–228). And nowhere does the company address the sole contention the Trust made on appeal about these expenses: that they should have been considered in combination with pre-2012 costs in assessing harmless error. *See* Trust's Br. 45–47.

* * *

Given the sizable amount spent building Canyon Mine through 1987 and the absence of information in the administrative record about expenses in the next two decades, there is no basis to conclude that the Forest Service's error "clearly had no bearing on … the substance of [the] decision reached." *Cal. Wilderness Coal.*, 631 F.3d at 1090.

V. Allowing Energy Fuels to redact its sunk-costs estimate was improper.

Energy Fuels disputes the Trust's conditional request, Trust's Br. 56–57, that it be allowed to review and seek discovery into the company's redacted estimate of "sunk costs" if the Court concludes that the administrative record does not allow for a finding that the Forest Service's error was not harmless, EFR's Br. 58–59. Yet Energy Fuels' argument lumps together and mixes up two different court rulings—the relevant order authorizing the redaction in question, 1-ER-40, and an irrelevant ruling granting an unrelated motion to seal, 1-ER-38. *See* EFR's Br. 58. The dispute here is not about sealing from the public the company's sunk-costs estimate; it is about a redaction that withheld the estimate from the Trust. And it is not true that the district court "agreed" that Energy Fuels' motion to seal supplied "a compelling

reason to allow the redaction." EFR's Br. 58 (citing 1-SER-5–23). That motion had not even been filed when the redaction was allowed, *compare* 1-SER-5–23 (dated Sep. 25, 2019) *with* 1-ER-40 (dated Aug. 2, 2019), and the words "compelling reason" (which pertain to the legal standard for sealing) do not appear in the relevant district court order allowing the redaction, 1-ER-40. The question in resolving the redaction dispute was whether the amount of sunk costs was relevant, *see* Trust's Br. 56–57, a subject that Energy Fuels does not address.

Equally baseless is the company's assertion that the "Trust's complaints" are "untimely." EFR's Br. 58. The Trust persistently sought the document containing the disputed redaction, Appendix C to the validity determination. *See* 1-FER-67 (reflecting the Trust's request at the outset of this litigation to add to the record all the appendices to the validity determination); 1-FER-97 at n.7 (requesting Appendix C and an opportunity to conduct discovery about it after Energy Fuels put the document into issue on the merits); 1-FER-72–74 (on remand, immediately seeking Appendix C); 1-FER-53–62 (moving to compel the Defendants to add Appendix C to the record). When it was finally produced, the Trust then contested the redaction in question. *See* 1-ER-

100–109. And the Trust's contingent request in this appeal for an opportunity to seek discovery about that figure was prompted by the *sua sponte* holding about harmless error that led to this appeal, not some event early in the litigation. The company's claim that the Trust "chose not" to "conduct discovery or supplement the record" is without merit. EFR's Br. 58.

The company's offer to let the Court review *in camera* the company's secret sunk-costs estimate reveals why the Trust has sought this conditional relief. EFR's Br. 59. If the estimate is less than the Forest Service's 2012 "profit" forecast, absent a remand to the district court, this Court would have no basis for discerning whether the estimate is complete and accurate, nor how it would have affected the Forest Service's analysis.

CONCLUSION

If "sunk costs" are summarily disregarded when applying the marketability test, a mining claim can be deemed valid even if the mineral deposit claimed can be extracted, removed, and marketed only at a massive financial loss. Applying that interpretation, the Forest Service would say that a miner who has spent $50 million building a

mine to unearth a uranium deposit worth $5 million has a valid mining claim, so long as that claim's validity is examined after the mine is built and so long as the uranium will thereafter cost less than $5 million to remove and sell. Yet mining that deposit would not yield "a profit," *Coleman*, 390 U.S. at 600, nor a "paying mine," *Cameron*, 252 U.S. at 459, nor "success[] in developing a valuable mine," *Chrisman v. Miller*, 197 U.S. 313, 322 (1905).

The Court should reject that interpretation of the Mining Law and vacate the validity determination.

Respectfully submitted this 1st day of June 2021.

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UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

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9th Cir. Case Number(s) 20-16401

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This brief contains 8,362 words, excluding the items exempted by Fed. R. App. P. 32(f). The brief's type size and typeface comply with Fed. R. App. P. 32(a)(5) and (6).

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Signature s/ Aaron M. Paul **Date** June 1, 2021
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Case No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,

Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,

Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
District Court Case No. 3:13-cv-8045-DGC

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC Index of Exhibits to Plaintiffs Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's Motion for Summary Judgment and Memorandum in Support

EXHIBIT LIST

Exhibit 1	Native Excel and PDF copy of AR Docs. 673–680 (Canyon Mine Exam Economic Study (Mar. 28, 2012).
Exhibit 2	Price-Updated Copy of AR Docs. 673–680 (Canyon Mine Exam Economic Study (Mar. 28, 2012).
Exhibit 3	Declaration of Aaron M. Paul in Support of Plaintiffs' Motion for Summary Judgment (Sep. 11, 2019).
Exhibit 4	Second Supplemental Declaration of Roger Clark (Sep. 8, 2019).
Exhibit 5	Second Supplemental Declaration of Robin D. Silver (Sep. 9, 2019).

Exhibit 4

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC Second Supplemental Declaration of Roger Clark

I, Roger Clark, declare as follows:

1. I was born in Phoenix, Arizona in 1951 and have been a resident of Flagstaff, Arizona since 1981. I graduated from Northern Arizona University in 1973 with a Bachelor of Science degree in forestry. At Yale University, I completed my master of forestry degree in 1976 and master of philosophy degree in 1978.

2. I became a commercial Colorado River guide in the Grand Canyon in 1982. I worked as an environmental educator for the Resource Center for Environmental Education throughout northern Arizona between 1982 and 1988. I was the exhibits and education program director for the Museum of Northern Arizona between 1994 and 2004.

3. I am currently the Grand Canyon Program Director for the Grand Canyon Trust (Trust). I am also a member of the Trust. Incorporated in l 985, the mission of the Trust is to protect and restore the Colorado Plateau- its spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude.

4. My first backpacking trip in the Grand Canyon was with the Boy Scouts in 1962. I have been an avid backpacker ever since, and for more than four decades, I have regularly enjoyed camping, hiking, and recreating in Grand Canyon National Park and the Tusayan District of the Kaibab National Forest. My camping and hiking experiences in the Tusayan District include the 10X campground and Red Butte area and backcountry areas below the South Rim of Grand Canyon National Park, including South Bass, Tonto, Bright Angel, South Kaibab, Grandview, and Hance trails.

5. For over 20 years, my family and I have taken annual backpacking trips in the area of the South Rim of Grand Canyon and Tusayan Ranger District, including frequent camping trips in the Red Butte area. My most recent trip to the Red Butte area was on August 30, 2019, for a site inspection of Canyon Mine. We have enjoyed perennial streams and springs located below the Grand Canyon's South Rim and within the Tusayan District of the Kaibab National Forest, including Havasu Creek, Monument Creek, Horn Creek, Pipe Creek, Indian Creek, Cremation Creek, Cottonwood Creek, and

Miners Spring. The source of these and other streams and seeps is the Muave-Redwall aquifer and shallower perched aquifers, which underlay the Park and the Forest.

6. Past uranium mining activities and those that are being allowed to re-commence by the U.S. Forest Service, such as Canyon Mine, interfere with my enjoyment of the lands within and surrounding Grand Canyon National Park, including the Tusayan Ranger District of the Kaibab National Forest. During the late 1980s and early 1990s, I recall deciding on several occasions not to visit the Red Butte area because of the constant dust, noise, and traffic from trucks constructing roads and developing the Canyon Mine.

7. Past uranium mining on Grand Canyon's South Rim has negatively impacted my recreational experiences. In the fall of 1995, I backpacked into the Grand Canyon where I came across a sign along the Tonto Trail warning hikers not to drink from Horn Creek due to contamination by a uranium mine located on the South Rim of the Grand Canyon. The National Park Service has frequently advised Grand Canyon National Park visitors such as myself to avoid "drinking and bathing" where there are excessive "radionuclides" that, when released into the environment, can cause radioactive contamination. When I applied for a backcountry use permit in the spring of 2009 to hike the Tonto Trail between Hance Creek and the Bright Angel Trail, I was dismayed to see that my permit warned me not to drink water from Horn Creek due to contamination from uranium mining.

8. My family and I wish to continue to undertake recreational activities below the South Rim of the Grand Canyon and in the Tusayan Ranger District of the Kaibab National Forest, but with Canyon Mine's operations causing contaminated groundwater to be sprayed over the surface containment pond, we are now not recreating in that part of the Tusayan Ranger District. Absent mining operations, we intend to return into the Monument Creek area to backpack, to the Red Butte area to car camp and day hike, and use and enjoy the area's seeps, springs, and streams, diverse and healthy wildlife populations and their supporting native vegetation, archaeological sites and traditional

cultural properties, scenic vistas and natural landscapes, and vast spaces offering natural quiet and solitude.

9. Although we had plans to camp in the Red Butte area near Canyon Mine in the fall of 2012, we discovered loggers felling large old-growth ponderosa pines along Forest Road (FR) 305. The loggers told us that they were clearing trees along the power line leading to the Canyon Mine so that the electricity could be turned on to the mine. We are now avoiding the area because we fear for our health due to restarted uranium mining operations at Canyon Mine. We also believe that the on-going mining activities will destroy the very purpose of our recreational activities by visually impacting the landscape that we would otherwise seek to enjoy. In addition, the ruts and damage to the four-mile leg of FR 305, caused by the repeated traffic by construction workers and heavy equipment related to Canyon Mine, have deteriorated the primary road that we use to access Red Butte and the areas nearby where we like to car camp.

10. In the summer of 2010, my wife and I camped for two nights on a small side road to FR 305 on the Tusayan District of the Kaibab National Forest. We enjoyed the peace and quiet of the campsite. We also took a day hike to the top of Red Butte and enjoyed the 360 degree view from the top. The view, however, was marred by the site of Canyon Mine's headrig off to the northwest. If mining operations resume at the Canyon Mine, the noise, dust, and traffic associated with that Mine will prevent us from returning to our camping spot and prevent us from day hiking to the top of Red Butte, which we otherwise visit annually in order to enjoy scenic vistas and natural landscapes. As long as mining activities are occurring at Canyon Mine, we have stopped recreating in the area due to the impact of the marred landscape on our use and enjoyment of the area.

11. Throughout its history, the Trust has been engaged in protecting values unique to Grand Canyon National Park from threats within and outside the Park's boundaries. We worked closely with Senator McCain in passing the 1987 Grand Canyon Overflights Protection Act to reduce the impact of noise from air tour aircraft on the Canyon's "natural quiet" and disturbing endangered species. As a result of a Grand

Canyon Trust lawsuit, in 1989 the Secretary of Interior ordered the Western Area Power Administration to prepare an environmental impact statement before issuing its power marketing criteria, because those criteria directly affected Glen Canyon Dam operations and dam operations had an impact on the downstream environment in the Grand Canyon. The Trust later assisted in passing the Grand Canyon Protection Act of 1992 to further ensure that ecological, cultural, and recreational values along the Colorado River would be protected.

12. Much of the Trust's work over the years has focused on uranium mining and its impacts in the region. While working as the Grand Canyon Trust's director of research in 1991, I developed the Colorado Plateau Natural Resource Monitoring Program. One of the program's objectives was to inventory monitoring programs in the Grand Canyon Region. In a magazine article published that year, I wrote:

> The U.S. Geological Survey monitors groundwater from the Puerco River, which in 1979 carried 94 million gallons of highly radioactive effluent from United Nuclear Corporation's failed dam in Church Rock, New Mexico. The Puerco is a tributary to the Little Colorado River which joins the Colorado in the Grand Canyon.

Our program also inventoried other potential threats to water quality in the region, including radioactive contamination from the Orphan Mine located on the Canyon's South Rim, from uranium ore from Hack Canyon Mine washed into Kanab Creek in 1984 by a flash flood, and from dozens of abandoned uranium mills located along the Colorado River and its tributaries.

13. In 1997, the Trust began working to secure an adequate clean up of a massive pile of radioactive uranium mill wastes that is contaminating the Colorado River near Moab, Utah. We were instrumental in getting studies that first revealed the extent of contamination and in blocking early government efforts to literally cover up the problem by simply dumping dirt and rocks over the wastes where they sit in the river's floodplain. Later, the Trust helped to pass legislation that transferred responsibility for the site from the Nuclear Regulatory Commission, which has no money for this kind of clean-up, to

the U.S. Department of Energy, which has already removed every other uranium mill tailings pile from the Colorado River and its tributaries. In 2005 Energy Secretary Samuel Bodman announced that the preferred alternative in the Final Environmental Impact Statement ("EIS") for the Moab Uranium Millsite was to load the 12 million tons of radioactive wastes on trains and carry them to a new disposal cell 30 miles away from their present location on the bank of the Colorado River. The Trust joined Utah Governor Huntsman and many others in May of 2009 in celebrating the beginning of the removal process.

14. Beginning in 2007, the Trust began tracking a rapid increase in the number of uranium claims being filed on federal lands adjacent to Grand Canyon National Park and became concerned about potential impacts of new uranium development on the natural, cultural, and recreational values of the region. Later that year, the Kaibab National Forest approved a uranium exploration project without any analysis of its environmental impacts. Vane Minerals began drilling 39 test holes, some within two miles of the South Rim. The Trust, along with the Center for Biological Diversity and Sierra Club, filed suit to challenge the "categorical exclusion" granted by the government and its failure to assess effects of the exploratory drilling under the National Environmental Policy Act ("NEPA"). After an all day hearing in Phoenix on April 4, 2008, the court issued a preliminary injunction halting all further drilling. In September, the case was settled to the satisfaction of all parties when the Forest Service agreed to prepare an EIS for public review in full compliance with NEPA before authorizing any new drilling activities.

15. While our legal case against the Vane exploration project was pending, the Trust began to consider options, including a campaign to withdraw federal land around Grand Canyon National Park from future mining and mineral leases. We met with the Coconino County Board of Supervisors, and they passed a unanimous resolution asking Congress to withdraw lands in the Tusayan Ranger District and House Rock Valley from mineral entry. Former Governor Napolitano wrote a letter to the Secretary of Interior

requesting that public lands adjacent to Grand Canyon be withdrawn from mineral entry. Similar letters were later submitted by the Metropolitan Water District of Southern California and Southern Nevada Water Authority.

16. The Trust also worked with Arizona Congressman Raul Grijalva to support legislation that would withdraw federal lands adjacent to the Grand Canyon from mineral exploration under the 1872 Mining Law. He introduced the Grand Canyon Watersheds Protection Act in February, 2008. As Chairman of the House Subcommittee on National Parks, Forests and Public Lands of the House Natural Resources Committee, Congressman Grijalva conducted a field hearing in Flagstaff, Arizona. The Trust worked to identify witnesses for the hearing. Congressman Grijalva convened a second hearing before the House Subcommittee in Washington, D.C., where I presented written and oral testimony on behalf of the Trust. In that testimony on June 5, 2008, I noted how uranium development had already adversely affected the Grand Canyon.

17. Throughout 2008 and 2009 and continuing into 2010, I visited scores of sites where new uranium claims have been made within public lands proposed for mineral withdrawal in the Grand Canyon Watershed Protection Act. All of the sites I visited are located in undisturbed natural areas. During a two-day visit to the Arizona Strip arranged by the Bureau of Land Management, I visited an active exploratory drilling site and witnessed damage to native vegetation caused by driving the drill rig off established roads and operating heavy equipment on a previously undisturbed land. Incessant noise from the drilling rig most probably disturbed wildlife in the area. We also visited the Arizona 1 uranium mine in an extremely remote area in the Kanab Creek watershed, approximately 6.5 miles north of Grand Canyon National Park. The fenced-in, 25-acre site included piles of rock overburden, main mine shaft with 100-foot tall head rig, ventilation shaft, several operations buildings, and lined pond for collecting storm run-off. Power poles and electrical lines crossed the landscape to provide power to the mine. Later we visited the “reclaimed” Hermit Mine site, which was developed in the 1980s and reclaimed in 1990s. Its “footprint” was marked a vast areas of barren soil with

non-native vegetation, such as cheat-grass. Efforts to reclaim and restore that mine site had failed.

18. I continue to visit the area near and adjacent to Canyon Mine for educational purposes. For example, in June of 2014, I met a field seminar of college students from the University of Georgia at 10X campground, a few miles west of Canyon mine. I made a 45-minute presentation to the students and faculty about the toxic legacy of uranium mining within Grand Canyon watersheds and threats to aquifers that feed seeps and springs in the Grand Canyon, specifically Horn Creek and the sole source of drinking water for Havasupai people. We discussed the failure of the U.S. Forest Service to update the 1986 EIS for Canyon mine and to conduct any meaningful consultation with Havasupai people prior to permitting the mine to resume operations. We discussed the 2010 research reports by the U.S. Geological Survey that summarize evidence of contamination at every one of nearly a dozen uranium mines in the region and the potential for adverse impacts on groundwater, springs, wildlife, backpackers, and tourists. We discussed the 2012 Final EIS for the Northern Arizona Mineral Withdrawal, which spelled out the potential for cumulative, irreparable, and irretrievable harm to natural, cultural, and recreational resources due to continued operations of Canyon and other uranium mines within Grand Canyon watersheds. We also discussed the cultural significance of Red Butte Traditional Cultural Property and the conclusion, by the Final EIS, that Canyon mine has forever destroyed that sacred area for native people. We then drove to Canyon mine and inspected its perimeter, before touring the South Rim of the Grand Canyon and the Navajo Nation.

19. On December 1, 2014, Grand Canyon Trust's communications manager Ashley Davidson and I visited Canyon mine following a meeting in the Grand Canyon superintendent's office. Ms. Davidson had recently joined our staff and was interested in photographing the mine and learning more about it and the history of contamination by uranium mining in the region. We observed three encampments of hunters along the six-mile dirt road leading to Canyon mine. The fall hunting season for deer and elk was near

its end. Ms. Davidson was surprised to note that the U.S. Forest Service has not placed any signs at the mine or approach road on public lands to inform visitors that uranium mining was occurring in the area.

20. Between 2014 and 2019, I have made more than a dozen visits to observe operations at Canyon Mine. During one such visit in the spring of 2017, a colleague and I were surprised to see water cannons spraying water approximately 100 feet into the air from a nearly overflowing containment pond. Wind gusts were blowing what we later learned to be contaminated water into the surrounding national forest. Because the amount of water pumped from the mine exceeded the capacity of the containment pond, its owners had to bear the cost of trucking polluted mine water to the uranium mill site in Blanding, Utah. We also learned later that, in 2013, miners had encountered a perched aquifer at 300 feet when sinking the shaft to its current depth of approximately 1400 feet beneath the surface. Since then, after drilling deeper and piercing additional aquifers, nearly 20 million gallons of groundwater have been pumped from the shaft, and the annual volume removed has been increasing.

21. After witnessing the emergency water removal event in 2017, I joined others in researching records kept by the Arizona Department of Environmental Quality. We learned that Canyon Mine's owners reported removing 985,636 gallons of water in 2016 as the shaft neared its final depth. It also recorded a jump in dissolved uranium to more than four times the federal safe drinking water standard. In 2017, the amount of groundwater water pumped from the mine increased nearly nine times, and combined with surface runoff, exceeded the capacity of its containment pond. In 2018, the volume of pumping again increased to nearly 10 million gallons, and the level of contamination remained well above safe drinking water standards.

22. In the summer of 2017 and the fall of 2018, I assisted the Havasupai Tribe in organizing educational and ceremonial gatherings within the Red Butte Traditional Cultural Property. During these 3-4 day events, tribal members sang, danced, and prayed for the closure of Canyon Mine.

23. I keep an eye on the price of uranium, knowing that the Canyon Mine will not start operating if its owners cannot make money. Attached to this declaration as Attachment A is International Monetary Fund data showing the global spot price for uranium on a monthly basis. This is the same data that was used to generate Figure B-4 in Appendix B to the EIS for the Department Interior's mineral withdrawal, except that it includes data until July 2019. This data shows that the average price depicted in Figure B-4 between January 1980 and October 2011 was $22.86. It also shows that the spot price for uranium has been in near-constant decline since 2012, when the government prepared its Valid Existing Rights Determination for the mine. Since April 2016, the spot price has been below $30 per pound. The average price over the last three years, between August 2016 and July 2019, has been $23.73. This is less than half of the price that the Forest Service used to forecast the mine's profits in its Valid Existing Rights Determination. The average price between January 1980 and July of this year was $24.89. This is depicted in Figure A below.

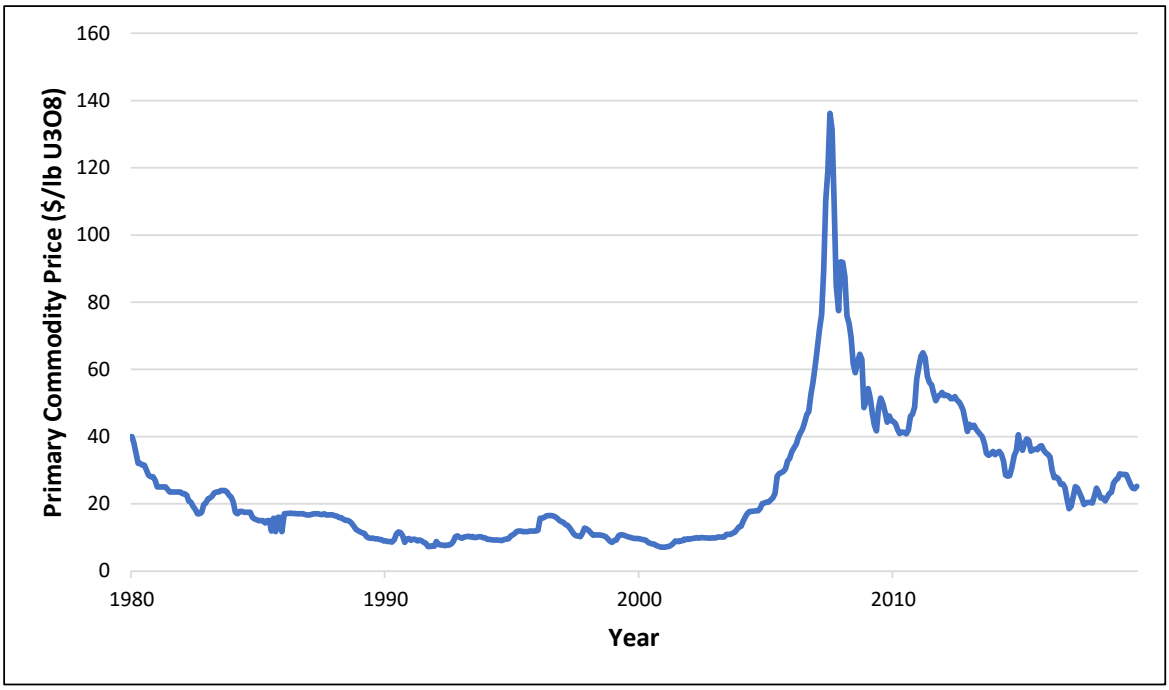

Figure A. Historical uranium market prices (U.S. dollars per pound) (Source: International Monetary Fund 2019).

Given that no ore has been mined at Canyon mine in the forty years since the claims were staked there, it seems obvious to me that the mine has been and remains unprofitable, especially at today's uranium prices, which are consistent with the typical market over the past four decades.

24. Although for decades I have regularly used and enjoyed the area around Canyon Mine, I have decided to stop visiting the area for recreational purposes. Canyon Mine operations have erased my desire to camp, hike, bike, or otherwise visit this large area of public land for recreational purposes. Using this area that my family has enjoyed for many years is no longer an option due to the mining operations at Canyon Mine.

25. For Canyon Mine, like the other uranium projects on the lands managed by the Forest Service south of Grand Canyon National Park, the Forest Service provided no public notice, prepared no current environmental analysis of the potential impacts, and allowed no public comment or public involvement in the process leading up to the recommencement of long-dormant mining operations at the Canyon Mine. This includes no public notice, public involvement, or NEPA analysis regarding the Forest Service's 2012 Valid Existing Rights Determination, which allowed mining to resume at Canyon Mine despite the U.S. Department of Interior's mineral withdrawal. In fact, Canyon Mine was authorized by the Forest Service without formal notice to the Trust or any attempt to communicate with us the agency's decision to allow mining to commence, despite our long-standing and well-known involvement in issues involving these public lands surrounding the Grand Canyon. The absence of an up-to-date, current public environmental review process as required by NEPA harms my and the Trust's interests, because it undermines my and the Trust's ability to know the full extent of the environmental consequences of the resumption of operations at Canyon Mine.

26. For four decades, I have reviewed proposals for various federal actions on public lands within the Grand Canyon watershed, and have provided comments on proposed actions on behalf of the Trust pursuant to the NEPA process. I research the issues, gather facts, prepare comments, and educate friends, family, Trust members, and

the general public. I have used the NEPA process in commenting on land exchanges; regional management plans for Grand Canyon National Park, the Kaibab National Forest, and the Arizona Strip District of the Bureau of Land Management; coalfired power plants; dam construction and operations; and numerous other proposed actions. If Forest Service was ordered to comply with NEPA and the National Historic Preservation Act for the Canyon Mine by involving the public, consulting with the appropriate Tribes and agencies, and preparing an up-to-date analysis of potential impacts, I and the Trust would then have the opportunity to be involved in the decisionmaking process, and could help insure that the responsible agency decisionmakers have the information they need concerning potential impacts on the environment prior to making their decisions, as NEPA intends.

27. Similarly, if the Forest Service was ordered to prepare a NEPA analysis for its Valid Existing Rights Determination for Canyon Mine, I and the Trust would then have the opportunity to be involved in the Forest Service's decisionmaking process, and could help insure that the responsible agency decisionmakers have the information they need concerning relevant environmental factors, including the expected costs of all necessary and appropriate mitigation and monitoring requirements to insure protection for natural resources impacted by Canyon Mine, prior to making its decision on the Valid Existing Rights Determination.

28. My concerns of serous and irreparable pollution from Canyon Mine, and the resulting impacts to my use and enjoyment of this area, would be addressed by an order vacating the Valid Existing Rights Determination and compelling the Forest Service to involve the public, consider input from other agencies, consult with Tribes in the region, and carefully consider ways to eliminate, mitigate and monitor environmental impacts before mining operations may legally resume, if at all, at Canyon Mine.

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I declare under penalty of perjury that the foregoing is true and correct. Executed September 8, 2019.

Roger Clark
Grand Canyon Trust
Flagstaff, Arizona

Attachment A

International Monetary Fund: Commodity Data September 3, 2019
https://www.imf.org/~/media/Files/Research/CommodityPrices/Monthly/ExternalData.ashx

	A	B
1	Commodity	PURAN
2	Commodity.Description	Uranium, NUEXCO, Restricted Price, Nuexco exchange spot, US$ per pound
3	Data Type	USD
4	Frequency	Monthly
5	1980M1	40.00
6	1980M2	38.00
7	1980M3	35.00
8	1980M4	32.00
9	1980M5	32.00
10	1980M6	31.50
11	1980M7	31.50
12	1980M8	30.00
13	1980M9	28.50
14	1980M10	28.00
15	1980M11	28.00
16	1980M12	27.00
17	1981M1	25.00
18	1981M2	25.00
19	1981M3	25.00
20	1981M4	25.00
21	1981M5	25.00
22	1981M6	24.25
23	1981M7	23.50
24	1981M8	23.50
25	1981M9	23.50
26	1981M10	23.50
27	1981M11	23.50
28	1981M12	23.50
29	1982M1	23.00
30	1982M2	23.00
31	1982M3	22.50
32	1982M4	20.75
33	1982M5	20.50
34	1982M6	19.25
35	1982M7	18.25
36	1982M8	17.00
37	1982M9	17.00
38	1982M10	17.50
39	1982M11	19.75
40	1982M12	20.25
41	1983M1	21.50
42	1983M2	21.75
43	1983M3	22.25
44	1983M4	23.25
45	1983M5	23.50
46	1983M6	23.50
47	1983M7	24.00
48	1983M8	24.00
49	1983M9	24.00
50	1983M10	23.50
51	1983M11	22.50
52	1983M12	22.00
53	1984M1	20.50
54	1984M2	17.50
55	1984M3	17.00

	A	B
56	1984M4	17.75
57	1984M5	17.75
58	1984M6	17.50
59	1984M7	17.50
60	1984M8	17.50
61	1984M9	17.50
62	1984M10	16.00
63	1984M11	15.50
64	1984M12	15.25
65	1985M1	15.00
66	1985M2	15.00
67	1985M3	15.00
68	1985M4	14.25
69	1985M5	15.00
70	1985M6	15.00
71	1985M7	11.85
72	1985M8	15.75
73	1985M9	11.70
74	1985M10	16.00
75	1985M11	16.00
76	1985M12	11.70
77	1986M1	17.00
78	1986M2	17.08
79	1986M3	17.17
80	1986M4	17.25
81	1986M5	17.17
82	1986M6	17.08
83	1986M7	17.00
84	1986M8	17.00
85	1986M9	17.00
86	1986M10	17.00
87	1986M11	16.75
88	1986M12	16.65
89	1987M1	16.65
90	1987M2	16.83
91	1987M3	17.00
92	1987M4	17.00
93	1987M5	17.00
94	1987M6	16.90
95	1987M7	16.75
96	1987M8	17.00
97	1987M9	16.65
98	1987M10	16.65
99	1987M11	16.75
100	1987M12	16.65
101	1988M1	16.45
102	1988M2	16.30
103	1988M3	15.90
104	1988M4	15.90
105	1988M5	15.40
106	1988M6	15.10
107	1988M7	15.10
108	1988M8	14.75
109	1988M9	14.15
110	1988M10	13.20
111	1988M11	12.30
112	1988M12	12.00
113	1989M1	11.60

	A	B
114	1989M2	11.35
115	1989M3	11.20
116	1989M4	10.20
117	1989M5	9.85
118	1989M6	9.80
119	1989M7	9.80
120	1989M8	9.60
121	1989M9	9.60
122	1989M10	9.40
123	1989M11	9.30
124	1989M12	9.00
125	1990M1	9.00
126	1990M2	8.80
127	1990M3	8.80
128	1990M4	8.65
129	1990M5	9.35
130	1990M6	11.00
131	1990M7	11.60
132	1990M8	11.45
133	1990M9	10.50
134	1990M10	8.50
135	1990M11	9.50
136	1990M12	9.70
137	1991M1	9.10
138	1991M2	9.50
139	1991M3	9.40
140	1991M4	9.00
141	1991M5	9.20
142	1991M6	9.00
143	1991M7	8.55
144	1991M8	8.25
145	1991M9	7.25
146	1991M10	7.25
147	1991M11	7.50
148	1991M12	7.40
149	1992M1	8.75
150	1992M2	7.90
151	1992M3	7.75
152	1992M4	7.75
153	1992M5	7.55
154	1992M6	7.75
155	1992M7	7.75
156	1992M8	8.05
157	1992M9	8.75
158	1992M10	10.25
159	1992M11	10.50
160	1992M12	10.00
161	1993M1	9.80
162	1993M2	10.10
163	1993M3	10.20
164	1993M4	10.35
165	1993M5	10.10
166	1993M6	10.30
167	1993M7	9.90
168	1993M8	10.05
169	1993M9	10.20
170	1993M10	10.18
171	1993M11	9.90

	A	B
172	1993M12	9.85
173	1994M1	9.45
174	1994M2	9.45
175	1994M3	9.30
176	1994M4	9.25
177	1994M5	9.25
178	1994M6	9.25
179	1994M7	9.10
180	1994M8	9.05
181	1994M9	9.45
182	1994M10	9.50
183	1994M11	9.60
184	1994M12	10.40
185	1995M1	10.78
186	1995M2	11.15
187	1995M3	11.80
188	1995M4	11.85
189	1995M5	11.90
190	1995M6	11.70
191	1995M7	11.70
192	1995M8	11.70
193	1995M9	11.85
194	1995M10	11.85
195	1995M11	11.85
196	1995M12	11.85
197	1996M1	12.20
198	1996M2	15.75
199	1996M3	15.75
200	1996M4	15.99
201	1996M5	16.38
202	1996M6	16.50
203	1996M7	16.50
204	1996M8	16.46
205	1996M9	16.15
206	1996M10	15.74
207	1996M11	15.07
208	1996M12	14.76
209	1997M1	14.49
210	1997M2	13.81
211	1997M3	13.62
212	1997M4	12.83
213	1997M5	11.83
214	1997M6	10.94
215	1997M7	10.49
216	1997M8	10.39
217	1997M9	10.25
218	1997M10	11.28
219	1997M11	12.75
220	1997M12	12.50
221	1998M1	12.04
222	1998M2	11.38
223	1998M3	10.66
224	1998M4	10.75
225	1998M5	10.75
226	1998M6	10.75
227	1998M7	10.61
228	1998M8	10.50
229	1998M9	10.23

	A	B
230	1998M10	9.61
231	1998M11	8.88
232	1998M12	8.49
233	1999M1	9.01
234	1999M2	9.20
235	1999M3	10.44
236	1999M4	10.85
237	1999M5	10.73
238	1999M6	10.56
239	1999M7	10.26
240	1999M8	10.11
241	1999M9	9.92
242	1999M10	9.76
243	1999M11	9.71
244	1999M12	9.64
245	2000M1	9.55
246	2000M2	9.39
247	2000M3	9.31
248	2000M4	9.14
249	2000M5	8.50
250	2000M6	8.23
251	2000M7	8.10
252	2000M8	7.96
253	2000M9	7.57
254	2000M10	7.40
255	2000M11	7.13
256	2000M12	7.14
257	2001M1	7.10
258	2001M2	7.39
259	2001M3	7.69
260	2001M4	8.23
261	2001M5	9.00
262	2001M6	8.78
263	2001M7	8.75
264	2001M8	8.95
265	2001M9	9.15
266	2001M10	9.47
267	2001M11	9.43
268	2001M12	9.50
269	2002M1	9.59
270	2002M2	9.72
271	2002M3	9.95
272	2002M4	9.75
273	2002M5	9.90
274	2002M6	9.90
275	2002M7	9.89
276	2002M8	9.85
277	2002M9	9.80
278	2002M10	9.84
279	2002M11	9.86
280	2002M12	9.88
281	2003M1	10.16
282	2003M2	10.10
283	2003M3	10.10
284	2003M4	10.10
285	2003M5	10.90
286	2003M6	10.90
287	2003M7	10.95

	A	B
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289	2003M9	11.49
290	2003M10	12.37
291	2003M11	13.18
292	2003M12	13.35
293	2004M1	14.80
294	2004M2	16.05
295	2004M3	17.14
296	2004M4	17.75
297	2004M5	17.75
298	2004M6	17.88
299	2004M7	17.90
300	2004M8	17.90
301	2004M9	18.60
302	2004M10	20.08
303	2004M11	20.20
304	2004M12	20.50
305	2005M1	20.54
306	2005M2	21.20
307	2005M3	21.84
308	2005M4	23.14
309	2005M5	28.25
310	2005M6	29.00
311	2005M7	29.28
312	2005M8	29.65
313	2005M9	30.43
314	2005M10	32.75
315	2005M11	33.56
316	2005M12	35.53
317	2006M1	36.75
318	2006M2	37.69
319	2006M3	39.77
320	2006M4	41.10
321	2006M5	42.28
322	2006M6	44.17
323	2006M7	46.50
324	2006M8	47.44
325	2006M9	52.44
326	2006M10	56.06
327	2006M11	61.44
328	2006M12	66.57
329	2007M1	72.00
330	2007M2	76.25
331	2007M3	89.44
332	2007M4	110.43
333	2007M5	119.11
334	2007M6	136.22
335	2007M7	131.50
336	2007M8	109.60
337	2007M9	85.00
338	2007M10	77.50
339	2007M11	92.00
340	2007M12	91.80
341	2008M1	87.56
342	2008M2	76.00
343	2008M3	73.71
344	2008M4	69.44
345	2008M5	61.67

	A	B
346	2008M6	59.00
347	2008M7	61.84
348	2008M8	64.50
349	2008M9	63.00
350	2008M10	48.60
351	2008M11	50.50
352	2008M12	54.33
353	2009M1	51.44
354	2009M2	47.00
355	2009M3	43.38
356	2009M4	41.72
357	2009M5	48.56
358	2009M6	51.50
359	2009M7	49.70
360	2009M8	47.19
361	2009M9	44.28
362	2009M10	46.11
363	2009M11	44.75
364	2009M12	44.44
365	2010M1	43.83
366	2010M2	42.10
367	2010M3	40.91
368	2010M4	41.33
369	2010M5	41.30
370	2010M6	40.78
371	2010M7	41.94
372	2010M8	46.06
373	2010M9	46.67
374	2010M10	48.83
375	2010M11	57.16
376	2010M12	60.63
377	2011M1	63.88
378	2011M2	65.00
379	2011M3	63.50
380	2011M4	57.82
381	2011M5	56.06
382	2011M6	55.40
383	2011M7	52.79
384	2011M8	50.68
385	2011M9	51.98
386	2011M10	52.34
387	2011M11	53.19
388	2011M12	52.18
389	2012M1	52.31
390	2012M2	52.06
391	2012M3	51.29
392	2012M4	51.30
393	2012M5	51.89
394	2012M6	50.83
395	2012M7	50.36
396	2012M8	49.25
397	2012M9	47.73
398	2012M10	44.61
399	2012M11	41.50
400	2012M12	43.67
401	2013M1	42.75
402	2013M2	43.41
403	2013M3	42.28

	A	B
404	2013M4	41.41
405	2013M5	40.61
406	2013M6	39.94
407	2013M7	38.02
408	2013M8	34.99
409	2013M9	34.45
410	2013M10	34.85
411	2013M11	35.59
412	2013M12	34.59
413	2014M1	35.21
414	2014M2	35.55
415	2014M3	34.70
416	2014M4	32.74
417	2014M5	28.54
418	2014M6	28.23
419	2014M7	28.40
420	2014M8	30.83
421	2014M9	34.37
422	2014M10	35.75
423	2014M11	40.59737319
424	2014M12	36.94825142
425	2015M1	35.89772727
426	2015M2	38.1875
427	2015M3	39.31818182
428	2015M4	38.84090909
429	2015M5	35.69047619
430	2015M6	36.04545455
431	2015M7	36.2826087
432	2015M8	36.0952381
433	2015M9	37.05681818
434	2015M10	37.23863636
435	2015M11	35.96428571
436	2015M12	35.16304348
437	2016M1	34.69047619
438	2016M2	34.00714286
439	2016M3	30.10652174
440	2016M4	27.81666667
441	2016M5	27.95454545
442	2016M6	27.35227273
443	2016M7	25.8452381
444	2016M8	25.90217391
445	2016M9	24.875
446	2016M10	21.48809524
447	2016M11	18.56818182
448	2016M12	19.21590909
449	2017M1	22.17045455
450	2017M2	25.15
451	2017M3	24.64130435
452	2017M4	23.25
453	2017M5	21.64130435
454	2017M6	19.75
455	2017M7	20.36428571
456	2017M8	20.40652174
457	2017M9	20.42857143
458	2017M10	20.23409091
459	2017M11	22.34545455
460	2017M12	24.69047619
461	2018M1	23.36956522

	A	B
462	2018M2	21.7625
463	2018M3	21.72727273
464	2018M4	20.8452381
465	2018M5	21.97826087
466	2018M6	23.07142857
467	2018M7	23.41590909
468	2018M8	26.04782609
469	2018M9	27.1075
470	2018M10	27.50869565
471	2018M11	28.93409091
472	2018M12	28.76190476
473	2019M1	28.71086957
474	2019M2	28.645
475	2019M3	27.20238095
476	2019M4	25.70454545
477	2019M5	24.68478261
478	2019M6	24.475
479	2019M7	25.22826087
480	2019M8	
481	2019M9	
482	2019M10	
483	2019M11	
484	2019M12	
485	2020M1	
486	2020M2	
487	2020M3	
488	2020M4	
489	2020M5	
490	2020M6	
491	2020M7	
492	2020M8	
493	2020M9	
494	2020M10	
495	2020M11	
496	2020M12	

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC Index of Exhibits to Plaintiffs Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's Motion for Summary Judgment and Memorandum in Support

EXHIBIT LIST

Exhibit 1	Native Excel and PDF copy of AR Docs. 673–680 (Canyon Mine Exam Economic Study (Mar. 28, 2012).
Exhibit 2	Price-Updated Copy of AR Docs. 673–680 (Canyon Mine Exam Economic Study (Mar. 28, 2012).
Exhibit 3	Declaration of Aaron M. Paul in Support of Plaintiffs' Motion for Summary Judgment (Sep. 11, 2019).
Exhibit 4	Second Supplemental Declaration of Roger Clark (Sep. 8, 2019).
Exhibit 5	Second Supplemental Declaration of Robin D. Silver (Sep. 9, 2019).

Exhibit 5

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC SECOND SUPPLEMENTAL DECLARATION OF ROBIN D. SILVER

I, Robin D. Silver, M.D. declare as follows:

1. I am a native Arizonan. I reside in Flagstaff, Arizona. I have lived in Arizona since birth in 1952 except for brief periods in early childhood and during medical training. I am a member, senior staff, and one of the original founders of the Center for Biological Diversity (formally the Southwest Center for Biological Diversity).

2. The Center for Biological Diversity ("the Center") is a tax-exempt, non-profit, membership organization with over 800,000 members and online activists. The Center has offices in a number of states, including Tucson and Flagstaff in Arizona. The Center is dedicated to the preservation, protection, and restoration of biodiversity, native species, ecosystems, and public lands. The Center is one of the leading conservation groups in both the nation and the region advocating for the protection of threatened and endangered species.

3. In addition to being a semi-retired emergency-room physician, I am a professional photographer specializing in imperiled wildlife and the habitats required for their survival. I have been a professional photographer for more than two decades. I am a member of the National Press Photographers Association and the Professional Photographers of America. I donate photographic images for educational purposes and for the fundraising benefit of those who endeavor to preserve imperiled wildlife and their habitats. I also sell photographic images for profit. My photographs frequently appear in the press and in magazines locally and nationally.

4. Over the past couple of decades, I have spent and continue to spend a substantial amount of my time on national forests and other public lands in Arizona, including the Kaibab National Forest and Grand Canyon National Park. I have visited Grand Canyon National Park and the surrounding area since I was a kid, and now enjoy taking my kids to these same special places.

5. During my visits to the Kaibab National Forest and Grand Canyon National Park, I regularly seek out wildlife, and enjoy bird watching, hiking, enjoying the scenery, seeking spiritual and psychic renewal, and making photographs. My use and enjoyment

of these areas, and my ability to make professional wildlife images, are dependent on good environmental quality and preservation of a landscape where native wildlife can survive. I have made attempts to photograph condors in this area, but these attempts have so far been unsuccessful.

6. I visited Red Butte on April 6, 2013. During this visit, I made many images of Red Butte of which the following is representative:

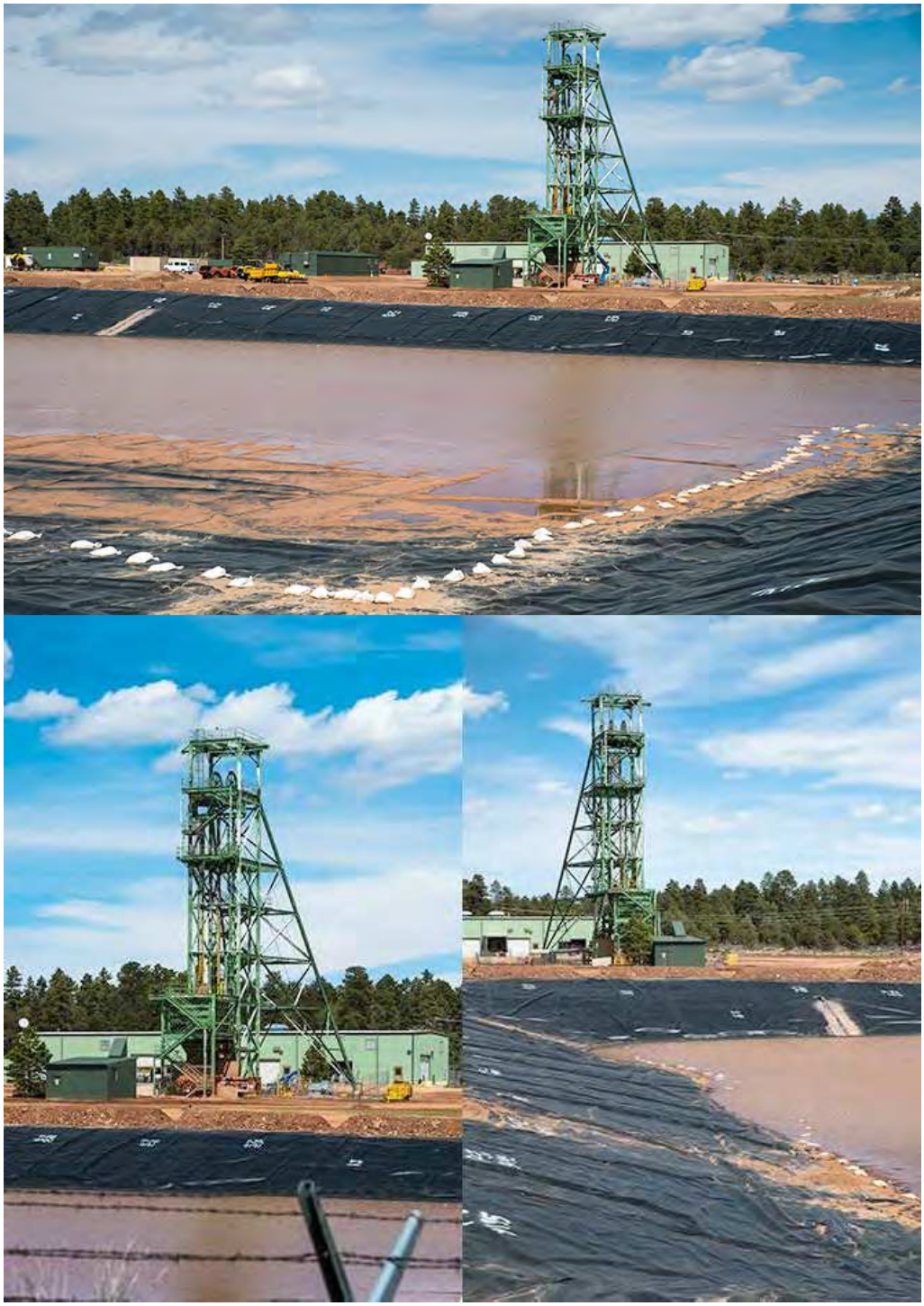
Basalt-capped Red Butte Kaibab National Forest, April 6, 2013

© Robin Silver Photography

7. On my visit to Red Butte on April 6, 2013, industrial noises were audible at Red Butte. Following the noises, I discovered the source of the industrial noise was the Canyon Mine.

8. I made the following images of the Canyon Mine on the Kaibab National Forest on April 6, 2013:

NOTICE
NO TRESPASSING



Dead Pine Siskin Bird outside Canyon Uranium Mine fence near uncovered Containment Pond April 6, 2013

© Robin Silver Photography

9. I returned to the Red Butte area of the Kaibab National Forest on June 26, 2014, and on September 9, 2014. I again traveled to the Red Butte area June 23 – 25, 2017 and on February 23, 2019. I intend to return in October, 2019. During these trips, I enjoy hiking and photographing the area. Because I am greatly concerned about the impacts of Canyon Mine on Red Butte and the surrounding area, I also regularly visit this area in order to help monitor and assess any negative impacts of the mining operations on the area.

10. Based on reports from Center for Biological Diversity staff and others, I am aware of significant modifications to operations at the Canyon Mine that have occurred since 2014. For example, after mine excavation pierced aquifers in 2016, significant amounts of groundwater began inundating the underground mine workings. According to water reports submitted to the Arizona Department of Environmental Quality by the mining company, nearly 9 million gallons flooded the mine in 2017[1] and nearly 10 million gallons in 2018[2]. Those reports also show dissolved uranium in that water consistently exceeding EPA toxicity standards for drinking water. This mine flooding caused the mining company in 2017 to request permission for higher water levels in its evaporation pond, to within one foot of the top of the pond, to begin trucking excess water offsite, to Utah, and to begin spraying the water into the air using "Land Shark" evaporators, whose spray drift was filmed moving offsite onto adjacent national forest.[3]

11. A site visit by Center staff on August 26, 2019 found that, since May of 2018, additional evaporators, docks, a water tank and additional infrastructure had been installed in response to ongoing mine flooding. Exhibit A. That flooding, and its high contamination counts, exacerbates concerns that mine flood water could be moving downward into the Redwall-Muav aquifer situated below the mine.

12. Center staff visits in 2018 and 2019 verified ongoing use of the mine water in the pond by birds, including bathing, drinking, and foraging. In both visits, nearby tanks were dry, and the mine water was the only standing water in the area, suggesting that the contaminated mine water is an ongoing attractive nuisance for birds and other wildlife. Exhibit A, B. None of the mine flooding, bird use of contaminated mine water, nor any of the associated measures to manage flood water—trucking, high-volume

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[1] Canyon Mine Annual Report, 2017. *See:* https://www.grandcanyontrust.org/sites/default/files/documents/Canyon_Mine_APP_Annual_Report_2017.pdf

[2] Canyon Mine Annual Report, 2018. *See*: https://www.grandcanyontrust.org/sites/default/files/documents/Canyon_Mine_APP_Report_2018.pdf

[3] Arizona Republic. April 3, 2017. Water levels at canyon uranium mine spark contamination concerns. *See:* https://www.azcentral.com/story/news/local/arizona-water/2017/04/03/water-has-accumulated-grand-canyon-uranium-mine-now-what/99843540/

storage in the waste pit, two types of evaporators, or associated infrastructure—were contemplated in the federal valid rights determination, the Canyon Mine Plan of Operations, or the Canyon Mine FEIS, which concluded:

> The possibility of significant ground water contamination from the mine is remote. Ground water flows, if they exist, are likely to be at least 1,000 feet below the lower extremities of the mine. This, plus the low potential for encountering groundwater in the mine, effectively eliminates the possibility of contaminating the Redwall-Muav aquifer.

FEIS at 26. The mine flooding, bird use of contaminated mine water, and all of the associated measures to manage flood water—trucking, high-volume storage in the waste pit, two types of evaporators, and associated infrastructure—are impacts and costs that bely the factual basis upon which each of the aforementioned federal approvals relies. They are also further examples of how the mine harms the surrounding area and would degrade my use of the area.

13. Both in my individual capacity and in my capacity as a member of the Center for Biological Diversity, I depend on the Forest Service to obey federal environmental laws in approving and overseeing projects on our national forests in order to protect my interests in these public lands. The Canyon Mine was approved by the Forest Service over twenty- five years ago, and we have learned a great deal about groundwater flows, seeps, and springs within the Grand Canyon watershed during that time. The Forest Service, however, refuses to reopen the public National Environmental Policy Act (NEPA) process on the Canyon Mine through either a new NEPA process on the April 2012 valid existing rights determination or by supplementing its outdated analysis for the Canyon Mine plan of operations. As a result, I have been unable to participate in a NEPA process whereby the Forest Service evaluates the new information about the Mine's environmental impacts.

14. After the U.S. Department of Interior withdrew the area around Grand Canyon National Park from mining, I was hopeful that mining operations at Canyon

Mine could not and would not proceed. My understanding is that mining can only proceed in the area of the withdrawal if the mining company has demonstrated valid existing rights. When the Forest Service was in the process of determining whether the mining company at Canyon Mine had valid existing rights, after the mineral withdrawal, I should have had the opportunity to be involved in that process under NEPA, both as an individual citizen living in Flagstaff, and as a member of the Center for Biological Diversity who has long had an interest in this region. If the Forest Service had prepared a NEPA analysis, I would have participated, and would have encouraged other organizations, individuals, and agencies to do the same. Had the Forest Service prepared a NEPA analysis, considered alternatives, and considered public input, I believe the Forest Service may have reached a different conclusion that the mining claims at Canyon Mine could not be mined at a profit at the time of the mineral withdrawal.

15. The mining related activities at the Canyon Mine site are allowed to proceed as a result of the valid existing rights determination despite the recent mineral withdrawal. These mining operations threaten and harm my interests on the Kaibab National Forest and Grand Canyon National Park for a number of reasons. For instance, the mining activities threaten to destroy my aesthetic enjoyment of the Red Butte area due to dust, heavy truck traffic, light pollution and noise.

16. My interests in photography in this region are also threatened with irreparable injury. The operations of the mine will limit and interfere with my local photographic opportunities, as wildlife will be disturbed and the dust related to the mine will limit photographic quality. In fact, a number of old growth trees in the area have already been destroyed as part of the mining operations.

17. As evidenced from the significant, irreparable contamination left by the Orphan Mine, the Kanab North mine, and other mines in the region, the Canyon Mine will likely leave behind contamination locally and in the nearby springs and seeps. Similarly, as evidenced from operations at Orphan Mine, the Canyon Mine's well will likely contribute to the entry of contaminants to perched aquifers and the Redwall aquifer.

In addition, as evidenced from operations of the Orphan Mine, the Canyon Mine shaft itself is likely to contribute to contamination of perched aquifers and the Redwall aquifer.

18. My interests in Grand Canyon National Park are also significantly threatened, as the mining operations at the Canyon Mine risk irreparable harm to the springs and seeps of the Redwall layer by contaminating them with radioactive material. These springs have very low flow rates so intercepting minimal amounts could affect spring flow negatively.

19. If and when negative effects on local springs and seeps and negative effects on Grand Canyon National Park springs and seeps are found, the mine's Arizona Department of Environmental Quality aquifer protection permit does not require monitoring of perched aquifers or the Redwall aquifer for mine-related radionucleotide contamination, nor does it require a plan to remediate such contamination. As a result, the harm to springs and seeps is likely to be irreparable by the time it is discovered. My interests in visiting the Grand Canyon National Park without such contamination and pollution will be forever impaired.

20. The significant and irreparable harm to seeps and springs near the Canyon Mine project area and down-gradient in Grand Canyon National Park significantly threatens my use and enjoyment of this area. Numerous wildlife species are highly dependent on healthy springs and seeps in this arid region, and the resulting adverse impacts to wildlife will negatively impact my interests in viewing and photographing wildlife species.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Dated this 9th day of September, 2019, in Flagstaff, Arizona.

Robin D. Silver, M.D.

EXHIBIT A

Date: 3 September 2019
To: Interested Parties
From: Taylor McKinnon, Center for Biological Diversity, tmckinnon@biologicaldiversity.org
Re: Canyon Mine Site Visit, Flooding

The following information and photographs were collected during a visit to the Canyon Mine on 26 August 2019 at approximately 5 – 7 pm. It was around 80 F with light northerly winds (0-10 mph) and mostly clear skies. I didn't see anyone at the mine.

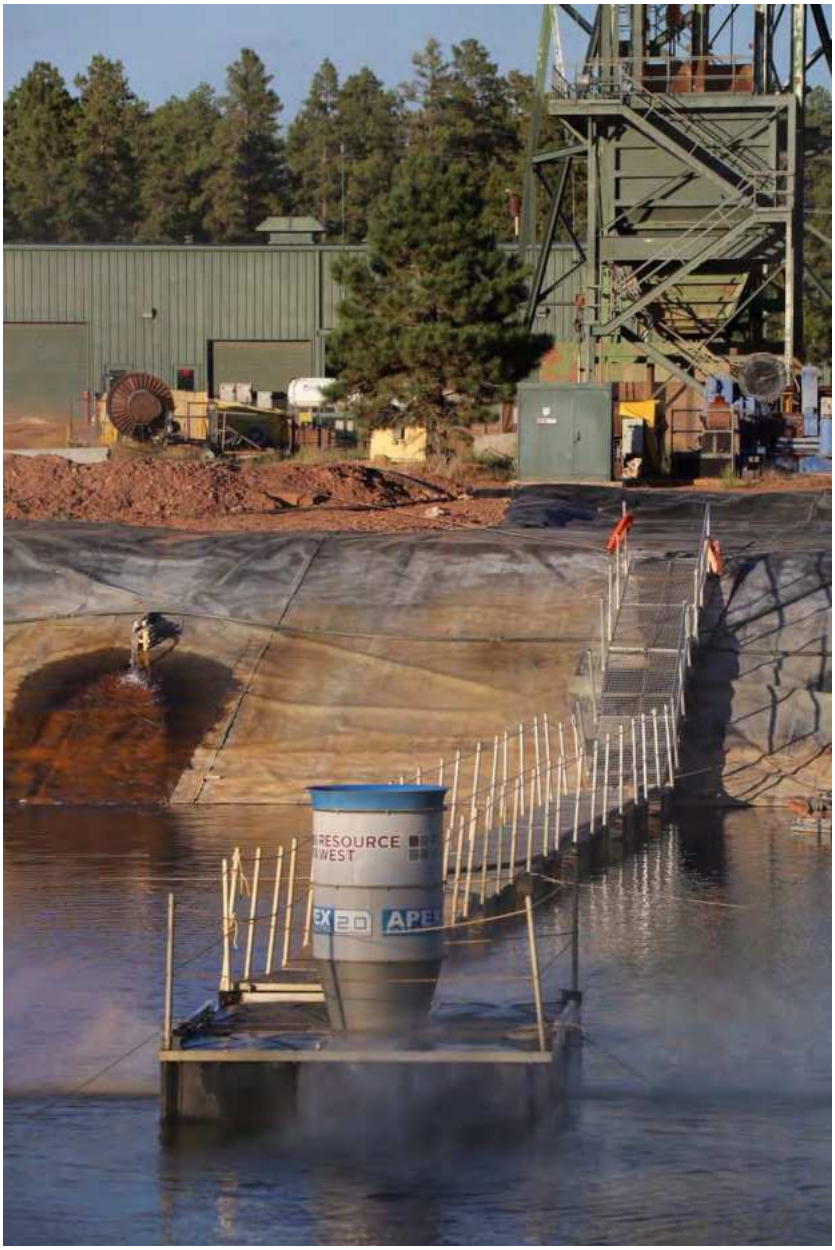
1. The waste water pit still contains water. Most of the pit floor surface was covered by water. There is a layer of sediment atop the pit liner at and below a line that is about two feet above the current water level. Mine operators recently installed new (1) two floating evaporators, (2) two docks or floating walkways, (3) a large circular above-ground water tank, and (4) rectangular dark green buildings adjacent to the waste pit (that I'm told house water-warming infrastructure to facilitate evaporation, but I have not independently confirmed this).

   The following photos shows the entire facility, the waste water pit, the water therein, and the new infrastructure.

2. Water inflow to the pit cycled at about 20 minute intervals, alternating between a trickle of water and a robust flow. This means that, after perched aquifers were pierced by mine

shaft excavation in 2016 or so, perched groundwater continues to inundate the mine, and the mine is being dewatered constantly. (See inflow from pipe left of the dock in the next photo below.)

3. The two new floating evaporators appear to have replaced the directional "land shark" evaporators that were earlier used. The floating evaporators ran constantly during my visit, and are noisy. They generate a mist that remains proximal to the water surface, unlike land sharks that earlier blasted the mist into the air.



The floating evaporators are made by Resource West Inc. The model is "Apex 2." See: https://www.resourcewest.com/apex-2/ According to information on the website, these evaporators allow for control of water droplet size, thereby allowing some control of spray distance (smaller droplets will drift farther).

The mist I observed seemed capable of drifting offsite in moderate or high wind.

4. As with 2018, birds continue to use water in the pit for bathing, drinking, and foraging for aquatic life. As with 2018, I photographed many birds doing so. I observed more bird and more species of birds using the waste pit (and standing water in the adjacent waste rock pile) on this visit, including aquatic-obligate species (spotted sandpiper, black-headed phoebe) and an entire flock of pinyon jays. The photo below shows a spotted sandpiper foraging in the margins of the pit water. Additional photos and videos of this and other species using the waste pit water are available upon request.

5. I also observed birds using standing water adjacent to the waste rock pile to the east and south of the waste water pit. I observed black water hose on and around the pile, and suspect but cannot confirm that the water came from that hosing. The following photo shows that water, partially obscured by vegetation.

6. As with 2018, "Owl Tank," which is located a mile or two from the mine, was dry, and the waste pit appears to be the only standing surface water in the vicinity. As such, and, as with 2018, the Canyon Mine waste pit appears to be an attractive nuisance to birds and other wildlife that can broach the chain-link fence; contaminated mine water appears to be the only reliable year-round water source for those wildlife. This photo shows Owl Tank without water.

EXHIBIT B

Taylor McKinnon

From: Taylor McKinnon
Sent: Wednesday, May 30, 2018 4:14 PM
To: achaney@azgfd.gov; idb@azdeq.gov; lschuppert@fs.fed.us; nkline@fs.fed.us; jhinck@usgs.gov; kwaltond@usgs.gov; hcprovencio@fs.fed.us; ftillman@usgs.gov; Brenda_Smith@fws.gov
Cc: Taylor McKinnon
Subject: Birds in Canyon Mine uranium waste pit

Dear Ian, Brenda, Heather, Liz, Jo Ellen, Katie, and Fred:

I am writing to alert your agencies that native birds are drinking, bathing, and foraging in the Canyon Mine's waste pit.

On 29 May I stopped in at the Canyon Mine on the Kaibab National Forest and observed and photographed several species of birds drinking, bathing, and foraging in the mine's waste pit. Had I stayed longer, I could have photographed many other species. It's the only surface water across a large area, and there were dozens of birds. Obviously, for lack of any cover impeding their access, any birds passing by, including federally protected species, could be exposed to the waste pit fluids.

I am concerned about (1) harm to birds from past and ongoing exposure to mine waste water with elevated levels of uranium and other pollutants, (2) the lack of a protective cover over the waste pit to prevent bird exposure to that waste water and (3) the potential, given ongoing unimpeded access, for bird populations to become dependent on mine waste water with elevated levels of uranium and other pollutants. For example, the most recent water chemistry data that I'm aware of show dissolved uranium concentration of 130ppb (the federal drinking water standard is 30ppb), as reported on 4 April: https://www.usatoday.com/story/news/nation-now/2017/04/04/grand-canyon-uranium-mine/100021380/

Three questions:

1. What is the date of most recent water quality sample(s) of the waste water pit?
2. What were the results of recent water samples, particularly in dissolved uranium?
3. Can you email me those data for 2018 samples thus far? (Presumably they are electronic and a few clicks away.)

Thanks for your consideration.

Best,

Taylor McKinnon
Center for Biological Diversity
(801) 300-2414
@PublicCarbon

Violet-green swallow (*Tachycineta thalassina*), foraging

A pair of mourning doves (*Zenaida macroura*), drinking, bathing

American robin (*Turdus migratorius*), drinking, bathing

Western tanager (*Piranga ludoviciana*) female, drinking, bathing

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Counsel for Plaintiffs Grand Canyon Trust, Sierra Club, and Center for Biological Diversity

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC Plaintiffs Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's Motion to Complete the Administrative Record

INTRODUCTION

Though judicial review under the Administrative Procedure Act (APA) is to be based on the "whole record," the U.S. Forest Service in this APA case has given the Court and the plaintiffs only a partial administrative record—one without documents that ostensibly contain confidential commercial information. All the while, both the Forest Service and intervenor-defendant Energy Fuels have raised arguments on the merits that squarely put into issue several of these withheld documents.

The Forest Service has made no effort to substantiate its claim that these documents contain business information that is confidential, and even had it done so, it has cited no legal basis for summarily removing them from the record produced to the Court. Purging the record in this way is not authorized by any statute, rule, or judicial precedent. If the defendants want to remove documents containing commercial information from the publically available administrative record, it is their burden to demonstrate that the information is confidential and that disclosing it would compromise Energy Fuels' competitive interests. And if they carry that burden, withholding the relevant documents in their entirety would be unwarranted. The documents should instead be filed under seal, and a protective order should be entered allowing the documents to be disclosed to the plaintiffs but not the public at large.

The Forest Service's stratagem—shrouding in secrecy several key documents that the agency considered and that could provide the plaintiffs a way to rebut the defendants' arguments—contravenes basic principles of record review under the APA and our adversarial system, which insists that both sides have access to the same information to present their case. This is especially true given that the defendants have brandished withheld documents to argue for judgment in their favor. The Court should remedy this inequity and breach of the APA by ordering the Forest Service to produce a complete administrative record that includes the disputed documents.

BACKGROUND

The sole claim remaining before the Court for disposition—Claim 4 in the amended complaint—contends that the Forest Service unlawfully concluded that Energy Fuels had "valid existing rights" to mine uranium at Canyon Mine even though the mine sits on federal public lands that have been temporarily closed to uranium mining. *See* Am. Compl. ¶¶ 89–92, ECF 115, (Apr. 23, 2014). This validity determination is set out in a January 2012 "mineral report," one of the pivotal documents at issue in Claim 4. AR Doc. 525. The validity determination is flawed because it concludes that the mine would be profitable—and hence, would satisfy the valid-existing-rights test—without accounting for all the mine's costs. *See* Pls.' Mem. Supp. Mot. Summ. J. at ECF pp. 17–21, ECF 140-1 (Oct. 15, 2014). The omitted costs include the expense of performing mandatory environmental monitoring, undertaking measures to mitigate harm to the environment and cultural resources, and completing wildlife-conservation measures. *Id.*

Several years ago, when the parties briefed summary judgment on Claim 4, the defendants made arguments about mining costs that implicate documents the Forest Service withheld from the administrative record produced to the plaintiffs and the Court. One of those documents was Appendix C to the January 2012 mineral report. The defendants put that appendix in issue by asserting that some or all of the disputed mitigation and monitoring costs were accounted for in the validity determination as capital costs. *See* Fed. Defs.' Mem. Supp. Mot. Summ. J. at ECF p. 39, ECF 146-1 (Nov. 19, 2014) ("Fed Defs.' MSJ"); EFR's Mem. Opp. Pls.' Mot. Summ. J. at ECF pp. 18–19, ECF 147-1 (Nov. 19, 2014) ("EFR's MSJ"). To make that argument, the defendants pointed to the mineral report's two-page summary of the mine's capital costs. *See* Fed Defs.' MSJ at ECF p. 39 (citing AR Doc. 525 at 10501); EFR's MSJ at ECF pp. 18–19 (citing AR Doc. 525:10499–502). Yet nowhere does that summary mention the disputed costs of environmental monitoring, wildlife-conservation, or mitigation measures. AR Doc. 525 at 10500–10501.

According to the mineral report, the "specific costs" that back up this capital-cost summary are laid out in Appendix C to the report. *Id.* at 10501. And that would be the natural place for the plaintiffs (and the Court) to turn for the purpose of checking whether defendants' arguments ring hollow. Yet, because the Forest Service has deemed this appendix to be "confidential," the agency has refused to let the plaintiffs or the Court see it. *See* Ex. 1 attached hereto at 1 (correspondence from federal defendants agreeing to provide appendix A and B to the validity determination but asserting that "[t]he remaining appendices to the [validity] [d]etermination are confidential"); *see also* Joint Status Report at 8–9, ECF 200 (Mar. 15, 2019) ("JSR").

The defendants have raised the same confidentiality argument about a spreadsheet Energy Fuels sent the Forest Service to help the agency prepare its validity determination. In an extra-record declaration attached to Energy Fuels' prior summary judgment brief, a company employee asserted that this spreadsheet accounted for some of the disputed monitoring and mitigation costs. *See* EFR's MSJ at ECF p. 19; Roberts Decl. ¶¶ 8–9, ECF 147-2 (Nov. 19, 2014).[1] The Forest Service in its reply briefing adopted this argument as its own. *See* Fed. Defs.' Reply at ECF p. 16, ECF 155 (Jan. 29, 2015). But when the record was produced to the Court and the plaintiffs, this spreadsheet was withheld, along with the cover e-mail, a letter, and associated records Energy Fuels sent the agency. *See* Exs. 2 and 3 attached hereto (e-mail and letter transmitting spreadsheet).

That e-mail and letter reveal an error in Energy Fuels' representations about the spreadsheet that should be set straight in order to clarify exactly what records plaintiffs are seeking in this motion. The company's declarant claimed that the economic-study spreadsheet—named "Canyon Mine Mineral Exam Economic Study March 2012.xls"—was attached to AR Doc. 670, which is a letter that Energy Fuels sent the Forest Service in November 2011. Roberts Decl. ¶¶ 8–11, ECF 147-2. But that claim appears to be

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[1] Energy Fuels asserts that it intends to file a new extra-record declaration when it supplements its summary judgment brief, JSR at 12, disregarding again the APA's record-review rules. *See San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 991–93 (9th Cir. 2014) (improper to admit extra-record declarations in APA case).

wrong. The November 2011 letter identifies by filename over a dozen enclosures, yet none of them match the filename of the economic-study spreadsheet. *See* AR Doc. 670 at 12426. And indeed, according to its filename, the spreadsheet appears to have been finished in March 2012, about four months *after* Energy Fuels sent the November 2011 letter to the Forest Service. It is impossible, contrary to the company's declarant's claim, that the spreadsheet could have been attached to a letter sent long before the spreadsheet was completed.

So far as plaintiffs can discern, Energy Fuels actually sent the Forest Service the economic-study spreadsheet by e-mail on March 29, 2012. *See* Ex. 2 (showing a filename matching the name of the economic-study spreadsheet). And, after filing the most recent joint-status report, *see* ECF 200, and disentangling Energy Fuels' erroneous claim that the spreadsheet was attached to AR Doc. 670, plaintiffs realized that Energy Fuels probably did produce to plaintiffs during discovery a heavily redacted and essentially unintelligible copy of the economic-study spreadsheet. In addition to Appendix C, it is an un-redacted and usable copy of this spreadsheet and all the other attachments to Energy Fuels' March 29, 2012, e-mail, not the attachments to AR Doc. 670, that plaintiffs seek to have added to the record before the Court.

ARGUMENT

I. The record is incomplete.

The APA provides that judicial review is to be based on the "whole record." 5 U.S.C. § 706. The "whole record" includes "everything that was before the agency pertaining to the merits of its decision." *Portland Audubon Soc'y v. Endangered Species Comm.*, 984 F.2d 1534, 1548 (9th Cir. 1993); *Thompson v. U.S. Dep't of Labor*, 885 F.2d 551, 555 (9th Cir. 1989) ("The 'whole' administrative record … consists of all documents and materials directly or *indirectly* considered by agency decision-makers and includes evidence contrary to the agency's position.") (emphasis in original).

Appendix C, the economic-study spreadsheet, and the correspondence transmitting that spreadsheet to the Forest Service are all part of the administrative record, for they

were before the agency and pertain to the merits of its decision. Appendix C is an integral part of the Forest Service's mineral report evaluating whether Energy Fuels had valid existing rights, and that report is the key document underlying the Forest Service's decision in dispute. *See* AR Doc. 525. That the appendix was considered by agency decision-makers is beyond doubt, for the appendix is part of the very document that embodies the agency's decision.

Likewise, Energy Fuels sent the economic-study spreadsheet and a letter describing that spreadsheet and related materials to the Forest Service employees who prepared the validity determination, to be used, as the company put it, "in completing [the agency's] economic analysis for the mineral examination." *See* Ex. 3 at C00000939. And the mineral report makes clear that the Forest Service used the company's cost information in the agency's validity analysis. AR Doc. 525 at 10500 ("Capital and operating cost estimates for the Canyon Mine were derived from [Energy Fuels' predecessor's] recent and on-going experience from their Arizona One Mine north of the Grand Canyon in a similar ore deposit, as well as the Canyon Mine project."); *id.* at 10504 ("Using the company's capital and operating costs, we performed several independent cash flow analyses…."). The spreadsheet was thus considered by agency decision-makers in making the disputed validity determination.

Energy Fuels concedes that Appendix C and the economic-study spreadsheet are part of the administrative record. JSR at 10. And given that both defendants relied in their summary judgment briefing on the spreadsheet and the mineral report's summary of Appendix C, it would be anomalous for the defendants to now assert that these documents were not considered by Forest Service decision-makers. For if that were true, and these documents were *not* in the administrative record, it would flout the APA for the defendants to use them to defend the Forest Service's decision. *See* 5 U.S.C. § 706; *Locke*, 776 F.3d at 991–93 (holding that extra-record evidence should not have been considered by the district court).

II. Defendants have provided no legal basis for withholding Appendix C, the economic-study spreadsheet, and related correspondence.

The Forest Service has given no defensible reason for removing the disputed documents from the record produced to the Court. The agency has made only a conclusory claim that Appendix C is confidential, has deferred wholesale to Energy Fuels' claim that the economic-study spreadsheet and the correspondence transmitting it are confidential, and has refused to produce the documents. *See* JSR at 8–9 (asserting, without citation, that the documents in dispute "were properly withheld because they contain confidential business information").

No legal authority permits the government in APA lawsuits to remove, carte blanche, from the record relevant commercial information that the government or a business deems confidential. Courts have allowed a few narrowly defined categories of confidential information to be withheld when it is contained in an administrative record, such as material protected by the attorney-client privilege or deliberative-process privilege, or information that is specifically exempt from disclosure by statute. *See, e.g.*, *Ariz. Rehabilitation Hosp., Inc. v. Shalala*, 185 F.R.D. 263 (D. Ariz. 1998) (applying deliberative-process and attorney-client privileges to administrative record); *Pub. Emps. for Envtl. Responsibility v. Beaudreau*, 2012 WL 12942599, *7–8 (D.D.C. Nov. 9, 2012) (same, and discussing several statutory exemptions as well). But no statute, rule, or judicial precedent allows the government to expunge commercial information from the record simply because it is in a document that the government or a business has stamped "confidential." *See Fed. Open Market Comm. v. Merrill*, 443 U.S. 340, 362 (1979) ("[T]here is no absolute privilege for trade secrets and similar confidential information.") (quoting 8 C. Wright & A. Miller, Fed. Prac. & Proc. § 2043, 300 (1970)); *Fylers Rights Educ. Fund, Inc. v. Fed. Aviation Admin.*, 864 F.3d 738, 745–47 (D.C. Cir. 2017) (finding it improper for the government, without a "reasoned explanation," to withhold "proprietary" information from the record).

The court's decision in *Beaudreau* is directly on point. The federal defendants in that case redacted "confidential business information" from an administrative record without supplying "a legal basis to justify the withholding of this information." *Beaudreau*, 2012 WL 12942599 at *7. After concluding that the information could not be withheld on the grounds that the agency did not consider it, the court surveyed cases addressing possible statutory grounds for the defendants' redactions, such as the National Historic Preservation Act's safeguards for information about historic properties and trade-secret protections afforded in pharmaceutical-licensing proceedings. *Id.* The court found no grounds for redacting confidential business information and held that it should be in the record before the court. *Id.* at *7–8. The government, the court observed, could seek a protective order if it thought necessary. *Id.*

The same outcome is warranted here. The Forest Service has supplied no legal justification for lodging a record with the Court that omits Appendix C, the economic-study spreadsheet, and the e-mail and attached materials transmitting and describing the spreadsheet. The Court accordingly should order the agency to complete the record with unredacted copies of those documents. Indeed, this result is all the more justified because the defendants have asked the Court, as a reason for affirming the government's validity determination, to trust their assertions about what these documents contain. *See Flyers Rights*, 864 F.3d at 746. As the D.C. Circuit has put it, "that is not how judicial review works," for a court "cannot affirm the sufficiency of what [it] cannot see." *Id.* "Having invited the court into its record, the [government] cannot hide the evidentiary ball." *Id.*

The defendants, if they so desire, may seek a protective order to limit how the disputed documents may be disclosed, and they may seek the Court's permission to file the documents under seal. To get a protective order, they must demonstrate that the documents contain confidential commercial information, *see* Fed. R. Civ. P. 26(c)(1)(G), and make an adequate showing of the "specific prejudice or harm [that] will result if no protective order is granted." *Phillips ex rel. Estates of Byrd v. Gen. Motors Corp.*, 307 F.3d 1206, 1210–11 (9th Cir. 2002). If the defendants meet that burden, an order may be

fashioned for disclosing the documents to the plaintiffs and the Court while protecting Energy Fuels' commercial interests. Under no circumstance would it be a suitable remedy to conceal these documents from the plaintiffs and the Court when sealing procedures and a protective order would provide a straightforward way to ensure that the documents are not revealed to Energy Fuels' competitors in the uranium-mining business. *See, e.g.*, *Beaudreau*, 2012 WL 12942599 at *8; *Ensco Offshore Co. v. Salazar*, 2010 WL 11538697, *12–13 (E.D. La. Sep. 16, 2010) (ordering that confidential commercial data be included in the record subject to a protective order).

III. Plaintiffs did not agree that the disputed documents could be withheld.

Energy Fuels has asserted that the plaintiffs agreed to keep Appendix C and the economic study "out of the administrative record because they contain CBI." JSR at 10. That is not so. The plaintiffs agreed in the midst of discovery over the Court's jurisdiction to defer a dispute over confidentiality assertions until after a pending motion to dismiss for lack of jurisdiction was resolved—an agreement plaintiffs made after concluding that the confidential information could be relevant to the merits, but not jurisdiction. This agreement is reflected unambiguously in two letters that the defendants sent the plaintiffs during the course of the prior discovery dispute. The first, sent by the Forest Service in July 2013, described the parties' agreement that the appendices to the mineral report—which the plaintiffs requested promptly after seeing that they were not produced along with the rest of the record—"will be submitted to the Court only in the event that Defendants' Partial Motion to Dismiss is denied as to the claims regarding the [validity] [d]etermination." Ex. 1 at 1–2; *see also* Cert. of Supp. Admin. R. at ¶ 4, ECF 75-1 (July 2, 2013) ("In accordance with an agreement Plaintiffs and Intervenors reached on June 26, 2013, regarding the timing of any supplementation of the record with confidential business information, confidential supplemental administrative record documents will be submitted to the Court only in the event that Defendants' Partial Motion to Dismiss is denied."). The second letter, sent by Energy Fuels in January 2014, described the parties' agreement that, if the plaintiffs chose to dispute Energy Fuels' confidentiality redactions,

they would not do so "until after the Court has resolved [the Forest Service's] Motion to Dismiss and the posture of the case moves into motions for summary judgment." Ex. 4 at 2; *see also* Joint Matrix re Parties' Discovery Disputes at n. 2, ECF 106 (Mar. 5, 2014) ("Plaintiffs have agreed to not seek, in the context of resolving the pending Motion to Dismiss," another appendix to the validity determination.).

So, the only agreement plaintiffs made was to not quarrel over confidentiality assertions unless the Court denied the Forest Service's motion to dismiss and let the case proceed. After the Court did exactly that, and the defendants made arguments during summary judgment that made Appendix C and the economic-study spreadsheet pertinent, plaintiffs sought copies of both documents. *See* Pls.' Reply Supp. Mot. Summ. J. at n.7, ECF 151 (Dec. 19, 2014). All told, the claim that plaintiffs consented to removing confidential business information from the record is completely unfounded.

CONCLUSION

As the Ninth Circuit has said, "[i]f the record is not complete, then the requirement that the agency decision be supported by 'the record' becomes almost meaningless." *Portland Audubon Soc'y*, 984 F.2d at 1548. By scrubbing purportedly confidential information from the record, the Forest Service has hampered plaintiffs' ability to rebut defendants' arguments and has thwarted the Court's review on the "whole record." The Grand Canyon Trust, Center for Biological Diversity, and Sierra Club accordingly ask the Court to redress this APA violation by ordering the defendants to complete the record with unredacted (and usable) copies of Appendix C, the economic-study spreadsheet, and the correspondence and related files to which that spreadsheet was attached.

Respectfully submitted this 5th day of April, 2019.

s/ Aaron M. Paul

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources, Inc., et al., Intervenor-Defendants.	Case No. CV-13-8045-PCT-DGC Index of Exhibits to Plaintiffs Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's Motion to Complete the Administrative Record

EXHIBIT LIST

Exhibit 1	Letter from B. Li, Trial Attorney, U.S. Dep't of Justice, to N. Levine, Staff Attorney, Grand Canyon Trust (July 2, 2013).
Exhibit 2	E-mail from H. Roberts, Executive Vice President, U.S. Operations, Denison Mines, to M. Linden and M. Doran, U.S. Forest Service (Mar. 29, 2012).
Exhibit 3	Letter from H. Roberts, Executive Vice President, U.S. Operations, Denison Mines, to M. Linden, U.S. Forest Service (Mar. 28, 2012).
Exhibit 4	Letter from D. DePippo, Attorney, Gallagher & Kennedy, to N. Levine, Staff Attorney, Grand Canyon Trust (Jan. 27, 2014).

Exhibit 1

U.S. Department of Justice

Environment and Natural Resources Division

90-1-4-13931

Natural Resources Section
P.O. Box 7611
Washington, DC 20044

Telephone (202) 353-9213
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July 2, 2013

Via Email

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Re: *Grand Canyon Trust v. U.S. Forest Service*, Civ. No. 13-08045-DGC4

Dear Neil,

I am writing in response to your letters of June 12, 2013 and June 26, 2013.

The Forest Service responds to your request to add several documents or categories of documents to the record as enumerated in your June 12, 2013 letter as follows:

1. Documents that were used in the preparation of, or related to, the Valid Existing Rights ("VER") Determination can be found in the administrative record that was lodged with the Court on May 10, 2013 at Document Nos. 338, 359, 362, 370, 371, 372, 373, 374, 424, 429, 430, 432, 443, 453, 525 and 591. The Forest Service intends to supplement the record at this time with five letters regarding the VER Determination that were inadvertently omitted from the record when it was lodged with the Court on May 10, 2013. If there are other documents you are seeking to include in the record, please provide further detail.

2. At this time, the Forest Service intends to supplement the record with Appendix A and one map from Appendix B to the VER Determination, which were inadvertently omitted from the administrative record. The remaining appendices to the VER Determination are confidential, and in accordance with the agreement Plaintiffs and Intervenors reached on June 26, 2013 regarding the timing of any supplementation of the record with confidential business information, those appendices will be submitted to the Court only in

the event that Defendants' Partial Motion to Dismiss is denied as to the claims regarding the VER Determination.

3. The enclosures referenced in Document 271, a letter dated November 6, 1986, were not attached to Document 271, but a copy of the same bond can be found attached to Document 349 at page 5.

4. The Forest Service intends to supplement the record at this time with a copy of the signed Groundwater Aquifer Protection Permit, which was not attached to Document 318.

5. The Forest Service was unable to locate in its files a written request to suspend active operations at the Canyon Mine.

6. The documents referred to in Document 658 at 4 "concerning the mine review process" can be found in the administrative record that was already provided to the Court. The documents related to the mine review would be too numerous to list here. If there is a specific document you are seeking to include in the record, please provide further detail.

With respect to your intent to conduct discovery on jurisdictional issues, we intend to oppose such discovery because it is not appropriate in this case.

As for your request in your June 26, 2013 letter for monitoring information, certain baseline and background information is already included in the record, e.g. DEIS App. E Radiological Assessment at AR 338, and App. F. Groundwater Conditions at AR 383. As noted in the FEIS at AR 527, certain baseline radiological data is to be collected within one year prior to ore production, an event which has not yet been triggered. The Forest Service has located further historical monitoring documents for water quality and will be supplementing the record with these documents. However, the Forest Service does not have further documents on monitoring of air quality and soils.

The Forest Service will provide a supplemental record to the Court once the documents mentioned above have been Bates stamped and indexed, which should occur in early July.

Please let me know if you have any questions.

Sincerely,

/s/ Beverly Li

Beverly Li
Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Natural Resources Section

cc: Marc Fink, Center for Biological Diversity
Richard Hughes, Rothstein Donatelli Hughes Dahlstrom Schoenburg & Bienvenu LLP
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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA
PRESCOTT DIVISION

Grand Canyon Trust, et al., Plaintiffs, v. Heather Provencio, et al., Defendants, and Energy Fuels Resources Inc., et al., Intervenor-Defendants.	Case No. 13-8045-DGC JOINT STATUS REPORT

In response to the Court's order, ECF 191 (Jan. 7, 2019), Plaintiffs Grand Canyon Trust, Center for Biological Diversity, Sierra Club and Havasupai Tribe; Federal-Defendants Heather Provencio[1] and the U.S. Forest Service (collectively, the "Forest Service"); and Intervenor-Defendants Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (collectively, "Energy Fuels") submit this Joint Status Report to inform the Court of the Parties' respective positions about how to proceed with this lawsuit.

Background

Plaintiffs filed this case in 2013 challenging the Forest Service's administrative determination that Energy Fuels had valid existing rights in two mining claims for the Canyon Mine, which is located in the Kaibab National Forest near Grand Canyon National Park and on lands withdrawn under Section 204 of the Federal Land and Policy Management Act (FLPMA). After that Forest Service determination, Energy Fuels resumed mining operations at the Canyon Mine. The Court entered summary judgment for the Defendants in April 2015. Order, ECF 166 (Apr. 7, 2015). Plaintiffs appealed. Notice of Appeal, ECF 168 (Apr. 14, 2015); ECF 174 (Apr. 27, 2015).

In October 2018, the Ninth Circuit Court of Appeals partially upheld the Court's summary judgment order but remanded one claim to this Court for consideration on the merits. *See Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1167 (9th Cir. 2018). That claim—Claim 4 in the amended complaint—challenged the determination made by the

[1] As Michael Williams' successor as Kaibab National Forest Supervisor, Heather Provencio is substituted as a defendant under Fed. R. Civ. P. 25(d).

Forest Service that Energy Fuels had "valid existing rights" to mine uranium at Canyon Mine, and thus was not affected by the Secretary of the Interior's 2012 withdrawal of the area from hard rock mining—*i.e.*, location and entry under the 1872 Mining Law—for two decades. *See* Am. Compl. ¶¶ 89–92, ECF 115, (Apr. 22, 2014). Plaintiffs asserted that the Forest Service's validity determination—and reliance on that validity determination to allow for the resumption of mining operations at Canyon Mine despite the FLPMA withdrawal—constitutes legal error because the Forest Service failed to properly account for all the costs associated with the Canyon Mine, including costs of complying with environmental and other regulations. *See id.*

The Parties disagree about how the Court ought to proceed in resolving this claim. As a result, their respective positions are set out below.

The Parties also wish to advise the Court that Plaintiff Havasupai Tribe intends to file a petition for certiorari in the U.S. Supreme Court seeking review of the Tribe's claim under the National Historic Preservation Act. The petition is due March 25, 2019.

Plaintiffs' Position:

Plaintiffs take the position that, before the Court rules on the merits of Plaintiffs' claim challenging the validity determination, the Court should: (1) order the Defendants to produce two administrative-record documents that they have not produced despite arguing in prior summary judgment briefing that the documents justify a ruling in their favor; and (2) strike the declaration of Harold R. Roberts (ECF 147-2) that Energy Fuels has filed with the Court and that was relied upon in briefing by both the Forest Service and Energy Fuels, Fed. Defs.' Reply at 5, ECF 155 (Jan. 29, 2015); EFR's MSJ at 14,

ECF 146-1; Roberts Decl. ¶¶ 8–9, ECF 147-2 (Nov. 19, 2014).

During summary judgment briefing, the Forest Service and Energy Fuels both asked the Court to rule for the Defendants on Claim 4 by relying in part on assertions about the content of two documents that the Defendants have refused to disclose to Plaintiffs or the Court. One of those documents is an appendix to the validity determination. The Defendants generically asserted in their summary judgment briefing that some or all of the environmental compliance and monitoring costs at issue were accounted for, in some manner, as "capital costs" in the validity determination, citing to a few pages in the validity determination that discusses capital costs. *See* Fed. Defs.' Mot. Summ. J. at 28, ECF 146-1 (Nov. 19, 2014) (citing AR 10501); EFR's Mot. Summ. J. at 13–14, ECF 147-1 (Nov. 19, 2014) ("EFR's MSJ") (citing AR Doc. 525:10499–502). Those pages of the validity determination cross-reference an appendix—Appendix C—that purportedly sets out the "specific costs" that backup the "capital costs" Defendants claim to be relevant. *See* AR Doc. 525 at 10500. Yet Appendix C was not produced to the Court or the Plaintiffs, preventing a proper evaluation of the Defendants' arguments about capital costs.

The second document is a spreadsheet that Energy Fuels sent the Forest Service to review in preparing the validity determination. *See* AR Doc 670. During the prior summary judgment briefing, Energy Fuels submitted an extra-record declaration from an Energy Fuels employee, Harold Roberts, asserting that this spreadsheet accounted for some of the disputed costs. *See* EFR's MSJ at 14; Roberts Decl. ¶¶ 8–9, ECF 147-2 (Nov. 19, 2014) (discussing a spreadsheet entitled "Canyon Mine Mineral Exam Economic

Study March 2012.xls"). The Forest Service in its reply briefing adopted the arguments that Energy Fuels made about this spreadsheet. *See* Fed. Defs.' Reply at 5, ECF 155 (Jan. 29, 2015). But the spreadsheet was not made available to Plaintiffs or the Court.

Both Appendix C and the "economic study" spreadsheet were in front of the Forest Service at the time it made its decision, *see* AR 525 at 10500 (revealing that Appendix C was part of the agency's validity exam); AR 670 (transmitting the spreadsheet to the Forest Service), and are therefore in the administrative record. *See Thompson v. U.S. Dep't of Labor*, 885 F.2d 551, 555 (9th Cir. 1989) ("The 'whole' administrative record … consists of all documents and materials directly or indirectly considered by agency decision-makers and includes evidence contrary to the agency's position."). The Defendants' justification for refusing to disclose these documents is that they contain confidential business information. That, however, is not a proper basis for withholding the documents. If they contain confidential business information, the remedy is not to withhold them from disclosure, but to disclose them subject to a protective order—especially given that Defendants have affirmatively relied on these documents in arguing their case. *See* Fed. R. Civ. P. 26(c). Plaintiffs have offered to stipulate to an amended protective order in this case so that these two documents may be disclosed to Plaintiffs and the Court without disclosing them publicly, but Defendants have declined.

Moreover, the Roberts declaration improperly attempted to put before the Court a description of Energy Fuels' claims about its internal cost calculations that was not before the Forest Service. Though the cost spreadsheet was provided to and considered by the Forest Service in preparing the validity determination, the company's post-hoc

description of the calculations in that spreadsheet was not before the Forest Service when the agency made the decision that is contested in this case, and that description is therefore not properly part of the administrative record. *See* Pls.' Combined Reply in Supp. Mot. Summ. J. at 9–10, ECF 151 (Dec. 19, 2014). Consistent with their prior request, *id*. at 9–10, Plaintiffs intend to move to strike the Roberts declaration.

Plaintiffs believe these disputes should be resolved before the Court rules on the merits and before the parties submit any additional summary judgment briefing. Plaintiffs accordingly request that the Court establish a two-part schedule that: (1) allows the parties to brief and the Court to resolve whether to order the production of the two disputed documents and strike the Roberts Declaration; and (2) only then allows the parties to supplement the existing summary judgment briefing, with the scope of the record before the Court properly established. To that end, Plaintiffs propose that the Court establish the following deadlines, based initially on the date that the Court enters a scheduling order in response to this joint status report:

Event	**Deadline**
Plaintiffs' motion to complete the record and strike H. Roberts' declaration (the "Motion")	14 days after service of the Court's scheduling order
Defendants' responses to the Motion	14 days after service of the Motion
Plaintiffs' reply in support of the Motion	7 days after service of Defendants' responses to the Motion
Plaintiffs' supplemental summary judgment brief	21 days after service of the Court's order disposing of the Motion

Defendants' supplemental summary judgment brief	21 days after service of Plaintiffs' supplemental summary judgment brief
Plaintiffs' reply in support of their summary judgment brief	14 days after service of Defendants' supplemental summary judgment brief

Plaintiffs are amenable to the page limitations proposed by the Federal Defendants, namely, adhering to limits set forth in Local Rule 7.2(e) for all forthcoming motions.

Plaintiffs disagree with Federal Defendants and EFR on the following issues: (1) whether confidential business information is a basis to withhold administrative record documents completely, or must they be made available for litigation subject to a protective order; (2) whether Defendants can withhold such documents but then rely on them in briefing; (3) the relevance and applicability of the Court's April 7, 2014 Order, ECF 112, assessing document withheld during discovery on the jurisdictional issue of final agency action; (4) whether the previously filed Harold Roberts declaration, which is in the Court's record at ECF 147-2, can now be the subject of a motion to strike; and (5) whether, in an administrative record review case, Energy Fuels can file any declarations pertaining to the merits of Plaintiffs' claim.

Forest Service's Position:

The Ninth Circuit remanded the case to this Court so that it can consider Plaintiffs' argument that based on the Forest Service's administrative determination of Energy Fuels' valid existing rights in mining claims, mining operations were improperly allowed to continue at Canyon Mine in violation of FLPMA. 906 F.3d 1155 at 1166-67 (9th Cir.

2018). The Forest Service believes that the Court should enter a briefing schedule to allow the parties to brief this issue and propose the following briefing schedule:

Event[2]	**Deadline**
Plaintiffs' motion for summary judgment	April 24, 2019
Federal Defendants' and Intervenor-Defendants cross motion for summary judgment and response to Plaintiffs' motion for summary judgment	May 22, 2019
Plaintiffs' reply in support of their motion summary judgment and response to Federal Defendants' and Intervenor-Defendants' cross motion for summary judgment	June 12, 2019
Federal Defendants and Intervernor-Defendants' reply in support of their cross motion for summary judgment	July 3, 2019

The Forest Service believes that now is not the appropriate time, and this Joint Status Report is not the appropriate document for the parties to provide substantive arguments regarding whether Plaintiffs are entitled documents that contain confidential business information and whether a declaration previously submitted in connection with summary judgment briefing should be stricken. In any event, motion practice on this collateral issue should not affect briefing on the merits of the Plaintiffs' claim that the Forest Service violated the terms of the FLPMA withdrawal.

The two documents that Plaintiffs seek to add to the administrative record were

[2] Federal Defendants believe that the Local Rule regarding length of motions, memoranda and objections should apply to this briefing schedule, *i.e.* motions and opening briefs not in excess of 17 pages and reply briefs not in excess of 11 pages. LRCiv. 7.2(e).

properly withheld because they contain confidential business information. The Court has previously considered and rejected Plaintiffs' efforts to obtain documents that were properly withheld on the basis of privilege, *see* ECF No. 112, and should not allow Plaintiffs to bring a successive claim to obtain material that they were on notice was withheld and could have sought previously. To the extent the Court allows Plaintiffs to again move to obtain privileged materials, the Forest Service will oppose Plaintiffs request to obtain those materials at that time.

Energy Fuels provided the declaration of Harold R. Roberts (ECF 147-2) in their cross motion for summary judgment on November 19, 2014. In their reply brief, Plaintiffs objected to the declaration on the basis that it is not part of the administrative record. ECF 151 at 9-10. Because there are no currently pending motions that that upon the Roberts declaration, any objection to the declaration is premature.

Energy Fuels' Position:

A. Summary Judgment Briefing

Energy Fuels agrees with the Forest Service's position regarding additional summary judgment briefing. Energy Fuel's position is that discovery was conducted and completed; the administrative record was finalized and lodged with the Court; the Court considered and addressed all of the Plaintiffs' objections and concerns regarding privileged documents and the administrative record; and the summary judgment briefing was completed. Energy Fuels agrees with the other Parties that an additional round of summary judgment briefing will allow the Parties to narrow and consolidate the briefing for the Court, address the decision by the Ninth Circuit, and update the legal citations and

arguments for the Court. Energy Fuels agrees with the schedule and page limits proposed by the Forest Service.

B. Administrative Record Documents

Energy Fuels disagrees with the Plaintiffs' request that Appendix C (Cost Information) to the Valid Existing Rights Determination ("Appendix C") and the Canyon Mine Mineral Exam Economics Study dated March 2012 ("2012 Study") be disclosed and added to the administrative record. Energy Fuels' position is that Appendix C and the 2012 Study contain confidential business information ("CBI") that is maintained as confidential by Energy Fuels, is not publicly available, is exempt from public disclosure, should not be disclosed to Plaintiffs, and should not be included in the public record. Energy Fuels has consistently taken this position regarding its CBI, Appendix C, and the 2012 Study since this lawsuit began in 2013. Specifically, Energy Fuels worked cooperatively with the Forest Service and Plaintiffs to insure that its CBI was not disclosed to the public or included in the administrative record. And while both Appendix C and the 2012 Study were before the Forest Service when it made its decision, the Parties agreed to keep those documents out of the administrative record because they contain CBI. In fact, this agreement was recognized by the Court in one of its discovery orders. *See* ECF 112 at 2 (". . . [Defendants] have agreed to release the [Valid Existing Rights Determination] in a redacted format, with the understanding that Plaintiffs' counsel will not challenge redactions that protect confidential business information. Doc. 110 at 7."). Plaintiffs' request for the disclosure of Appendix C and the 2012 Study should be rejected due to this agreement between the Parties and because the documents

themselves do not provide the specific information Plaintiffs seek.

Plaintiffs contend that Appendix C and the 2012 Study should be released and included in the administrative record because they were referenced in Energy Fuels' summary judgment briefing and the Declaration of Harold R. Roberts (ECF 147-2) ("Roberts Declaration"). Energy Fuels disagrees. Energy Fuels cited to the documents and provided the Roberts Declaration to explain what applicable costs noted by Plaintiffs in its summary judgment briefing were included in the analysis provided to the Forest Service and where they were included. Energy Fuels believes that the limited and specific citations were relevant and appropriate, were beneficial to the Court, did not disclose CBI or waive its CBI claim, and do not warrant the full disclosure of Appendix C and the 2012 Study and the CBI contained therein. Notwithstanding this position and to address Plaintiffs' specific concerns regarding the citations to Appendix C and the 2012 Study, Energy Fuels is willing to agree not to cite to Appendix C and the 2012 Study in the additional summary judgment briefing proposed by the Parties. Energy Fuels also will agree not to include citations to Appendix C and the 2012 Study in any declarations that it submits in support of its additional summary judgment briefing. Energy Fuels believes that this compromise will address Plaintiffs' specific concerns, protect the CBI contained in Appendix C and the 2012 Study, and allow the Parties to move to the merits. Energy Fuels is willing to brief the merits of its CBI claim regarding Appendix C and the 2012 Study or submit the documents for *in camera* review if the Court wants to assess Energy Fuels' CBI claim.

C. Motion to Strike

Energy Fuels' position is that the Court does not need to consider Plaintiffs' motion to strike the Roberts Declaration (ECF 147-2) until the additional summary judgment briefing proposed by the Parties is completed. As part of this additional briefing, Energy Fuels anticipates filing a revised declaration in support of its summary judgment briefing. Once this revised declaration is filed, Plaintiffs then can challenge and move to strike the declaration as appropriate pursuant to LRCiv 7.2(m), which sets forth the procedure for a party to move to strike and the Court to rule on such a motion. Energy Fuels does not believe there is any reason to deviate from the procedure set forth in LRCiv 7.2(m), especially since the Parties are submitting additional summary judgment briefing and Energy Fuels anticipates submitting a revised declaration that will render Plaintiffs' specific objection and motion moot.

Respectfully submitted this 15th day of March, 2019.

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA
PRESCOTT DIVISION

GRAND CANYON TRUST, *et al.*, Plaintiffs vs. MICHAEL WILLIAMS, *et al.*, Defendants, and ENERGY FUELS RESOURCES INC., *et al.*, Defendant-Intervenors.	Case No. 13-8045-DGC PLAINTIFFS' COMBINED REPLY IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND RESPONSE IN OPPOSITION TO DEFENDANTS' CROSS-MOTIONS FOR SUMMARY JUDGMENT ORAL ARGUMENT REQUESTED

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INTRODUCTION

The Forest Service asks this Court to find that it did not have *any* obligations under the National Environmental Policy Act (NEPA) or National Historic Preservation Act (NHPA) when it allowed, through its Valid Existing Right (VER) Determination, Energy Fuels Resources (EFR) to recommence mining activities at Canyon Mine after more than twenty years of closure and on lands withdrawn from operation of the Mining Law. This complete abdication of its statutory obligations should be rejected. Further, the Forest Service and EFR's inability to clearly demonstrate in the VER Determination or administrative record that it considered all relevant costs in assessing the Mine's profitability shows this agency action is also abitrary and capricious.

The Forest Service also makes troubling new arguments that it did not have any NHPA consultation obligations at the time of resumed mining. The agency now contends that, even if Plaintiffs prevail in this litigation, the Forest Service would allow mining to resume without any further NHPA consultation and NEPA compliance and not determine claim validity for Canyon Mine. This new position directly contradicts the Forest Service's own prior legal determination in its Mine Review that it did have NHPA consultation obligations under Section 800.13(b)(3) (albeit, as we have explained, that determination was deeply flawed). It also shows that the Forest Service has violated the good faith requirement of the NHPA in its dealings with the tribes. The Forest Service has failed to protect the environment and the traditional cultural properties in the area of Red Butte TCP despite knowledge of the adverse effects of the Canyon Mine. Accordingly, as demonstrated herein and in their opening brief, the Court should grant summary judgment on all of Plaintiffs' claims.

ARGUMENT

I. Standard of Review

The Forest Service is not entitled to a "highly deferential"[1] standard of review, as it contends. EFR Doc. 146-1 at 20. Here, the issues in dispute are predominantly legal

[1] The Ninth Circuit case cited by the Forest Service never used the quoted phrase "highly deferential," nor does it hold that there is a presumption in favor of finding agency action valid. *See Lands Council v. McNair*, 537 F.3d 981, 993 (9th Cir. 2008).

in nature, concerning the applicability of NEPA and NHPA. *See* 5 U.S.C. § 706 ("the reviewing court shall decide all relevant questions of law"); *California ex rel. Lockyer v. U.S. Dep't of Agric.*, 575 F.3d 999, 1011 (9th Cir. 2009) ("Ninth Circuit jurisprudence distinguishes between the level of deference afforded to agency decisions that are primarily legal in nature and that afforded to decisions that are factual."). Moreover, as Plaintiffs have argued (ECF Doc. 140-1 at 13), the Forest Service is not entitled to deference in interpreting NEPA or NHPA because it is not the agency charged with administering these statutes. The agency provided no response on this point.

Forest Service deference is particularly inappropriate given the agency's contradictory legal positions regarding its NHPA obligations,[2] and its claim that its employees had "layman's confusion about the applicable legal requirements as the process of resuming mining operations unfolded." ECF Doc. 146-1 at 28; AR Doc. 482 at 10333 ("This is a new process for us and we are learning as we go.").

II. Plaintiffs have Established Standing To Bring Each Of Their Claims

EFR -- but not the Forest Service -- asserts that Plaintiffs have not established Article III standing to challenge the VER Determination in Claims 1, 2 and 4. ECF Doc. 147-1 at 6-7. According to EFR, Plaintiffs have not provided evidence of injuries that were caused by the VER Determination, even if Plaintiffs have demonstrated injuries to their interests that are traceable to mining operations at Canyon Mine. *See id.* ("declarants do not mention the VER Determination or anything like that process").

In fact, Plaintiffs' concrete injuries to their environmental, cultural and procedural interests stem directly from the VER Determination and the agency's failure to comply with NEPA and the NHPA. ECF Doc. 140-1 at 13.[3] As detailed throughout this case, mining was prohibited at Canyon Mine under the Withdrawal until the Forest Service concluded that the Mine's claims contained valid existing rights, allowing

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[2] In the Mine Review, the Forest Service determined that the agency was obligated to consult with the tribes under 36 C.F.R. § 800.13(b)(3), AR Doc 533 at 10602-04, but now argues that it did not have any consultation obligations under NHPA at the time that mining resumed. ECF Doc. 146-1 at 32-35. It would not make sense to afford deference to either of these contradictory positions.

[3] Plaintiffs have supplemented their declarations to update Plaintiffs' standing. *See* Supplemental Decs. of Silver and Clark, filed herewith.

Canyon Mine mining to resume. The agency's non-compliance with NEPA and NHPA prevented Plaintiffs participation in environmental review and consultation processes.

The VER Determination's impact on Plaintiffs' concrete injuries is the same as the effect of the management plan at issue in *Alliance for Wild Rockies v. U.S. Dep't of Agric.*, _ F.3d _, 2014 WL 6480352 (9th Cir. Nov. 20, 2014). There, the Ninth Circuit held plaintiffs had standing to challenge a Forest Service's management plan that was connected to the helicopter flights that harmed plaintiffs' interests. *Id.* *5-7. Here, too, Plaintiffs' declarations firmly establish their injuries resulting from resumed mining operations and these harms are intimately connected to the Forest Service's VER Determination. *See* ECF Doc. 23, ¶¶ 7-9; ECF Doc. 24, ¶¶ 6-10; ECF Doc. 20, ¶¶ 11-16; ECF Doc. 22, ¶ 10; ECF Doc. 21.

Furthermore, for Claim 2, the challenged action is not the VER Determination, but the Forest Service's failure to conduct an NHPA consultation, and the Tribe has demonstrated injury in fact through declarations from tribal leaders identifying the religious and cultural harms caused by this failure. ECF Doc. 37-7 at 42-48; ECF Doc. 22; ECF Doc. 21; *see also* AR Doc. 121 at 3140-42. Furthermore, the Forest Service itself recognizes the Canyon Mine's harms on areas of cultural and religious significance to the Tribe in their brief (ECF Doc. 146-1 at 20), in the Mine Review (AR Doc. 533 at 10605, 10607, 10616-17; AR Doc. 535 at 10640), and in its "consultation initiation" letter to the Tribe. AR Doc. 539 at 10690-91; *see Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 778-79 (9th Cir. 2006) (tribe established standing where agencies' own report identified religious and cultural significance of affected area); *see also* ECF Doc. 86 at 6-7 (finding irreparable harm).

EFR's redressability argument also fails. *See* ECF Doc. 147-1 at 7; *see also* ECF Doc. 146-1 at 23, n.7. As Plaintiffs have demonstrated, the Withdrawal prohibits EFR from conducting mining activities at Canyon Mine. Thus, if the VER Determination is unlawful and set aside, there would be no mining activities at Canyon Mine that cause Plaintiffs' environmental and cultural injuries. *See Alliance for Wild Rockies*, 2014 WL

6480352, at *6 (finding causation and redressability satisfied because "flights were authorized by the Management Plan").

Moreover, had the Forest Service complied with NEPA and NHPA procedures and also considered all relevant costs, the agency may have reached a different validity conclusion, including requiring additional conservation measures or precluded mining altogether at Canyon Mine due the Withdrawal, thereby redressing Plaintiffs' injuries. *See Natural Res. Def. Council v. Jewell,* 749 F.3d 776, 783 (9th Cir. 2014) (en banc) (holding redressability established when compliance with environmental laws "*could* protect his concrete interests") (emphasis in original); *Pit River Tribe*, 469 F.3d at 779 ("the causation and redressability requirements are relaxed" for procedural injury); ECF Doc. 131 at 13-14 (finding Section 106 consultation "in this case might well have resulted in a legally enforceable MOA"); *see also* ECF Doc. 23, ¶ 11 (declarant Crumbo stating injuries would be redressed if agency ordered to comply with NEPA and NHPA); ECF Doc. 24, ¶ 19 (same); Supp. Silver Decl. ¶¶ 10-11; Supp. Clark Decl. ¶¶ 22-24.

EFR's redressability argument is based, partly, on the Forest Service's new assertion that if Plaintiffs prevail in this action, the Forest Service would "void or retract the VER Determination [] rather than reissue it after completing additional analysis or NHPA consultation." ECF Doc. 146-1 at 23 n.7. Not only is this assertion problematic for reasons described below, it ignore the fact that this Court has broad authority to issue an injunction ordering the agency to comply with its legal obligations and enjoining mining until NEPA and the NHPA are satisfied. *See Pit River Tribe*, 469 F.3d at 779. Therefore, the Court has the power to provide redress for Plaintiffs' claims.

III. The VER Determination Is Unlawful

A. The VER Determination Constitutes Final Agency Action

The issue of whether the Forest Service's VER Determination constitutes "final agency action" under the Administrative Procedure Act (APA) was directly at issue in the Forest Service's Partial Motion to Dismiss, fully briefed after Plaintiffs conducted discovery, and decided by the Court. Addressing the Motion "as a motion for summary judgment attacking the merits of Plaintiff's case" (ECF Doc. 131 at 3), the Court held

that "the VER Determination is an agency action that satisfies both prongs of the *Bennett* test" and thus "is a final agency action." *Id*. at 11.

Nonetheless, the Forest Service uses its cross-motion for summary judgment to ask the Court to "revisit" this jurisdictional issue. ECF Doc. 146-1 at 21. However, "when a court decides upon a rule of law, that decision should continue to govern the same issues in subsequent stages in the same case," to promote "the finality and efficiency of the judicial process." *Christianson v. Colt Industries*, 486 U.S. 800, 816 (1988). Courts should thus be "loathe" to revisit their own prior decisions absent "extraordinary circumstances," such as where the decision was "clearly erroneous" and would result in a "manifest injustice." *Id*. at 817; *see also Thomas v. Bible*, 983 F.2d 152, 155 (9th Cir. 1993). The Forest Service neither identifies these standards nor attempts to satisfy the applicable requirements.

In restating its argument, the Forest Service claims the Court adopted a "new approach" to final agency action and *Bennett*'s second prong. ECF Doc. 146-1 at 21. *Bennett* requires that an action "must be one by which 'rights or obligations have been determined,' or from which 'legal consequences will flow.'" *Bennett v. Spear*, 520 U.S. 154, 178 (1997); *see also Oregon Nat. Desert Ass'n v. U.S. Forest Serv. ("ONDA")*, 465 F.3d 977, 986 (9th Cir. 2006). Applying this standard, this Court ruled there is no question that the Forest Service "determined rights" at the Canyon Mine though the VER Determination, as that was its sole purpose. ECF Doc. 131 at 10 ("The VER Determination thus appears to come within the express language of *Bennett*"). The Court also found the VER Determination "allowed mining operations to resume under the original Plan of Operations" and despite the Withdrawal. *Id*. The Court thus did not employ a "new approach," as the agency now claims, but relied on established Supreme Court and Ninth Circuit precedent to consider whether the VER Determination was a practical or legal requirement. ECF Doc. 131 at 7.

Moreover, the Forest Service is wrong that the Ninth Circuit "narrowed the effect" of its *ONDA* decision in *Columbia Riverkeeper v U.S. Coast Guard*, 761 F.3d 1084 (9th Cir. 2014). *See* ECF Doc. 146-1 at 23. Rather, the Ninth Circuit confirmed

that courts do consider "*the practical effects* of an agency's decision." *Columbia Riverkeeper*, 761 F.3d at 1094-95 (emphasis added). In *Columbia Riverkeeper*, the Coast Guard and the applicable statutory scheme made clear that the Coast Guard's role was limited to providing the Federal Energy Regulatory Commission (FERC) with a "letter of recommendation." *Id*. at 1093-95. The court held this letter had neither a legal nor practical effect under the statutory scheme, and found that FERC provided the only relevant approval for the challenged gas facility and pipeline. *Id*. at 1093-95. Here, in contrast, the statutory and regulatory scheme requires a Forest Service determination that claims are valid before mining may resume. AR Doc. 525 at 10489.[4]

Moreover, the Court has ruled that an agency's failure to consult under NHPA Section 106 would be a final agency action and thus Claim 2 is proper under the APA. ECF Doc. 131 at 12-14. Thus, the Forest Service's argument that the VER Determination is not a final agency action has no bearing on the reviewability of Plaintiffs' NHPA claims. This Court correctly determined that the *Bennett* test was met for the failure to consult because (1) completion of the consultation would constitute the culmination of the agency's NHPA action with respect to the Canyon Mine, and (2) the process is intended to produce an MOA with legally enforceable effects. *Id.* at 13-14.

B. <u>The Forest Service Failed To Consider All Relevant Factors In Its VER Determination (Claim 4)</u>

1. <u>Claim 4 Is Reviewable Because There Is Law To Apply</u>

As its primary defense to Claim 4, the Forest Service argues this claim is unreviewable because VER determinations are completely discretionary and there is no law to apply. ECF Doc. 146-1 at 37-38. The agency states "it is well-settled that a plaintiff cannot bring a stand-alone" claim that a decision violated the "arbitrary and capricious" standard in 5 U.S.C. § 706(2). *Id*. at 37. Notwithstanding the agency's mistaken framing of the issue, there is law to apply and Claim 4 is justiciable.

[4] The Forest Service defiantly threatens that, if the VER Determination were set aside, it would not reissue the VER Determinaton. ECF Doc. 146-1 at 23, n.7. Absent the VER Determination, however, EFR would have no authority to mine because the public lands upon which Canyon Mine sits are withdrawn and unavailable for mining under the Mining Law absent a validity determination.

There is a presumption of judicial review under the APA. *Pinnacle Armour v. U.S.*, 648 F.3d 708, 718 (9th Cir. 2011). Claims are justiciable as long as there is some law to apply. *See Heckler v. Chaney,* 470 U.S. 821, 829 (1985). Conversely, 5 U.S.C. § 701(a)(2)'s "committed to agency discretion by law" language provides a "narrow exception to the presumption of judicial review of agency action under the APA [and] applies if the statute is drawn so that a court would have no meaningful standard against which to judge the agency's exercise of discretion. *Drakes Bay Oyster Co. v. Jewell,* 747 F.3d 1073, 1082 (9th Cir. 2014); *e.g., Or. Natural Resources Council v. Thomas*, 92 F.3d 792, 795 (9th Cir. 1996) (finding narrow exception applies when law includes "notwithstanding any other law" clause).

Here, the extensive statutory and regulatory scheme governing mining claims in withdrawn areas and validity determinations provide law for the Court to apply. Mining claims with "valid existing rights" are exempt from the effect of a FLPMA withdrawal. The meaning of valid existing rights – specifically, the prudent person test as supplemented by the marketability test -- has been the subject of significant legal interpretation, including from the Interior Board of Land Appeals (IBLA). *See infra.* The agencies have prepared manuals and handbooks that include procedures for issuing validity determinations. AR Docs. 374, 359. In short, there is substantial law to apply.

Moreover, the APA in 5 U.S.C. § 706(2) provides additional legal standards to review the VER Determination. As the Ninth Circuit held, "although 5 U.S.C. 701(a)(2) insulates from judicial review agency discretion where there is no law to apply, the APA itself commits final agency action to our review for 'abuse of discretion.' 5 U.S.C. § 706(2)(A)." *Pinnacle Armour*, 648 F.3d at 720. Indeed, this Court recently ruled that "[u]nder the APA, actions by the Secretary to withdraw land, like other agency actions, are valid if the agency considered the relevant factors and articulated a rational connection between the facts found and the choices made." *Yount v. Salazar*, 2014 WL 4904423, *19 (D. Ariz. Sept. 30, 2014).

The argument that there is no law to review the VER Determination fails. *See e.g.*, *Wilderness Society v. Dombeck*, 168 F.3d 367, 375-77 (9th Cir. 1999).

2. The VER Determination Failed To Include All Costs

The Forest Service was arbitrary and capricious and abused its discretion in issuing the VER Determination and determining Canyon Mine's profitability. *See* 5 U.S.C. § 706(2). Specifically, the agency failed to consider all relevant costs associated with complying with environmental and cultural laws, including monitoring and mitigation requirements. Nothing in the administrative record indicates the agency included these costs upon exempting the Mine from the Withdrawal's effects.

Neither the Forest Service nor EFR dispute that these types of costs are required components of a VER determination. As Plaintiffs demonstrated (ECF Doc. 140-1 at 15-16, 29-30), the law makes this requirement explicit.[5] BLM's Handbook for validity determinations, which the Forest Service employs (ECF Doc. 146-1 at 39), states that costs affecting profitability include "environmental and cultural permitting, mitigation, reclamation and rehabilitation costs." AR Doc. 359 at 6792. Yet, on its face, the VER Determination omitted these costs, while clearly including other types of costs that are similarly required by BLM's Handbook, such as capital costs, labor costs, transportation costs and milling costs. *See* AR Doc. 525 at 10500-02.

Nonetheless, the Forest Service argues that the omitted costs were, in fact, included as reclamation costs ($450,000) and capital contingency costs ($1.7 million), although they failed to detail where and exactly how they were accounted for. ECF Doc. 146-1 at 39. The $450,000 for reclamation covers activities that will occur after mining concludes and are associated exclusively with removing mining equipment and structures and returning the surface to its original state. *See* AR Doc. 418 at 7677-78; *see also* AR Docs. 650, 667. Nothing in the record suggests that the $450,000 reclamation bond will cover costs of groundwater monitoring, mitigating radionuclide contamination, or measures to protect cultural and wildlife resources.

[5] *See Independence Mining v. Babbitt*, 105 F.3d 502, 506-07 (9th Cir. 1997); *Clouser v. Espy*, 42 F.3d 1522, 1530 (9th Cir. 1994); *Barrick Goldstrike Mines v. Babbitt,* 1994 WL 836324, *4 (D. Nev. Jan. 14, 1994); *Great Basin Mine Watch*, 146 IBLA 248, 256 (1999); *Moon Mining v. HECLA Mining*, 161 IBLA 334, 362 (2004).

The Forest Service and EFR attempt to portray the VER Determination's "Contingency on Total Capital Costs" as a catch-all fund that could cover any and all costs not explicitly identified. ECF Doc. 146-1 at 39; ECF Doc. 147-1 at 19. The record does not support this argument. By definition, a "capital" contingency applies to cost overruns related to capital development and equipment. None of the identified capital costs – not those in narrative description of capital costs (AR Doc. 525 at 10500) or the line-items for capital development and equipment (*id*. at 10500-01) -- include the missing costs. Further, the capital contingency is calculated as 10% of identified capital costs. AR Doc. 525 at 10501. Consequently, nothing in the record demonstrates that the $1.7 million contingency was allocated to cover environment or cultural-related costs, in addition to cost overruns on true capital costs. Indeed, the record provides no evidence that the Forest Service evaluated whether the capital contingency amount is adequate for mitigation and monitoring. Lastly, the costs of mitigation and monitoring are not unknown "contingencies," but were known requirements.[6]

EFR next contends that the missing costs were included within certain specific capital costs. ECF Doc. 147-1 at 19. Yet, the VER Determination itself provides no support for this contention, as none of the capital costs capture, for example, mitigation actions or ongoing monitoring. The VER Determination states that specific capital costs are contained in Appendix C. AR Doc. 525 at 10500. However, Appendix C was omitted from the record. EFR implicitly concedes that the VER Determination and record are wanting by submitting the extra-record declaration of Harold Roberts to address this deficiency. ECF Doc. 147-2. As an initial matter, the Court cannot consider this declaration because it is not part of the Forest Service's administrative record. *See*

[6] EFR states that wildlife measures were imposed after the VER Determination. ECF Doc. 147-1 at 19, n.23. EFR is wrong. In a letter sent after the VER Determination, the Forest Service reminded EFR of a pre-existing requirement that the company had not undertaken. AR Doc. 626. During a January-February 2012 consultation process on the Mine, measures to address the California condor were identified by the Forest Service and FWS (*see* AR Doc. 507 at 10433-34; AR Doc. 501 at 10415-16), and these were the same measures imposed during tree-cutting along a powerline corridor in the fall of 2012. AR Doc. 582. The condor measures and related costs were known before the VER Determination.

e.g., Camp v. Pitts, 411 U.S. 138, 142 (1973); *Thompson v. U.S. Dept. of Labor*, 885 F.2d 551, 555 (9th Cir. 1989). EFR did not submit a motion to supplement the record prior to filing the declaration, and the time for seeking permission to submit extra-record documents has long since past. *See* ECF Doc. 93. In any case, like the VER Determination and the record, the Roberts declaration comes up short. It relies on a cover letter that purportedly included several spreadsheets (AR Doc. 670 at 12426), but those spreadsheets are also not in the administrative record. ECF Doc. 147-2 at ¶ 8-11.[7] At bottom, there is no record evidence that supports Mr. Roberts' assertions that the costs relating groundwater monitoring and wildlife mitigation were considered.

In addition to claiming the aforementioned costs were actually included, the Forest Service concurrently proclaims that environmental costs are "too speculative…to include in a 'prudent man' analysis." ECF Doc. 146-1 at 39; ECF Doc. 147-1 at 19-20 (EFR making same argument).[8] The record belies the agency's suggestion that compliance with environmental and cultural laws, including monitoring and mitigation actions, are unknown and that costs cannot reasonably be determined. First, one of the reasons that the Forest Service was required to undertake a full Section 106 consultation process *prior* to the VER Determination was to determine the costs of the mitigation measures, which could have affected the profitability analysis. ECF Doc. 140-1 at 32-33. Second, there is also nothing speculative about the current requirement to monitor three Grand Canyon springs every six months and, because this monitoring had been done previously (ECF Doc. 99 at 4-5), a cost estimate could be provided. *See* AR Doc. 3 at 588; AR Doc. 6 at 924. Third, the Forest Service specifically identified "the construction of other groundwater monitoring wells[]" to mitigate radioactive contamination. AR Doc. 6 at 924. This mitigation action, therefore, is not hypothetical,

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[7] If this declaration is considered nonetheless, Plaintiffs request that the Court order EFR to release the materials referenced in the declaration, including "Canyon Mine Mineral Exam Economic Study March 2012.xls" and Appendix C to the VER Determination, and if that information is not self explanatory, allow Plaintiffs to depose Mr. Roberts to gain a full understanding of his interpretation of the documents the Forest Service omitted from the record and to file a sur-reply on this issue.

[8] Here, the Forest Service refers only to the "prudent person" test, inexplicably ignoring the marketability test and its profitability requirement. ECF Doc. 146-1 at 39.

but expressly contemplated. And because a prior monitoring well was constructed around Canyon Mine (AR Doc. 3 at 530 & AR Doc. 6 at 924) and characterized as "expensive" (AR Doc. 6 at 924), the cost of monitoring wells is known.

Moreover, the record contradicts the agency and EFR's claim that groundwater impacts – either contamination or disturbing groundwater flows – are too speculative. ECF Doc. 146-1 at 39; ECF Doc. 147-1 at 19. The Forest Service required the monitoring of springs and other radionuclide monitoring because of this impact. AR Doc. 3 at 527, 530, 588. The Court previously ruled that the Mine will likely cause Plaintiffs irreparable harm, including "because the mineshaft will drain perched aquifers and degrade regional springs." ECF Doc. 86 at 5-6. The Canyon Mine's boreholes and shaft construction have impacted groundwater, both in terms of elevated uranium concentrations and draining perched aquifers. AR Doc. 430 at 8334, 8335; *see also* ECF Doc. 63-1, ¶¶ 4, 7. The USGS reported "elevated uranium concentrations" at Canyon Mine (AR Doc. 430 at 8334, 8335), and that "[f]ifteen springs and 5 wells in the region contain concentrations of dissolved uranium that exceed the U.S. Environmental Protection Agency maximum contaminant level for drinking water *and are related to mining processes*." AR Doc. 430 at 8345 (emphasis added). In sum, the need for monitoring and mitigation is not speculative, and the costs can be determined. The Forest Service had no basis to ignore these legally-required costs.

The Forest Service's failure to include these mandatory costs is significant because, had they been considered, the Forest Service may have reached a different outcome in the VER Determination. EFR responds by claiming "the Mine is very profitable" and "could withstand a drastic increase in costs (or decrease in uranium price)." ECF Doc. 146-1 at 18. Yet, EFR's argument is belied by the fact that the Mine was closed from 1992 though April 2013 and again in November 2013 because it was not profitable. ECF Doc. 96-1 at 3. Thus, even without including the required environmental and cultural costs, the Mine's profitability is questionable at best.

C. The Forest Service Failed To Comply With NEPA When It Prepared The VER Determination (Claim 1)

1. The VER Determination Is A Major Federal Action

"The VER determination is mandatory for lands that are withdrawn." 65 Fed. Reg. 69,998, 70,026 (Nov. 21, 2000). Responding to doubts raised by this Court, Plaintiffs' opening brief explained that the Forest Service must *determine* that claims are valid before mining activities may occur on public lands withdrawn from the Mining Law. ECF Doc. 140-1 at 24-26. The Bureau of Land Management has the same obligation on BLM-lands, as the agency explained:

> One commenter asked, concerning VER examinations, how can anyone but the miner decide if a deposit is economically feasible? The law has long been well-established that determinations of VER, including whether a valuable mineral deposit has been discovered are not subjective decisions to be made by the miner. BLM mineral examiners are geologists and mining engineers who are trained in sampling, interpreting, and evaluating mineral deposits to determine whether or not, in their professional opinion, a discovery of a valuable mineral has been made.

65 Fed. Reg. at 70,026; *U.S. v. Martinek*, 166 IBLA 347, 352 (2005) ("The burden is on the Department to determine the existence of valid rights in the land so withdrawn").

In their response briefs, neither the Forest Service nor EFR disagree that the Withdrawal's "subject to valid existing rights" language requires an agency finding on claim validity. In fact, the Forest Service's brief explicitly concedes that the agency is obligated to make this finding, stating "a VER Determination would certainly be required for a new Plan on an existing mining claim." ECF Doc. 146-1 at 26; *id*. at 28 ("[T]he Forest Service conducts VER Determinations when they are required"). Putting aside the agency's proffered distinction between new mines and mines with previously-approved plans of operations, the Forest Service makes clear in no uncertain terms that the Withdrawal requires land management agencies to determine claim validity.

The Forest Service's primary argument against 'major federal action' is that the VER Determination was unnecessary despite the Withdrawal because the agency approved a plan of operations for Canyon Mine in 1986. Doc. 146-1 at 24. Plaintiffs refuted this contention in their opening brief, arguing:

-Forest Service mining regulations (36 C.F.R. §§ 228 *et seq.*) applicable to mining plans of operations do not require the agency to assess claim validity;

-in fact, the Forest Service did not determine claim validity at Canyon Mine in 1986 when it approved a plan of operations;

-the agency's Manual distinguishes between plan of operations approvals and validity determinations as two distinct agency actions; and,

-the law requires an agency finding of claim validity at the time of a withdrawal.

Doc. 140-1 at 26, 28-29. The Forest Service's response brief completely ignores these dispositive defects in its argument and simply restates its reliance on its 1986 approval. The 1986 approval, however, provides no exception to the Withdrawal's effect.[9]

As in prior briefing, the Forest Service cites BLM's regulation at 43 C.F.R. § 3809.100. ECF Doc. 146-1 at 26. During this litigation, the agency has interpreted this provision to mean that a validity determination is unnecessary for a mine with a plan of operations that was approved prior to a withdrawal. However, even though Canyon Mine had an approved plan of operations, the Forest Service *did issue* the VER Determination for Canyon Mine, and thus rejected the regulatory interpretation it now offers. This is likely because the BLM regulation does not say what government lawyers argue in litigation. The provision confirms that BLM will not approve a new plan of operations in a withdrawn area absent a validity determination (43 C.F.R. § 3809.100(a)), but does not apply to the scenario at Canyon Mine.

Indeed, the regulatory history of this provision provides that "[t]he VER determination is mandatory for lands that are withdrawn" (65 Fed. Reg. at 70,025-26), and does not suggest that mines with approved plans of operations are exempt from a withdrawal or the requirement to determine claim validity in a withdrawn area. The Forest Service's litigating position requires the Court to rewrite the Withdrawal so it reads: the Withdrawal is 'subject to mines with approved plans of operations.' However, the plain language of the Withdrawal -- and FLPMA's authorization of

[9] The Forest Service notes that the Withdrawal's EIS contemplated mining at Canyon Mine. ECF Doc. 146-1 at 26. But as Plaintiffs have explained, that EIS analyzed, as NEPA requires, reasonably foreseeable activities, but expressly warned that its analysis did not presuppose claim validity at Canyon Mine, which is to "occur[] independent[ly.]" AR Doc. 445 at 8648.

withdrawals -- states it is subject to valid existing rights, not previously approved plans of operations. AR Doc. 481 at 10310; 43 U.S.C. § 1701 note, Sec. 701(h).

EFR makes a related argument that the Withdrawal applies exclusively to *new* mining claims. ECF Doc. 147-1 at 9. This overstated contention has no support.[10] While a withdrawal prohibits new claims, it also impacts existing claims that lack valid existing rights. *See* 65 Fed. Reg. at 70,026 ("[W]here land is closed to location and entry under the mining laws, *subsequent to the location of a mining claim*, the claimant must establish the discovery of a valuable mineral deposit at the time of the withdrawal, as well as the date of the hearing") (emphasis added).[11] The VER Determination itself rejects EFR's argument, stating "[i]t is Forest Service policy (FSM 2803.5) to only allow operations *on mining claims* within a withdrawal that have valid existing rights (VER)." AR Doc. 525 at 10486 (emphasis added). The Forest Service similarly informed another mining company -- Vane Minerals -- that its existing claims required a validity determination before exploration activities can occur. ECF Doc. 140-9 at 1.[12]

Moreover, EFR misrepresents Plaintiffs' argument concerning the Withdrawal's effect. Plaintiffs do not contend, as EFR suggests, that the "Withdrawal automatically prohibited all mining within the withdrawn area" nor have Plaintiffs claimed that the Withdrawal "invalidated EFR's mining claims." Doc. 147-1 at 8. Rather, the Withdrawal prohibits new mining claims and requires valid existing rights determinations for existing claims. *See* ECF Doc. 140-1 at 23-24; *see also* 65 Fed. Reg. at 70,025 (BLM's mining regulations confirming that "operations are allowable in areas segregated or withdrawn from the mining laws *only to the extent that* a person has valid

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[10] EFR's claim that the Withdrawal is inapplicable to existing mining claims also would render the "subject to valid existing rights" language without effect. The Withdrawal's prohibition cannot be limited to only new claims because claims that did not exist at time of a withdrawal will never have valid existing rights.

[11] BLM's website also explains: "[h]olders of mining claims… located within lands *later withdrawn* from mineral entry must prove their right to continue to occupy and use the land for mining purposes." www.blm.gov/wo/st/en/info/regulations/mining_claims.html.

[12] *See also Yount*, 2014 WL 4904423, at *5 (confirming prior holding "that NEI and NMA had shown Article III standing because the Withdrawal imposed expensive and years-long examination processes on their members and reduced the value of *existing mining claims* and claim investments") (emphasis added).

existing rights to proceed") (emphasis added).[13] And, contrary to EFR's characterization, the Withdrawal did not "invalidate" the mining claims at Canyon Mine, but simply required the Forest Service to determine whether the Mine's two claims contain valid existing rights in order for EFR to resume mining operations.

Citing the Forest Service's Manual, EFR argues validity is not required on mining claims, "even in the face of a withdrawal." ECF Doc. 147-1 at 10-11. The relied-upon statement from the Manual (AR Doc. 371 at 7280 (§ 2811.5)), however, applies only to lands that are open and are not subject to a withdrawal. Indeed, subsequent provisions in the same Manual provide:

> The use of validity determinations should be limited to situations where valid existing rights must be verified where the lands in question have been withdrawn from mineral entry.

AR Doc. 371 at 7310. The cases EFR cites do not articulate a different interpretation.[14]

The Forest Service and EFR contend, again, that a VER determination is part of a claim contest, which they characterize as an "enforcement action." Doc. 146-1 at 23-24; Doc. 147-1 at 8, 12 (VER determinations evidence for determining whether to "bring a contest claim"). Plaintiffs do not dispute that a validity determination may also be a component in claim "contests," but the VER Determination at issue in *this* case never involved a claim contest. The VER Determination for Canyon Mine was prepared instead "due to the Withdrawal." *See* AR Doc. 525 at 10489.

Even though the VER Determination allowed Canyon Mine to resume operations despite the Withdrawal and after 20 years of closure, the Forest Service contends this

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[13] Plaintiffs agree that "the Mining Law's intent [is] to promote mining" (ECF Doc. 147-1 at 10), but note the Withdrawal's purpose was to forego this Mining Law intent within the 1,000,000 acres of public lands surrounding Grand Canyon National Park.

[14] EFR makes a similar error when arguing that a valid claim is obtained merely "by performing the location and entry steps." *See* ECF Doc. 147-1 at 9 & n.7 (citing and quoting Forest Service Manual §2811.5). The same manual EFR cites makes clear that a "discovery" is required for claim to be valid. AR Doc. 371 at 7279 ("The general mining laws impose certain obligations on a claimant who wishes to take advantage of the privileges those laws provide. A claimant must: 1. Discover a valuable deposit (FSM 2815.1, para. 1) of a locatable mineral in federally owned public domain land open to the operation of the mining laws. *Satisfaction of other requirements of the 1872 act does not make a claim valid absent a discovery of a valuable deposit* (30 U.S.C. 21-54).") (emphasis added).

agency action did not change the status quo and thus did not trigger NEPA. *See* ECF Doc. 146-1 at 34. The agency's reliance on *Nat'l Wildlife Found. v. Espy* for this proposition is misplaced. In *Espy*, the court ruled that a transfer of property from federal to private ownership did not change ongoing and continuous grazing activities. 45 F.3d 1337, 1344, 1340 (9th Cir. 1995). *Espy* is not analogous here, however, because the VER Determination did, in fact, change the status quo, both from a regulatory perspective and on-the-ground. The status quo prior to the VER Determination was no mining and the Withdrawal, which prohibited mining absent a determination of valid existing rights. 65 Fed. Reg. at 70,026; AR Doc. 525 at 10489.

Consequently, the Ninth Circuit's ruling in *Pit River Tribe* controls. There, the court distinguished *Espy* on the ground that the agency's action -- extending geothermal leases -- was required before the project could proceed. 469 F.3d at 784. Several other courts have distinguished *Espy* because an agency action changed the status quo. For instance, as cited in Plaintiffs' opening brief, the court in *Humane Soc'y v. Johanns* held an agency's new interim regulations were necessary to allow previously-occurring activities to continue and thus NEPA applied. 520 F.Supp.2d 8, 28-29 (D.D.C. 2007). The *Humane Soc'y* court explained that the agency action provided a "new regulatory structure both in content … and in regulatory authority." *Id.* at 30. This line of cases demonstrates that NEPA compliance may be avoided where, unlike here, the activities would continue regardless of the federal action taken.

2. <u>The Forest Service Has Meaningful Discretion</u>

While the Forest Service was legally required to evaluate claim validity due to the Withdrawal and consider environment and cultural resource costs, the Forest Service has discretion and is free to use its judgment in deciding how to value expected costs and revenues. *Independence Mining*, 105 F.3d at 509; *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin. ("NHTSA")*, 538 F.3d 1172, 1195 (9th Cir. 2008) ("The EPCA clearly requires the agency to consider these four factors, but it gives NHTSA discretion to decide how to balance the statutory factors"). Under the prudent-person test and marketability test, the Forest Service does not have to accept a

company's profit and cost projections, but has the discretionary authority to scrutinize which exact costs are to be included and determine how such costs are valued. *See* 65 Fed. Reg. at 70,026; *Martinek*, 166 IBLA at 352, 406, 408, 410 (describing factors where agency exercised discretion, including methods of pricing relevant minerals, and determining "extent of resource" and quality of minerals). The Handbook for validity determinations identifies factors where agency discretion is used:

> -determining mining methods and whether a mining "plan is operationally viable," agency "may … adjust or modify any component to improve efficiency, recovery of valuable minerals, savings on reclamation and so forth" AR Doc. 374 at 7435;
>
> -establishing resource values: "[y]our choice of method should be appropriate to the situation, recognize geologic boundaries" *id.* at 7434;
>
> -choosing method for estimating costs, involving "an iterative process" and multiple iterations "to provide a sufficient level of confidence." *Id.* at 7436-37.

Thus, the validity test is not a routine or ministerial act, but rather "complex" and "very fact-based" (65 Fed. Reg. at 70,025), wherein the Forest Service has meaningful discretion over the VER Determination's outcome.

This discretion extends to costs associated with protecting environmental and cultural resources. The courts and the IBLA have recognized that "the costs of compliance with any environmental and reclamation laws" and implementing conservation measures to address harm to the environment and cultural resources must be included when determining profitability. *Independence Mining*, 105 F.3d at 506-07; *Espy*, 42 F.3d at 1530; *Great Basin Mine Watch*, 146 IBLA at 256; *Moon Mining*, 161 IBLA at 362. In *Barrick Goldstrike Mine*, the court recognized how environmental costs can impact claim validity: "if this administration chooses to enforce the Endangered Species Act with more vigor than prior administrations, mitigation costs for the protection of threatened or endangered species will be highly relevant to the value of the deposits." 1994 WL 836324, at *4-5. Accordingly, the Forest Service has discretionary authority to meaningfully consider impacts to groundwater, wildlife, and cultural resources, as well as alternative methods of mitigating impacts and protecting these resources, which, in turn, could affect the outcome of a VER determination. *See*

Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 372 (1989); *NHTSA*, 538 F.3d at 1213 (finding agency could act "on whatever information might be contained in an EIS").

The Forest Service and EFR respond by characterizing VER determinations as a ministerial act. ECF Doc. 146-1 at 29-30; ECF Doc. 147-1 at 12.[15] However, the relied-upon cases involved a different type of mining decision – a decision to patent a claim. Notably, when specifically addressing a validity determination, the Ninth Circuit ruled:

> The Secretary's validity determination requires *considerable judgment and discretion to evaluate and assess the results of the mineral examination*, and to ultimately conclude whether the statutory requirement of a "valuable discovery" has been met.

Independence Mining, 105 F.3d at 509 (emphasis added). The court further noted:

> IMC [the plaintiff] argues that the validity determination itself is non-discretionary because it involves an objective test. In doing so, IMC confuses two different concepts. Specifically, merely because a task involves an 'objective' standard of review does not mean that it is a ministerial act.

Id. at 509, n.8.[16] As one court held, "[t]his [validity] determination is clearly an exercise of the Secretary's discretion; and therefore it cannot be ministerial." *Barrick Goldstrike Mines* 1994 WL 836324, at *4.

Ignoring the Ninth Circuit's ruling in *Independence Mining*, the agency cites a district court opinion in *Wilderness Soc'y v. Robertson*, 824 F.Supp. 947, 953 (D. Mont. 1993). ECF Doc. 146-1 at 29. In addition to having no precedential value and predating *Independence Mining*, Plaintiffs respectfully submit that *Wilderness Soc'y* was wrongly decided. As detailed above, determining claim validity is a discretionary agency action that includes consideration of environmental compliance costs. Moreover, the *Wilderness Soc'y* court relied exclusively for its conclusion on a Supreme Court case, *Wilbur v. Krushnic*, 280 U.S. 306, 318-19 (1929), which found that issuance of a

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[15] In contrast to its argument here that a validity determination is a ministerial act, the Forest Service argues in defense to Claim 4 that a VER determination is an action committed to agency discretion. *See* ECF Doc. 146-1 at 37-38.

[16] Citing the Motion to Dismiss transcript, the Forest Service highlights a statement made by counsel for the Havasupai Tribe proclaiming that a VER determination is an "objective inquiry." ECF Doc. 146-1 at 30. Merely because claim validity is based on "an 'objective' standard does not mean that it is a ministerial act." *Independence Mining*, 105 F.3d at 509 n. 8.

mineral patent is a ministerial agency action. As noted above, Plaintiffs are not challenging a mineral patent and the Canyon Mine VER Determination was not part of a mineral patent process. Another case the Forest Service cites (ECF Doc. 146-1 at 12) -- *S. Dakota v. Andrus*, 614 F.2d 1190, 1193 (8th Cir. 1980) -- also involved a patent and relied on *Wilbur v. Krushnic*.[17] As *Independence Mining* noted in rejecting *S. Dakota*, "issuance of a mineral patent was only ministerial to the extent the [patent] application satisfied the requirements of the statute," which includes the discretionary finding as to whether claims contain valid existing rights. *Independence Mining,* 105 F.3d at 508.

3. <u>The Mine, As Authorized By The VER Determination, May Result In Significant Impacts</u>

Notably, neither the Forest Service nor EFR dispute Plaintiffs' argument (ECF Doc. 140-1 at 31-34) that Canyon Mine, as authorized by the VER Determination, may result in significant impacts to the environment and cultural resources. Instead, the Forest Service claims that, if the VER Determination is a major federal action, a new NEPA analysis is not necessary because the 1986 EIS provided a sufficient review. ECF Doc. 146-1 at 30-32. As an initial matter, this *post hoc* litigation position does not respond to the legal question of whether the VER Determination required NEPA compliance because it is a major federal action with significant impacts. And, in any case, nothing in the record indicates the agency determined that NEPA for the VER Determination was satisfied based on the 1986 EIS, as the agency now argues.

To the extent NEPA permits the Forest Service to reference the 1986 EIS in evaluating the VER Determination (*see e.g.*, 40 C.F.R. § 1502.20, § 1502.21), the 1986 EIS is not sufficient. Since 1986, there is new data, information and legal requirements, including, evidence of groundwater contamination, the re-establishment of a California condor population, newly-designated status for Red Butte as a cultural resource, and new management prescriptions in the revised Kaibab National Forest land use plan. *See e.g.*, AR Doc. 430 at 8334, 8335 (reporting results from late 1980s groundwater

[17] *S. Dakota* is not applicable here also because it addressed the effect of a mineral patent in an area that had not been withdrawn, such that mining could occur with or without a mineral patent. *S. Dakota*, 614 F.2d at 1194 ("the issuance of a mineral patent is not a precondition which enables a party to begin mining operations").

monitoring showing "elevated uranium concentrations" in Canyon Mine well). Further, NEPA requires the agency to consider Canyon Mine's impacts together with the impacts of other mining operations approved since the 1986 plan of operations, as part of a cumulative impact analysis. *See* 40 C.F.R. § 1508.27(b)(7). None of this new information was addressed in the 1986 EIS. The 1986 EIS also did not consider any of the relevant environmental information, reports, or analysis related to the 2012 Withdrawal, wherein the Department of Interior concluded that the area where Canyon Mine sits should be precluded from mining to protect the natural resources surrounding Grand Canyon National Park. Indeed, since 1986, the Forest Service required EFR to update and increase the reclamation bond for Canyon Mine (AR Docs. 650, 667), and state regulations recently required the installation of a new liner in the wastewater pit. AR Doc. 533 at 10598.[18] Thus, even if the 1986 EIS could provide a starting point under NEPA, additional analysis and public comment will be required.[19]

IV. Collateral Estoppel Does Not Apply To Plaintiffs' NHPA Claims

EFR makes the meritless argument, which the Forest Service does not join, that Plaintiffs' NHPA claims are barred by collateral estoppel. ECF Doc. 147-1 at 7-8. Collateral estoppel, also known as "issue preclusion," bars "successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment." *Taylor v. Sturgell*, 553 U.S. 880, 892 (2008). This doctrine has no application here because the issues of fact or law in this proceeding were not previous previously litigated. Plaintiffs challenge the Forest Service's failure to conduct a full Section 106 consultation prior to allowing mining activity to resume, which is conduct that occurred approximately twenty years after the prior Canyon Mine litigation concluded. *See Havasupai Tribe v. Robertson*, 943 F.2d 32 (9th Cir. 1991).

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[18] The Forest Service states the 1986 EIS prepared in connection with its approval of a plan of operations was found adequate. ECF Doc. 146-1 at 31. However, Plaintiffs are not challenging that EIS, but instead the Forest Service's failure to comply with NEPA in connection with the VER Determination.

[19] The agency notes that it prepared the 2012 Mine Review. ECF Doc. 146-1 at 31. However, that review, which was not prepared in connection with the VER Determination, was an internal agency document and thus the public did not get an opportunity to review or comment. *See Ctr. for Biological Diversity*, 538 F.3d at 1185.

The Court already rejected a nearly identical "res judicata" argument offered in the Forest Service's Motion to Dismiss, and the Court's reasoning is equally applicable here. ECF Doc. 131 at 14.

V. The Forest Service Failed to Consult Under NHPA

Plaintiffs' Second Claim is that the Forest Service violated NHPA by failing to undertake a Section 106 consultation prior to conducting the VER Determination. The Forest Service concedes that "mining activities would adversely affect Red Butte TCP." ECF No. 146-1 at 20. Nevertheless, the Forest Service now takes the position that it did not have *any* Section 106 consultation obligations in connection with the VER Determination. ECF Doc. 145-1 at 32 ("The Forest Service Was Not Required to Consult Under Section 106 of the NHPA for the VER Determination"). Additionally, the Forest Service states that even if the VER Determination were invalidated, it would allow mining to go forward without conducting any further NHPA consultation. *Id.* at 23 n.7. This complete abdication of the agency's NHPA obligations must be rejected.

A. The Forest Service Did Have Section 106 Consultation Obligations

The Forest Service's new position that it was not obligated to consult under Section 106 is directly contradicted by the Forest Service's own prior legal analysis and conduct. The Forest Service expressly determined in the Mine Review that it did have obligations under Section 106 in connection with the resumption of mining activity, albeit under the more abbreviated requirements of Section 800.13(b)(3). AR Doc 533 at 10602-04. The Forest Service also sent letters to the tribes and the ACHP purporting to "initiate" the NHPA consultation process. AR Doc. 531 at 10544; AR Doc 539 at 10690. The Forest Service's inconsistent legal positions show that the agency has failed to understand its NHPA obligations and has acted arbitrarily and capriciously.[20]

[20] The Forest Service's newly asserted position that it did not have any Section 106 consultation obligations in connection with the resumption of mining activity, and that it would refuse to engage in further consultation even if the VER Determination were invalidated (ECF Doc. 146-1 at 23 n.7, 32-35), shows that the Forest Service's prior representations to the Tribe regarding NHPA consultation were false. *See, e.g.,* AR Doc 539 at 10690 ("The Kaibab National Forest would like to enter into government-to-government consultation with you pursuant to 36 CFR 800.13(b) of the [NHPA]."). This failure to consult with the Tribe in good faith is itself a violation of the agency's obligations under NHPA. *See* 36 C.F.R. §§ 800.2(c)(ii), 800.3(f)(2), 800.4(b)(1)

The Forest Service's brief also shows a fundamental misunderstanding about when its Section 106 obligations arise. The Forest Service and EFR both argue that the VER Determination did not "trigger" the Forest Service's obligation to consult under Section 106. ECF Doc. 146-1 at 12-13, 33; ECF Doc. 147-1 at 12-14. But it is well established that NHPA imposes a continuing obligation on agencies to preserve historic properties. ECF Doc. 140-1 at 35-36 n.17, 39. As this Court has already recognized, the case law establishes that an agency's NHPA obligations arise when the "Federal agency has opportunity to exercise authority at any stage of an undertaking where alterations might be made to modify its impact on historic preservation goals." ECF Doc. 131 at 13.[21] It is clear that at the time of the VER Determination, the Forest Service did have an opportunity to exercise authority to modify the Canyon Mine's impact on historic preservation goals, as is evident from its own statements in the Mine Review that "*no modification or amendment* to the existing Plan of Operations is *necessary*." AR Doc. 533 at 10592 (emphasis added); ECF Doc. 140-1 at 39. This opportunity for modifications is also evident from the Forest Service's statements to the tribes that it sought to identify potential "mitigation measures" and draft an MOU memorializing these measures. The Forest Service's NHPA obligations were thus "triggered" at the time the Forest Service learned that EFR proposed to restart mining operations.

(requiring that agencies make a "reasonable and good faith efforts" during consultation); *see also Pueblo of Sandia v. U.S.*, 50 F.3d 856, 862 (10th Cir. 1995) (finding that the Forest Service "failed to make the requisite good faith effort" under NHPA by withholding information regarding traditional cultural properties from the SHPO during the consultation process). This "good faith" requirement is reinforced by the obligations under the NHPA regulations that "[c]onsultation with Indian tribes should be conducted in a sensitive manner and respectful of tribal sovereignty" and "must recognize the government-to-government relationship between the Federal Government and Indian tribes." 36 C.F.R. §§ 800.2(c)(ii)(B), (C). Moreover, it is well-established that consultations must be undertaken in a manner consistent with the fiduciary duty that federal agencies owe Indian tribes. *See Pit River Tribe*, 469 F.3d at 788; *Quechan Tribe of Fort Yuma Indian Reservation v. U.S. Dep't of Interior*, 755 F. Supp. 2d 1104, 1110 (S.D. Cal. 2010).

[21] The Forest Service attempts to distinguish the cases cited by the Plaintiffs and this Court on the grounds this case involves "the Forest Service's one-time approval of a Plan that a private party would implement without requiring further federal involvement." ECF Doc. 146-1 at 34. This is self-evidently false given the Forest Service's extensive continuing involvement in the Canyon Mine, as evident from the VER Determination, Mine Review, and its "consultation" with the Tribes.

The Forest Service's obligation to undertake consultation prior to the VER Determination is further demonstrated by *Pit River Tribe*, which ruled that the BLM was required to undertake a consultation process prior to extending leases to drill and extract geothermal resources in an area of religious significance to Indian tribes, even though there had been prior approval of the project by the agency and there had been no change in the character of the project. ECF Doc. 140-1 at 35; *Pit River Tribe*, 469 F.3d at 787. The Forest Service attempts to distinguish this case based on the erroneous claim that "the VER determination was not required before resumption of mining activities at Canyon Mine." ECF Doc. 146-1 at 34. This Court has already found, based on the Forest Service's own statements and policies, that the VER determination was a "practical if not legal requirement" for resumption of mining activities. ECF Doc. 131 at 7-9; *see also* ECF Doc. 140-1 at 36-37 n.18 (identifying Forest Service statements and policies that support this ruling).

The Forest Service instead relies on *Espy*, a NEPA case, where the court ruled that an agency's transfer of title to lands did not require an EIS because the lands were used for livestock grazing before and after the transfer. ECF Doc. 146-1 at 34. However, unlike that case, where any adverse effects on the environment were completely unchanged by the agency's transfer of title, here the resumption of mining activity represents a significant change from the dormant status of the mine, and this change will adversely affect Red Butte TCP. Furthermore, *Espy* is not an NHPA case, and the court's reasoning is inapplicable in the NHPA context where it is well-established that an agency has continuing obligations to preserve and protect historic properties where an undertaking is continuing.

B. Defendants' Arguments Regarding Whether The VER Determination Is An "Undertaking" Are Misplaced

Defendants also argue that the Forest Service did not have NHPA consultation obligations because the VER determination does not constitute an "undertaking." *See* ECF Doc. 146-1 at 33 ("the VER Determination does not constitute a federal undertaking that triggers NHPA consultation."); *id.* at 34-35 n.10 ("The relevant inquiry

is whether the VER Determination constituted an undertaking. It did not."); ECF Doc 147-1 at 14 (VER Determination didn't trigger NHPA because it's not an undertaking). This argument is mistaken.

The "undertaking" in this case is not the VER Determination, it is the resumption of mining activity at Canyon Mine. ECF Doc. 140-1 at 34-35, 39. The resumption of mining activity is a "project [or] activity" that required a "permit, license or approval" from a Federal agency. *See* 36 C.F.R. § 800.16(y) (defining the term "undertaking"). Even if the resumption of mining activity was not considered a "new" undertaking, moreover, as the Forest Service contends, the Canyon Mine constituted an ongoing undertaking that required continued compliance with NHPA. ECF Doc. 140-1 at 35-36 n.17, 39. The Forest Service's arguments that the VER Determination was not an undertaking are therefore misplaced and irrelevant to the agency's NHPA obligations.[22] Indeed, the Forest Service's brief repeatedly admits that there was an "undertaking" that was "approved," although the Forest Service does not specify what the "undertaking" was. ECF Doc. 146-1 at 19, 36.[23] The Forest Service's argument that the VER Determination is not an "undertaking" because it is not a "major federal action" are similarly inapposite because no party to this action claims that the VER Determination was the relevant undertaking. ECF Doc. 146-1 at 33.

The Forest Service's misunderstanding of the applicable regulations is further evident when it argues that "the VER Determination does not constitute a federal undertaking . . . because it is not a 'Federal permit, license or approval.'" ECF Doc. 146-1 at 33. This argument conflates an "undertaking" with a "permit, license or approval," which are distinct concepts under the regulation. *See* 36 C.F.R. § 800.16(y) (defining an "undertaking" as a project, activity or program "*requiring* a Federal permit, license or approval") (emphasis added); *Sheridan Kalorama Hist. Assoc. v. Christopher*,

[22] The Forest Service also contends that the VER Determination is not an "undertaking" because it "has no direct effect on the historic property," ECF Doc. 146-1 at 33, but the resumption of mining *would* have a direct effect on the historic property, which further demonstrates that the mining activity is the relevant undertaking.

[23] In places, the Forest Service appears to acknowledge that Canyon Mine is the undertaking. *See* ECF Doc. 146-1 at 13 ("Because *Canyon Mine* was already approved . . . following 36 C.F.R. § 800.13(b)(3) was appropriate.") (emphasis added).

49 F.3d 750, 754 (D.C. Cir. 1995) ("federal authority to fund or license a project can render the project an undertaking, but the decision of the funding or licensing agency is not itself an undertaking"). The VER Determination was a "permit, license or approval," because, as this Court has already found, it "allowed" mining operations to resume, but the "undertaking" is the mining activity. *See* ECF Doc. 140-1 at 34.[24]

Finally, the Forest Service also makes the remarkable claim that it was "exempted from any Section 106 requirements" in connection with the VER Determination under a Regional Programmatic Agreement. ECF Doc. 146-1 at 34. The Forest Service cannot contract away its statutory consultation obligations, especially in an agreement to which no tribe is a party. Additionally, the Regional Programmatic Agreement expressly provides that "mine operating plans" are "undertakings subject to standard consultations." AR Doc. 360 at 6832. Thus, this contract, to which the Forest Service is a party, removes any doubt that the resumption of mining activity at Canyon Mine is an undertaking and requires a "standard consultation."

For all of these reasons, the Forest Service's argument that it has no Section 106 consultation obligations must be rejected. As detailed in Plaintiffs' opening brief, the Forest Service was obligated to undertake a full Section 106 consultation with the Tribes and failed to do so. *See* ECF Doc. 140-1 at 34-40.[25]

VI. The Forest Service Incorrectly Applied the Limited and Expedited 800.13(b)(3) Process

Plaintiffs' Third Claim is that the Forest Service's decision to apply Section 800.13(b)(3) was a violation of the regulations, and the Forest Service failed to even comply with these regulations. *See* ECF Doc. 115 at ¶¶ 84-88.[26] The Forest Service

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[24] The Forest Service also incorrectly suggests that its NHPA obligation was somehow dependent upon whether NEPA applied. *See* ECF Doc. 146-1 at 34 ("Because NEPA was not required, NHPA consultation was also not required."). NHPA and NEPA are separate obligations and the obligation to comply with NHPA Section 106 is independent from, and not dependent upon, its NEPA duties.

[25] This was not an isolated incident. As described in Plaintiffs' opening brief, the Administrative Record reveals a second incident in which the Forest Service completely failed to consult with the tribes until after it had already given approval to a project. ECF Doc. 140-1 at 38 n.22.

[26] The distinction between Plaintiffs' NHPA claims is that the Second Claim asserts that the Forest Service was required to and failed to undertake a full consultation under the ordinary Section 106 process, whereas the Third Claim asserts that even accepting

responds with the conclusory statement that its "application of Section 800.13(b)(3) was proper and should be upheld," but this assertion must be rejected. ECF Doc. 146-1 at 37. Among other reasons, the claim that the Forest Service's acted properly in applying Section 800.13(b)(3) is contradicted and repudiated by the Forest Service's own argument that it actually did not have any Section 106 consultation obligations.

A. Section 800.13(b)(3) Did Not Apply

As shown in Plaintiffs' opening brief, even if one were to accept the Forest Service's legally erroneous position that Red Butte TCP was an after-discovered historic property, it was not proper for the Forest Service to apply Section 800.13(b)(3). ECF Doc. 140-1 at 40-43. Among other reasons, this is an "*emergency measure* to ensure historic properties are not inadvertently damaged *during project implementation*," as the Forest Service stated in its own Mine Review. *Id.* at 34-35; AR Doc. 533 at 10603 (emphasis added); *see also* ECF Doc. 140-1 at 40-41. The Forest Service now admits that expedited action was not required in this case. *See* ECF Doc. 146-1 at 36 ("review did not have to be expedited as in other situations where subsection (b)(3) is used"). This alone demonstrates that the application of this emergency provision was not consistent with the purpose of this provision and was improper.[27] The Forest Service had the opportunity to conduct a full consultation, which would have furthered the NHPA's goals to preserve historic properties.

Section 800.13(b)(3) also does not apply here because it requires that the agency has already "approved the undertaking" and "completed the section 106 process," neither of which had occurred when the Forest Service learned of EFR's intention to

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the Forest Service's legally erroneous position that there was an after-discovered historic property under Section 800.13(b), the Forest Service erred in applying 800.13(b)(3) rather than 800.13(b)(1), which would have also required a full consultation. EFR argues that "the entire subsection" of Section 800.13(b) was not triggered because there was no "discovery," as contemplated by the regulations. ECF Doc. 147-1 at 14-15. This argument just further supports Plaintiffs' Second Claim that the Forest Service should have followed the full Section 106 consultation process.

[27] The Administrative Record shows that the Forest Service recognized that this provision was "not a great fit," ECF Doc. 140-1 at 43 (quoting AR Doc. 800 at 10389), but the Forest Service was determined to apply it anyway to avoid conducting a full Section 106 process, as would have been required had it applied Section 800.13(b)(1).

resume mining operations. ECF Doc. 140-1 at 42-43.[28] The history of the Section 800.13(b)(3) regulations also confirms that this provision was not intended to apply where there was an opportunity for a full consultation. *Id.* at 41-42. EFR's brief even acknowledges that this history shows that ACHP was concerned about providing "the flexibility to complete full consultation." ECF Doc. 147-1 at 15.[29] This history is consistent with the ACHP's advice to the Forest Service, AR Doc. 565 at 11335, and Plaintiffs' opening brief (ECF Doc. 140-1 at 41-42) cites numerous authorities showing the ACHP is entitled to deference in interpreting its regulations.[30]

The Forest Service's argument that Section 800.13(b)(3) applies relies heavily on the phrase "construction has commenced." ECF Doc 146-1 at 35, 36 n.11, 37. But this phrase does not mean that the emergency procedures of Section 800.13(b)(3) automatically apply every time any amount of construction has occurred, even if construction was subsequently halted and suspended for over twenty years. Such an interpretation is inconsistent with the purpose of this provision, the broader goals of the NHPA to preserve historic properties, the history of the regulations, and the advice of the ACHP. *See* AR Doc. 565 at 11335 (Section 800.13(b)(3) is intended to apply where "construction activities have begun *and would be ongoing*") (emphasis added). Accordingly, it was improper for the Forest Service to apply Section 800.13(b)(3).

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[28] The Forest Service does claim that an "undertaking had already been approved," apparently in reference to the original ROD approving of the Canyon Mine. ECF Doc. 146-1 at 19. As described above, however, the relevant undertaking was the resumption of mining activity, and the approval was the VER Determination, which allowed mining to proceed. Thus, the undertaking had not yet been approved at the time that the Forest Service learned of EFR's intention to restart the mine.

[29] EFR's suggestion that this concern was limited to cases where construction had not yet started is squarely refuted by the history of this provision, which was originally titled "Resources discovered *during construction*," and later renamed "Properties discovered *during implementation* of an undertaking." ECF Doc. 140-1 at 41 (emphasis added).

[30] The Forest Service argues in a footnote that the ACHP's interpretation should "not be viewed as ACHP's final word regarding the NHPA regulations," citing a self-serving declaration of Forest Service employee Margaret Hangan. ECF Doc. 146-1 at 37 n.12. In fact, the ACHP has never changed its view that Section 800.13(b)(3) was not intended to apply to situations where expedited action was not required, and that view is consistent with the history of the regulations that it promulgated. There was also no "misinformation" in the ACHP's letter, notwithstanding Hangan's refusal to disclose key facts when seeking advice from the ACHP. *See* ECF Doc. 140-1 at 41-42 n.23.

B. The Forest Service Did Not Follow the Section 800.13(b)(3) Procedure

The Forest Service also makes conclusory assertions that it "properly followed" and "properly applied" Section 800.13(b)(3), but the agency fails to demonstrate that any of the regulatory requirements of this process were met. ECF Doc. 146-1 at 35-37. The Forest Service does not even identify the regulatory requirements, and instead makes only vague assertions that it "worked with the tribes to identify actions to address their concerns." *Id.* at 9. Periodic meetings and cursory information sessions do not meet the required "government-to-government" consultation required under Section 106. ECF Doc 140-1 at 37 n.20.

Plaintiffs' opening brief details numerous ways in which the Forest Service failed to comply with the procedures required under Section 800.13(b)(3). ECF Doc 140-1 at 43-45. Among other things, the Forest Service was permitted to take unilateral action to avoid or mitigate adverse effects to historic properties, but the Forest Service took no such action and instead falsely informed the tribes that the only mitigation measures that would occur are those voluntarily undertaken by EFR. *Id.* at 44. EFR admits that "additional mitigation measures regarding Red Butte have not been required." ECF Doc. 147-1 at 20. The Forest Service also asserts that it "went above and beyond" the regulatory requirements by providing the tribes with 30 days for comments, rather than 48 hours, ECF Doc. 146-1 at 35, but Plaintiffs have already shown that this was itself a violation of the Section 800.13(b)(3) procedures and a demonstration that this expedited process was unnecessary and inapplicable. ECF Doc. 140-1 at 44. The Forest Service also allowed mining operations to resume during this extended consultation period, contrary to the advice of the ACHP, AR Doc. 656 at 12346, and this extension actually helped ensure that mitigation measures would *not* be implemented until it was too late to prevent adverse effects. EFC Doc. 140-1 at 44-45.

Even if the Forest Service had complied with the Section 800.13(b)(3) procedures, it would not have satisfied the agency's NHPA obligations because, as described above, a full Section 106 consultation was required. However, the Forest Service's complete failure to comply with these procedures is significant because it

undermines the Forest Service's claims that this provision was applicable, and it strongly indicates that the Forest Service relied on this provision solely to avoid undertaking a full Section 106 consultation. ECF Doc. 140-1 at 45. The Forest Service's new assertions that it did not have any Section 106 obligations at the time of the resumption of mining activity (ECF Doc. 146-1 at 32) further confirms that the decision to apply Section 800.13(b)(3) was not made in good faith. For all of these reasons, the Forest Service failed to comply with its obligations under the NHPA.

VII. The Court Should Vacate the VER Determination And Issue An Injunction

As set forth in Plaintiffs' opening brief (ECF Doc. 140-1 at 46), the Court should vacate and remand the unlawful VER Determination. *See* 5 U.S.C. § 706(2). The Court should also order the Forest Service to comply with NEPA and undertake a full NHPA Section 106 consultation process prior to completing a VER determination and allowing mining activities to resume at Canyon Mine. *See id*. § 706(1).

Vacatur provides the normal remedy in this type of case, required under the APA. 5 U.S.C. § 706 (courts "shall" … set aside" unlawful agency actions); *see Tinoqui–Chalola Council of Kitanemuk & Yowlumne Tejon Indians v. U.S. Dep't of Energy,* 232 F.3d 1300, 1305 (9th Cir. 2000). "In all cases agency action must be set aside if the action was arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law." *FCC v. NextWave Pers. Commc'n*, 537 U.S. 293, 300 (2003). The Forest Service, however, argues for an exception to vacatur without detailing the reasons why the APA's general rule should not apply here. *See Cal. Communities Against Toxics v. EPA*, 688 F.3d 989, 992, 994 (9th Cir. 2012) (noting "we have only ordered remand without vacatur in limited circumstances").[31] Nonetheless, vacatur of the VER Determination is warranted here, because the Forest Service committed serious legal errors by failing to comply *at all* with NEPA procedures and the NHPA consultation process, and by skewing its validity determination by ignoring relevant costs. These legal errors will allow mining to occur in an area that has been withdrawn from the

[31] *See id* at 994 (not vacating because doing so would impact region's power supply): *Idaho Farm Bureau v Babbitt*, 58 F.3d 1392, 1405-06 (9th Cir. 1995) ("leaving the listing rule in place while FWS remedies its procedural error").

Mining Law, wherein the Department of the Interior determined that uranium mining presents a significant risk to invaluable resources, including the culturally-rich Red Butte TCP. And, because EFR has stopped operations at Canyon Mine for business reasons, vacating the VER Determination would not have "disruptive consequences." *See Cal. Communities Against Toxics*, 688 F.3d at 992.

Plaintiffs also request that the Court enjoin further mining activities at Canyon Mine pending the Forest Service's full compliance with the law. *See Pit River Tribe*, 469 F.3d at 779; *Rogue Riverkeeper v. Bean*, No. 1:11-CV-3013-CL, 2013 WL 1785778, at *3 (D. Or. Jan. 23, 2013) (enjoining mining activity until defendant complies with environmental statutes); *Colo. Envtl. Coal. v. Office of Legacy Mgmt.*, 819 F. Supp. 2d 1193, 1223-24 (D. Colo. 2011) (staying uranium mining leases pending NEPA compliance). Plaintiffs satisfy the four-part test for injunctive relief. *See Monsanto v. Geertson Seed Farms*, 561 U.S. 139, 156-57 (2010). Plaintiffs have already shown, and the Court has found, that a likelihood of irreparable injury if mining proceeds. ECF Doc. 86 at 6. It is implicit in this ruling that there are no remedies at law that would compensate Plaintiffs for injuries to their environmental and cultural interests if mining resumes, and Plaintiffs do not seek any monetary relief. Moreover, other available remedies, including vacatur, are inadequate to prevent Plaintiffs' injuries because the Forest Service has made clear that it would not comply with NEPA and NHPA even if the VER Determination was invalidated. ECF Doc. 146-1 at 23 n.7. The balance of harms also tips sharply in Plaintiffs' favor, as the financial harms identified by EFR at the preliminary injunction stage (which, it is now clear, were overstated) are no longer applicable because EFR has shut down the mine indefinitely. ECF Doc. 96-1 at 3. The public interest would be not be disserved by injunctive relief; instead, the public interest is served by ensuring compliance with federal laws. *Alliance for the Wild Rockies*, 632 F.3d at 1138.[32] As a result, an injunction against mining activities is warranted.

[32] The public interest in an injunction is supported by the Withdrawal, which was the result of public concern about the impacts of uranium mining in this area and was supported by the Forest Service for this same reason. *See Yount*, 2014 WL 4904423, at *1, *25.

Respectfully submitted,

December 19, 2014

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CERTIFICATE OF SERVICE

I hereby certify that on December 19, 2014, I filed a true and exact copy of PLAINTIFFS' COMBINED REPLY IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND RESPONSE IN OPPOSITION TO DEFENDANTS' CROSS-MOTIONS FOR SUMMARY JUDGMENT with the Court's CM/ECF system, which will generate a Notice of Filing and Service on the following:

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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

PRESCOTT DIVISION

Grand Canyon Trust, *et al.*, Plaintiffs, v. Michael Williams, Forest Supervisor, Kaibab National Forest, *et al.* Defendants, Energy Fuels Resources (USA) Inc., *et al.*, Defendant-Intervenors.	No. 3:13-cv-08045 PCT-DGC **MEMORANDUM IN OPPOSITION TO PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND IN SUPPORT OF DEFENDANT-INTERVENORS' MOTION FOR SUMMARY JUDGMENT** (Assigned to The Honorable David G. Campbell)

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Defendant-Intervenors Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (together, "EFR") hereby file their Memorandum in Opposition to Plaintiffs' Motion for Summary Judgment ("Pl. Br.") (Doc. 140-1) and in Support of their Motion for Summary Judgment. Per this Court's Order, EFR coordinated its briefing with the Federal Defendants (herein after, "USFS"),[1] and thus, this brief incorporates the facts, statements, standards, and arguments made therein.

I. Plaintiffs Have Not Established Standing for Claims 1, 2, and 4.

Plaintiffs must establish standing for each claim they pursue. If they do not, the Court has no jurisdiction to resolve the claim. *Summers v. Earth Island Inst.*, 555 U.S. 488, 492-93 (2009). To show standing, a plaintiff must present evidence that it has an injury in fact that is fairly traceable to the challenged action, and that likely can be redressed by a favorable decision. *Id.*; *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992) (standing must be supported by evidence consistent with the burden of proof at that stage of the case). "Standing is not dispensed in gross;" Plaintiffs must establish standing for each claim. *Davis v. Fed. Election Comm'n*, 554 U.S. 724, 734 (2008).

Claims 1, 2, and 4, concern USFS's valid existing rights ("VER") determination. Am. Compl. ¶¶ 70-83, 89-92 (Doc. 115). Plaintiffs offer five declarations to establish standing. Pl. Br. at 7. The declarants do not mention the VER determination, or anything like that process. Instead, they focus on requiring USFS to force EFR to modify its current Plan of Operations ("Plan") for the Canyon Mine ("Mine"), or require a new plan, and the NEPA and NHPA issues related thereto. Decl. of Don Watahomigie ¶ 4 (Doc. 37-7); Decl. of Robin D. Silver ¶ 10 (Doc. 37-7); Decl. of Kim Crumbo ¶ 11 (Doc. 37-8).[2]

These declarations might support standing for claims regarding a failure to require a modification of the Plan or failure to supplement the Plan's EIS. Such claims were filed in the Complaint (Doc. 1 ¶¶ 70-79, 99-103, & 109-113), but were dropped in the Amended Complaint. (Doc. 115). Plaintiffs have not provided any evidence of injuries in

[1] Transcript of Motion to Dismiss Hearing at 65-69 (Aug. 1, 2014) ("Tr.") (Doc. 146-2).
[2] Mr. Tilousi's declaration makes no mention of the VER determination, the Plan, NEPA, or the NHPA. Mr. Clark's declaration seeks to force USFS to comply with NEPA and the NHPA, but does not identify any challenged action. (Docs. 37-7, -8).

fact (including procedural injuries) that are fairly traceable to the challenged action – the VER determination. *Summers*, 555 U.S. at 496 (procedural injuries must be linked to a concrete interest harmed by the challenged action). It is not enough that they may have evidence to establish standing for abandoned claims. *See Davis* and *Lujan*, *supra*.[3]

Plaintiffs also have not shown redressablity. As this Court found, the VER determination (1) "does not create mineral rights, but merely confirms they already exist," and (2) is not required by FLPMA or the Withdrawal. Motion to Dismiss ("MTD") Order at 9-10 (Doc. 131); Preliminary Injunction ("PI") Order at 12 (Doc. 86). In short, there are no legal consequences that flow from the VER determination. MTD Order at 10. Because of this, and because EFR's authority to conduct mining activities stems from the Plan—not the VER determination—even if the Court were to invalidate the VER determination, it would not stop mining activities. Thus, any injuries alleged to stem from mining operations will not be redressed. Further, in its brief, USFS stated that if the VER determination were invalidated, it would or retract it, and does not plan to reissue another VER determination for the claims at the Mine. USFS Brief at 12 n.7, 27 (Doc. 146-1).[4] Thus, any alleged procedural injuries stemming from the VER determination would not be redressed (even assuming a relaxed redressability standard).[5] *Summers*, *supra*.

II. Claims 2 and 3 are Barred by the Doctrine of Collateral Estoppel.

Collateral estoppel bars re-litigation of an issue of law or fact that was litigated in a prior suit between the parties, when the issue was necessarily decided as part of the judgment. *Hydranautics v. FilmTec Corp.*, 204 F.3d 880, 885-87 (9th Cir. 2000). The sole basis for Plaintiffs' NHPA claims is that USFS has not consulted with the Havasupai regarding Red Butte and surrounding areas or considered the impacts thereon when

[3] For Claim 2, Messrs. Watahomigie and Tilousi are the only declarants identified with the Havasupai Tribe, and thus, the only declarants that could state an injury in fact with respect to a failure to consult with the Tribe. As noted, they have failed to do so.

[4] This decision is within the enforcement discretion under the Mining Law. *Cameron v. United States*, 252 U.S. 450, 459-60 (1920); *Swanson, v. Babbitt*, 3 F.3d 1348, 1354 (9th Cir. 1993); USFS, FOREST SERVICE MANUAL ("FSM") § 2814.11 (ARDoc. 371:7284).

[5] These conclusions are not at odds with the Court's conclusions regarding harm in the PI Order, as Plaintiffs suggest. Pl. Br. at 7. There, the Court was not considering the requirements of standing in the summary judgment context (*Lujan, supra*), or the role of the VER determination on continued mining and future USFS enforcement decisions.

approving the Plan. Pl. Br. at 25-40. That is not true. As reflected in *Havasupai Tribe v. United States*, USFS undertook a comprehensive environmental and cultural review of the Plan. This included consultation with the Havasupai and consideration of their religious and cultural concerns related to Red Butte and the surrounding areas. 752 F. Supp. 1471, 1486-88, 1495-1500 (D. Ariz. 1990). This is confirmed by the record, and Mr. Tilousi. Record of Decision at 4, 8-12 (ARDoc. 6:919, 923-28) (USFS considered the Havasupai's concerns at Red Butte and the surrounding areas, and modified the Plan to mitigate impacts therefrom); Tilousi Decl. ¶ 3 (Doc. 37-7). These facts and actions were litigated and decided in *Havasupai*, and upheld on appeal, 943 F.2d 32 (9th Cir. 1991). They are barred from relitigation in Plaintiffs' NHPA claims. *Hydranautics*, *supra.*[6]

III. The VER Determination Does Not Trigger Compliance with NEPA or the NHPA (Claims 1 and 2).

Plaintiffs argue that NEPA and NHPA were triggered because the VER determination acted as a required approval or license for EFR to resume mining at the Mine. Pl. Br. at 15-22, 28-31. That argument stems from the assertion that the Withdrawal automatically prohibited all mining within the withdrawn area, invalidated EFR's mining claims, and required USFS to perform a VER determination before EFR could resume active mining. These positions are inconsistent with the plain language of the Withdrawal, the legal effect of withdrawals and property rights regarding existing mining claims, USFS's and BLM's interpretation of the effect of withdrawals on existing, permitted mines, and the purposes of conducting VER determinations. In short, the Withdrawal only prohibited the location and entry of new mining claims, and had no effect on EFR's existing mining claims or its ability to mine. The VER determination is an enforcement investigatory tool that has no legal effect on mining claims. This Court agreed with EFR and USFS on these points in the PI Order (at 10-12) and the MTD Order (at 9-10). Plaintiffs have not provided any reason for the Court to change its conclusions.

[6] *See also Te-Moak Tribe of W. Shoshone of Nev. v. Dep't of Interior*, 608 F.3d 592, 609-10 (9th Cir. 2010) (prior consultation satisfied current NHPA responsibility as long as tribe was given sufficient opportunity to identify its concerns). The Havasupai stated that it was given such an opportunity. Havasupai Reply to Responsive Statement at 4 (Feb. 18, 1987) (ARDoc. 50:1754).

A. The VER determination is not an approval or a license.

The Withdrawal states that subject to valid existing rights, certain public lands are "withdrawn from location and entry under the Mining Law of 1872." 77 Fed. Reg. 2563, 2563 (Jan. 18, 2012). The Withdrawal says nothing about automatically invalidating previously-located and entered mining claims, mandating VER determinations, or prohibiting mining. Instead, it is prospective, and forbids only the "location and entry"[7] of new claims under the Mining Law. It does not address any other aspects of mining, or render the withdrawal area "unavailable for mining." Pl. Br. at 16. Withdrawals have long been interpreted as such. *See, e.g.*, *In re Goergen*, 144 IBLA 293, 297 (1998); *Alaska v. Thorson*, 83 IBLA 237, 250 (1984) ("where land is withdrawn subject to valid existing rights or claims, the right or claim is not extinguished, and the withdrawal takes effect as to lands covered by such entries only upon their termination.").[8] The prospective nature of withdrawals makes sense, as FLPMA does not provide the Interior Secretary authority to promulgate retroactive rules or invalidate rights under the Mining Law. *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988). The Withdrawal is consistent with *Bowen* by including FLPMA's required language that it is subject to valid existing rights (not that it *prohibits or invalidates* valid existing rights unless USFS provides additional approvals, as Plaintiffs suggest).

BLM and USFS have interpreted the Withdrawal (and withdrawals generally) consistent with the discussion above. BLM and USFS assumed that mining at existing, permitted mines, including the Mine, would go forward despite the Withdrawal. PI Order at 3. Consistently, USFS and BLM never interpreted withdrawals as automatically invalidating claims, prohibiting previously approved mining, or requiring a VER

[7] "Location and entry" is a term of art representing the two separate requirements of establishing a valid mining claim with BLM: (1) physically locating the claim on public land by staking the corners and posting notice thereof, and (2) entering the claim by filing it with BLM. 43 C.F.R. §§ 3832.1, .11; §§ 3833.1, .11; *see* FSM § 2811.5 (ARDoc. 371:7279) (by performing the location and entry steps, the miner "obtains a valid mining claim"). Validity in this context means the establishment of a claim that triggers protected property rights recognized under the Mining Law that allow the miner to mine the claim until proven invalid by BLM in a claim contest. *See infra* discussion at 5-6 & n.9.

[8] The "subject to" in "subject to valid existing rights" means subordinate to or subservient to, contrary to Plaintiffs' assertions. *Alaska*, 83 IBLA at 243.

determination for all claims. BLM and USFS have drawn a different line. BLM regulations provide that within a withdrawn area, VER determinations are required only when a miner seeks a *new* plan of operations (or material modification of an existing plan). 43 C.F.R. § 3809.100(a). BLM's interpretation of the regulation states:

> *[A]pproved Plans of Operations* that were in place prior to the withdrawal or segregation date *are not subject to the mandatory valid existing rights determination procedures* at 43 CFR § 3809.100(a). *These operations may continue as accepted or approved and do not require a validity examination unless or until there is a material change in the activity.*[9]

BLM, Surface Management Handbook (H-3809-1), § 8.1.5 (emphasis added) (ARDoc. 591:11602); PI Order at 11 n.2 (relying on same and citing § 8.1.1.1 (ARDoc. 591:11600) for the point that claims with approved plans are exempt from § 3809.100(a)'s VER determination requirements). Thus, BLM interprets the Withdrawal as *not* impacting any rights and claims held by an existing mine with an approved plan, or compelling a VER determination in order to operate under an approved plan in a withdrawn area–as is the case at the Mine. USFS's policy tracks § 3809.100(a) and BLM's interpretation of it and states that USFS will not "allow" (*i.e.*, approve a new plan of operations or material change to an existing plan) without ensuring the claims have VER. FSM § 2803.5; *see* PI Order at 11 n.2 (noting 2803.5, and USFS's policy to act consistently with BLM); Decl. of Michael Linden ¶¶ 5-11 (Doc. 53-2) (same). USFS's policy tracking BLM's is unsurprising; BLM is the agency charged with administering the Mining Law: USFS implements it by agreement with BLM. FSM § 2814.11 (ARDoc. 371;7284).

As further evidence that withdrawals do not automatically invalidate claims and mandate VER determinations, USFS policy tracks federal case law and Department of Interior decisions holding that properly-located and entered mining claims are recognized property interests that vest the holder with the full right to develop and mine the claims unless and until the claims are invalidated through notice and a contest hearing (*i.e.*, Fifth Amendment due process), even in the face of a withdrawal. *Compare Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 335-38 (1963); *United States v. Shumway*, 199 F.3d

[9] BLM's interpretation of the Withdrawal's preceding Segregation Order is consistent with that position. BLM, Instruction Memo. No. 2010-088 re Guidance on 43 C.F.R. § 3809.100(a) and its Application (Doc. 60-1 at 31).

1093, 1099-1100 (9th Cir. 1999); *United States v. Martinek*, 166 IBLA 347, 351-53 (2005) *In re Ctr. for Biological Diversity*, 162 IBLA 268, 281 (2004); *In re Sw. Res. Council*, 96 IBLA 105, 118 (1987) *with* FSM 2811.5 ("A mining claim may lack the elements of validity and be invalid in fact, but it must be recognized as a claim until it has been finally declared invalid by the Department of the Interior or Federal courts.") (ARDoc. 371:7280);[10] Linden Decl. ¶¶ 10-11 (Doc. 53-2); PI Order at 10 (following FSM § 2811.5). Absent from these authorities are statements that withdrawals render claims automatically invalid and mandate VER determinations.[11]

Plaintiffs' also assert that a withdrawal triggers an entirely new regulatory approval regime, Pl. Br. at 20-22, yet they cite no regulations, guidance, or legal authority for that proposition. One would assume that if withdrawals carried such immediate, severe impacts and mandates, Congress, BLM, or USFS would have promulgated rules or guidance regarding them. They have not. Instead, Plaintiffs' cited cases support EFR's and USFS's position. For example, in *U.S. v. Boucher*, IBLA merely reiterates that a withdrawal removed public land from "location and entry"– that is, permission to prospect for new claims. 147 IBLA 236, 243 (1999); *see Kosanke v. Dep't of Interior*, 144 F.3d 873, 874 (D.C. Cir. 1998) (claims located and attempted to be entered five months *after* a withdrawal were not valid). These cases say nothing about automatic invalidation of all existing claims, mandatory VER determinations, or new regulatory approval regimes.[12]

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[10] This recognition reflects a general issue of timing regarding claim validity. While no claim is fully valid unless there has been a discovery of valuable minerals, that fact rarely is known upon the location and entry of a claim. Nevertheless, consistent with the Mining Law's intent to promote mining, BLM and the courts have concluded that the proper location and entry of a claim provides miners protected property rights to use and mine the claim up and until BLM determines through a claim contest that the claim is not valid (in this sense, full validity is assumed until proven otherwise).

[11] Perhaps the point is a simple one, but if Plaintiffs were correct that a withdrawal automatically invalidated claims, there would be no need for claim contests in withdrawn areas. Yet, the IBLA reporter is replete with these cases. *See Martinek*, *supra*.

[12] Plaintiffs' citation to *Hjelvik v. Babbitt*, 198 F.2d 1072, 1074 (9th Cir. 1999) and *Lara v. Dep't of Interior*, 820 F.3d 1535, 1542 (9th Cir. 1987) for the proposition that a VER determination is required for all mines in a withdrawal area is even more off-base. The "at the time of the withdrawal" language in those cases simply refers to the fact that in order to establish VER – whenever the mineral exam is conducted – the miner must show that it made a discovery of valuable minerals prior to the withdrawal date. That is consistent with *Boucher* and *Kosanke*. *See* Mineral Exam at 5 (ARDoc. 525:10487) (the exam in this case, done in 2012, properly used the segregation date and the review date).

Notwithstanding the forgoing, BLM and USFS are tasked with enforcing the Mining Law, and retain the discretion to perform a VER determination for any claim at any time for any reason. *Cameron*, 252 U.S. at 459-60 (1920); FSM § 2814.11 (ARDoc. 371:7284). If a VER determination suggests that claims may be invalid, BLM and USFS must initiate a claim contest in order to invalidate them. *Best*, 371 U.S. at 335-37; FSM § 2819 (ARDoc. 371:7310-13). "No adjudicative power has been given to [USFS]," however. FSM § 2819. For claims on USFS-managed land, if, following a VER determination, USFS believes claims do not possess VER, it must request that BLM review and contest them. FSM §§ 2814.11, 2819.1-.2; Linden Decl. ¶ 10 (Doc. 53-2).

Under this scheme, the role of the VER determination is easily understood. It is an investigatory tool used by BLM and USFS when performing enforcement under the Mining Law. It assists them in determining whether rights created by Congress have come into existence. Depending on the outcome of the determination, they decide whether to bring a contest claim (with the VER determination used as evidence). PI Order at 11-12. Thus, VER determination "'statements about validity are statements of belief and not formal determinations.'" *Id*. at 10 (quoting FSM § 2819); *see* Linden Decl ¶ 10.

Based on the forgoing, the Court found that VER determinations do not create mineral rights, but merely confirm whether they exist, are not required by law or the Withdrawal, and have no legal effects. MTD Order at 9-10; PI Order at 12. Therefore, the VER determination is not an approval or a license, and thus, is not a NEPA major Federal action or an NHPA undertaking. 36 C.F.R. § 800.16(y); 40 C.F.R. § 1508.18.

B. The VER determination is a nondiscretionary act that does not trigger NEPA or the NHPA.

Courts have long held that VER determinations do not trigger compliance with NEPA because they are nondiscretionary, ministerial acts. *Wilderness Soc. v. Robertson*, 824 F. Supp. 947, 953 (D. Mont. 1993); *South Dakota v. Andrus*, 462 F. Supp. 905, 906-07 (D.S.D. 1978); *In re Kosanke Sand Corp.*, 12 IBLA 282, 286-99 (1973); *see Sierra Club v. Babbitt*, 65 F.3d 1502, 1512 (9th Cir. 1995) (nondiscretionary or ministerial

actions do not trigger NEPA). The same is true under the NHPA. *See Sac and Fox Nation of Mo. v. Norton*, 240 F.3d 1250, 1262-63 (10th Cir. 2001).[13]

VER determinations are nondiscretionary because when conducting a VER determination USFS is not approving or denying a privilege (such as a permit), but is verifying only "whether rights conferred by Congress [under the Mining Law] have come into existence." *Wilderness Soc.*, 824 F. Supp. at 953; PI Order at 12. To make this verification, USFS determines whether there has been a discovery of a valuable mineral deposit under the prudent person and marketability tests. *Hjelvik*, 198 F.3d at 1074; FSM § 2811.5 (ARDoc. 371: 7279). Because a miner cannot mine without an approved plan, this test necessarily and specifically considers the miner's reasonably foreseeable costs of implementing an approved mine plan, including reasonably foreseeable costs of compliance with environmental laws associated with implementing the approved plan. The test does not include an additional layer of environmental or cultural review as part of the validation process to determine whether additional changes to the approved plan should be made (or other changes or mitigation required in some other fashion) under FLPMA or other environmental laws. Doing so would be adding new requirements for the establishment of mining claims to those Congress established in the Mining Law. USFS has no authority to do that in a VER determination. *Nat'l Ass'n of Homebuilders v. EPA*, 551 U.S. 644, 668-73 (2007) ("*NAHB*") (agencies have no authority to add or subtract from Congressionally established criteria that give rights (*e.g.*, adding environmental consultation requirements); their duty is nondiscretionary and ministerial; in such circumstances, agencies have no power to act on any additional information such environmental consultation might yield in concluding whether the Congressional right is established). Without the discretion or authority to act on any additional information NEPA or NHPA may yield, or otherwise withhold a Congressionally provided right, Plaintiffs' claim of discretion in the VER process fails.

Plaintiffs also argue that USFS has discretion in gathering and evaluating costs and

[13] Contrary to their summary judgment brief, at the Motion to Dismiss hearing, Plaintiffs asserted that VER determinations are nondiscretionary, and urged the Court to follow *Wilderness Society*. Tr. at 53 (Doc.146-2). EFR agrees.

whether VER exists, the VER decision is discretionary. Pl. Br. at 24.[14] That argument was rejected in *NAHB*. 551 U.S. at 671 (discretion in gathering and evaluating a statutory test does not create discretion to add criteria to that test).[15]

Beyond the issue of discretion, the VER determination also does not trigger NEPA or the NHPA because, as discussed above, a VER determination is an investigatory tool that is part of a potential enforcement action (*i.e.*, a claim contest). Enforcement actions are excluded from the definition of major Federal action, and also do not meet the definition of undertaking. 36 C.F.R. § 800.16(y); 40 C.F.R. § 1508.18.

IV. Assuming it was Triggered, USFS Properly Applied § 800.13(b)(3) (Claim 3).

For the NHPA's post-review discovery obligations in 36 C.F.R. § 800.13(b) to be triggered, there must be a discovery of an historic property potentially impacted by a previously-approved project, or unanticipated effects to a historic property. Neither of these triggers is met here. The term "discovery" is not defined in the regulations. Its common meaning is "the act, process, or an instance of gaining knowledge or ascertaining the existence of something previously unknown or unrecognized."[16] The existence of and characteristics that make Red Butte eligible for a TCP designation long have been known to all parties involved. Mine Review at 7-24 (ARDoc. 533:10600-17). Assigning a different legal status (TCP) in 2010 to Red Butte does not make known anything new about Red Butte. The context of § 800.13(b) makes clear that the regulation is focused on finding new facts, not new legal labels, and identifying reasonable steps to mitigate adverse effects that a previously-approved action actually may have on a property. The

[14] Assuming gathering costs and performing the test involved some discretion, the amount would be minimal. USFS gathers the costs of operations under the approved plan applying BLM guidance, calculates the metal price based on BLM guidance, and inserts the information into a computer program. Mineral Exam at 17-23 (ARDoc. 525:10499-505). The activity is ministerial and similar to BLM's calculation of a reclamation bond, which also involves the evaluation of costs under an existing plan, and does not trigger NEPA. *Ctr. for Biological Diversity v. Salazar*, 706 F.3d 1085, 1096 (9th Cir. 2013).

[15] Plaintiffs' reliance on *Independence Mining v. Babbitt*, 105 F.3d 502,509 (9th Cir. 1997), is misplaced. There, the court only noted what has been discussed here: BLM has minimal discretion in gathering and evaluating information related to performing a the nondiscretionary statutory test. Plaintiffs' reliance on *Ass'n of Pacific Fisheries v. EPA*, 615 F.2d 794, 805 (9th Cir. 1980), also is misplaced. That case is about EPA discretion in cost and benefit analyses regarding Clean Water Act control technologies.

[16] WEBSTER'S THIRD NEW INT'L DICTIONARY (UNABRIDGED) 647 (1986); *see also* BLACK'S LAW DICTIONARY 478 (7th ed. 1999) (same definition).

designation of the Red Butte area as a TCP is not a discovery under 800.13(b). For the same reasons, it cannot be said that operations at the Mine have created "unanticipated effects" on the area. The Mine was authorized under the Plan long before the TCP designation, and USFS considered and mitigated possible effects therefrom in the approved Plan after consultation with the Havasupai. USFS cannot be said to have erred in applying § 800.13(b)(3), when the entire subsection had not been triggered.

Assuming § 800.13(b) was triggered, USFS did not err in applying § 800.13(b)(3), instead of § 800.13(b)(1), as Plaintiffs argue. Pl. Br. at 34-39. The Court addressed and rejected this argument in the PI Order, and should do so again. PI Order 14-17. As the Court found, § 800.13(b)(1) applies when there has been an approved undertaking and construction has not commenced, and § 800.13(b)(3) applies when there has been an approved undertaking and construction has commenced. *Id*. at 14. Here, the relevant undertaking was USFS's approval of the Plan. *Id*. at 15. The only question is whether "construction has commenced." Because construction at the Mine had commenced in the past, the Court found that USFS reasonably determined, based on its plain terms, that § 800.13(b)(3) applied to this case. *Id*. at 15-17.

To make their case, Plaintiffs urge the Court to overlook the facts and terms of § 800.13(b)(3), and focus on the Advisory Council on Historic Preservation's ("ACHP") alleged intent behind that section, which they claim is focused on applying only to ongoing construction. Pl. Br. at 34-35 (claiming this intent is found in preambles to prior iterations of ACHP's regulations, and in the preamble to the current regulations). What is clear from these sources is that, when promulgating the current regulations, ACHP focused on ensuring the clear distinction between construction commencement and non-commencement in §§ 800.13(b)(1) and (3). According to ACHP, this distinction provides the flexibility to complete full consultation under (b)(1) when construction has not started. Contrary to Plaintiffs' suggestion, the preamble does not address whether construction is ongoing (or has stopped and restarted), and does not reference an alleged intent from prior rules. 64 Fed. Reg. 27,044, 27,058, 27,068 (May 18, 1999).

Plaintiffs also again urge the Court to look to ACHP's alleged interpretation of §§ 800.13(b)(1) and (3) in letters to USFS, and ask the Court to afford "substantial deference" thereto. The Court reviewed and rejected these arguments, finding that 800.13(b) was not ambiguous, and that 800.13(b)(3) plainly applies where "construction has commenced" and (b)(1) where "construction has not commenced." PI Order at 16. Contrary to Plaintiffs' and ACHP's assertions, the regulations do not contain the word recommence, or require construction to be ongoing for 800.13(b)(3) to apply. *Id*. The Court rejected any deference to ACHP's alleged interpretations because 1) the regulation was not ambiguous, and 2) its interpretation otherwise was at odds with its plain language. *Id*. To give ACHP deference would impermissibly allow it "'to create a *de facto* new regulation.'" *Id*. (citing *Christensen v. Harris Cnty.*, 529 U.S. 576, 587-88 (2000)). Plaintiffs have not given the Court any reason to revisit these conclusions.

Plaintiffs also argue that § 800.13(b)(3) should not apply because USFS has not "approved the undertaking" at issue, and therefore, full consultation is required. Pl. Br. at 36. For the first time, Plaintiffs claim the relevant undertaking with respect to Claim 3 is the *VER determination*, and not the approval of the Plan. That is inconsistent with the Amended Complaint, which identifies the approved undertaking as the approval of the Plan. Am. Compl. ¶ 85 (Doc. 115).[17] Plaintiffs also suggest that § 800.13(b) does not apply because that section applies to historic properties found after consultation was completed and, because USFS never completed consultation with respect to Red Butte, none of § 800.13(b) applies. Pl. Br. at 37. That also is at odds with the Amended Complaint, that states that consultation was completed, and that Claim 3 focuses on duties under §800.13(b) in light of the Red Butte TCP designation. Am. Compl. ¶¶ 85-86 (Doc. 115). Plaintiffs cannot amend their claim at this late date in their brief.

Finally, Plaintiffs change the focus of their claim to whether USFS completed consultation under § 800.13(b)(3) properly. Pl. Br. at 37-39. This claim is well outside the Amended Complaint. Claim 3 is limited to a 5 U.S.C. § 706(1) claim that USFS withheld and delayed consultation under 36 C.F.R. § 800.13(b)(1) & (c), and contains no

[17] In any event, that claim is presented in Plaintiffs' Claim 2.

allegations regarding USFS's application of § 800.13(b)(3). Am. Compl. ¶ 88 (Doc. 115). The Court should reject this line of argument out of hand.

In any event, Plaintiffs argue that USFS failed to meet § 800.13(b)(3)'s time lines and purposely evaded full consultation under NHPA. That is not true. The record makes clear, as the Court acknowledged, USFS properly implemented § 800.13(b)(3). PI Order at 15. It notified the Havasupai and others of its assessment of the situation and its plan of action, consistent with the regulation. *Id.*[18] Given that this case did not involve an actual discovery of an historic property (such as coming across an artifact with a bulldozer), but rather the change of a known area's legal status, the 48-hour timing mechanisms were not perfectly fitted to the occasion, as the Court noted. *Id.* Therefore, USFS gave the Tribe far more time and process than 800.13(b)(3) required (30 days to respond instead of 48 hours).[19] Thereafter, USFS worked for months trying to complete a memorandum of agreement, despite § 800.13(b)(3) containing no requirement to do so. Williams Ltr. (ARDoc. 579:11394-95); Email from M. Hangan, USFS, to K. Harris (Jan. 18, 2013) (ARDoc. 651:12320); *see* 36 C.F.R. § 800.13(b)(3) (agencies only must "make reasonable efforts to avoid, minimize, or mitigate adverse effects" to historic properties through "appropriate actions."). In light of this lawsuit, USFS concluded that an agreement was unlikely, and that a voluntary arrangement with EFR was an appropriate path forward. ARDoc. 668: 12394-95; Hangan Decl. ¶¶ 2-10 (Doc. 53-4). Plaintiffs' claim that USFS attempted to avoid compliance with the NHPA is baseless.

V. USFS's Determination that EFR's Mine Claims Have VER Is Not Arbitrary and Capricious (Claim 4).

Plaintiffs argue that USFS failed to consider certain costs when it determined that EFR's mining claims had VER. Pl. Br. at 11-15. These costs are related to: (1) radionuclide and water monitoring; (2) mitigation related to potential radionuclide

[18] Plaintiffs argue that USFS waited a year to tell them EFR's plan to resume active mining. Pl. Br. at 38. That is not so. ARDocs. 448-50, 464 (USFS immediately began contacting tribes and the SHPO to discuss the resumption of mining and Red Butte).

[19] Plaintiffs' complaint about USFS's implementation of § 800.13(b)(3) is confounding. They admit the 48-hour time periods therein are for the protection of operators and their projects. Pl. Br. at 38 n.25. Apparently, Plaintiffs would have been happy to have had just two days to review the circumstances, gather their thoughts, and relay them to USFS.

contamination; (3) compliance with the NHPA; and, (4) implementing wildlife conservation measures. Plaintiffs are mistaken. EFR provided USFS costs to implement its Plan and operate in compliance with applicable laws, which included the costs Plaintiffs reference. The Court's review of the VER determination is highly deferential; USFS's action is presumed valid, and must be affirmed if a reasonable basis exists for it. *Ctr. for Biological Diversity v. Jewell*, 2014 WL 5703029, at *5 (D. Ariz. Nov. 5, 2014).

EFR submitted comprehensive capital and operating cost information regarding the development and operation of the Mine under the Plan, in compliance with law. Ltr. from D. Rykman, EFR, to M. Linden, USFS (ARDoc. 670:12426). Consistent with guidance,[20] USFS independently verified these data and inserted them into a "well-accepted" computer program, known as APEX, "specifically designed for the economic evaluation of mining projects." Mineral Exam at 18, 22 (ARDoc. 525:10500, 10504-05). Using APEX, USFS determined that after all costs and taxes were considered, the net sum of cash flow at the Mine –*i.e.*, the profit–was $29,350,736. *Id*. at 23 (ARDoc. 525; 10505). That results in an internal rate of return ("IROR") of 78%, which is 6.5 times greater than the USFS conservatively estimated minimum mining industry IROR of 12%. *Id*. In short, the Mine is very profitable. Based on USFS's calculations, the Mine likely could withstand a drastic increase in costs (or decrease in uranium price) and remain profitable.[21] Plaintiffs do not disagree with these conclusions, except to make the unsupported statement that the Mine has a "slim profit margin." Pl. Br. at 15.

With respect to the cost of implementing the Plan in compliance with law, USFS considered: mining and site general and administrative ("G&A") costs (*i.e.*, the cost operating under the Plan at $110.42/ton, which is $9,298,136.94; indirect operating costs at $3,078,607.92 ($36.56/ton) (which includes costs for permitting and land related issues); capital costs related to required surface facilities at $508,000; capital costs of permitting and engineering at $218,000; and, reclamation costs at $450,000. In addition, a

[20] BLM Mineral Examiners Handbook, H-3890-1, at V-10 (ARDoc. 374:7436).
[21] USFS ran a sensitivity analysis using a price per pound fourteen dollars less than the amount used for the standard analysis and concluded the Mine would remain very profitable with an IROR of 36%. *Id*. at 23 (ARDoc. 525:10505).

contingency of $1.7 million was included. Mineral Exam at 17-20 (ARDoc. 525:10499-502). These costs total $15,252,744.86. Plaintiffs do not disagree with these costs.

Plaintiffs assert that USFS failed to include costs in the four categories noted above. Regarding monitoring and wildlife conservation measures (categories 1 and 4), these costs were included. Decl. of Harold Roberts ¶¶ 8-9 (Ex. 1). Costs related to the construction of the monitoring well and powerlines were excluded as sunk costs, because they were built before the VER determination. *Id.* ¶ 12; Mineral Exam at 18 (ARDoc. 525:10500). The powerlines were made with crossarms, insulators, and adequate spacing so that condors[22] or other birds could not be harmed. Roberts Decl. ¶ 12.[23] Further, filled trucks on the haul roads will be covered to prevent leakage or wildlife access. *Id.* ¶ 13. Assuming monitoring and conservation costs were not accounted for, they were calculated in the EIS at a total of $131,060. (ARDoc. 3:538). At triple that amount ($393,180), overly accounting for inflation, those costs are well within the $1.7 million contingency.

Regarding potential radionuclide contamination (category 2), Plaintiffs assert that monitoring will invalidate assumptions about regional groundwater and impacts thereto from the Mine, and in turn, USFS will require EFR to modify its Plan to incorporate new mitigation measures. Pl. Br. at 13. These assertions have no basis in fact or the record, and are speculation about the future. As of the dates considered in the Mineral Exam (the segregation date (July 21, 2009), and the exam date (April 17, 2012)), such measures were not required, and were not (and still are not) reasonably foreseeable. Mineral Exam at 5 (ARDoc. 525:10487). USFS is not required to speculate as to unknown, and potential future costs when preparing a mineral exam. *U.S. v. Dwyer*, 175 IBLA 100, 118 (2008); *U.S. v. Garcia*, 161 IBLA 235, 257 (2004); *U.S. v. Clouser*, 144 IBLA 110, 130 (1998); *U.S. v. Highsmith*, 137 IBLA 262, 278 (1997); *see* Linden Decl. ¶ 12 (Doc. 53-2).

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[22] The Arizona condor population is "nonessential and experimental." Therefore, USFS rightly concluded only to make recommendations to EFR regarding the condor. Mine Review at 26-27 (ARDoc. 533:10619-20). These recommendations post-date the VER determination, and thus, could not have been considered. Nevertheless, any costs would be covered by the contingency. Roberts Decl. ¶ 10.

[23] Plaintiffs' reference to mitigation measures in ARDocs. 582 and 628 post-date the VER determination, and could not have been considered by USFS. Pl. Br. at 14. Regardless, the cost of replacing foraging habit was included as wildlife conservation, as noted.

Plaintiffs' citation to the 2010 USGS report does not support their position. That is natural background/baseline information (*i.e.*, prior to mining) about the Mine. It has been known to USFS since at least 2010, and has not compelled changes to EFR's Plan. Mine Review at 31 (ARDoc. 533:10624). Further, in the Withdrawal EIS, BLM and USFS concluded there was "a low probability of groundwater contamination from uranium mining," and that they needed additional sampling to make conclusions regarding such impacts. *Yount v. Salazar*, 2014 WL 4904423, at *15-17 (D. Ariz. Sept. 30, 2014).

Regarding NHPA compliance (category 3), Plaintiffs assert that someday "serious measures" to minimize impacts to Red Butte will be required. Pl. Br. at 14. This also is speculation as to what, if any, measures might be put in place. Any additional mitigation measures regarding Red Butte have not been required and were not (and still are not) reasonably foreseeable as of the date of the Mineral Exam. *See Dwyer* and related cases, *supra*. Despite this, potential future costs related to these issues that are not covered as indirect costs, would be covered by the contingency. Roberts Decl. ¶ 11.

USFS performed a comprehensive cost analysis of EFR's claims. This accounted for all known and reasonably foreseeable costs related to the operation of the Mine under the Plan and applicable environmental laws, and provided a contingency for unexpected costs. Based on these conservative estimates, the Mine was well above the threshold for establishing VER. USFS did not entirely fail to consider an important part of the problem, and a reasonable basis exists for its decision. *Jewell*, 2014 WL 5703029, at *5.

VI. Conclusion

For the forgoing reasons, EFR's and USFS's Motions for Summary Judgment should be granted, and Plaintiffs' Motion for Summary Judgment should be denied.

RESPECTFULLY SUBMITTED this 19th day of November, 2014.

GALLAGHER & KENNEDY, P.A. and
HUNTON & WILLIAMS LLP

By: /s/ David J. DePippo

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Attorneys for Defendant-Intervenors Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC

CERTIFICATE OF SERVICE

I hereby certify that on the 19th day of November, 2014, I electronically transmitted the attached document to the Clerk's Office using the CM/ECF System for filing and transmittal of a Notice of Electronic Filing to Clerk's to all CM/ECF registrants in this case.

By: /s/ David J. DePippo

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Attorneys for Plaintiffs

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA
PRESCOTT DIVISION

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERSITY; SIERRA CLUB; and HAVASUPAI TRIBE, Plaintiffs vs. MICHAEL WILLIAMS, Forest Supervisor, Kaibab National Forest; and UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture, Defendant.	Case No. 13-8045-DGC DECLARATION OF KIM CRUMBO

I, Kim Crumbo, declare under penalty of perjury that the following is true and correct and within my personal knowledge.

1. I was born in Provo, Utah, in 1947. I am a Vietnam Veteran, having served as a Navy SEAL on over 70 combat operations. I worked as a professional river guide on the Colorado River from 1971-1980, and worked for the National Park Service as a River Ranger and Wilderness Coordinator at Grand Canyon National Park from 1980-1999, retiring after 20 years.

2. Since 1999, I have worked primarily for Grand Canyon Wildlands Council, a non-profit organization dedicated to protecting and restoring Wild Nature in the Grand Canyon Ecoregion, which includes the Kaibab National Forest.

3. Between 1981 and 2010, I resided at Grand Canyon Village. Currently, I reside at 3275 Taylor Avenue, Ogden, Utah. I have resided at this location for 2.5 years.

4. I have been a member of the Sierra Club since 1998. The Sierra Club is a nationwide, non-profit organization dedicated to protecting and restoring the quality of the environment. It is comprised of over 800,000 members, in all 50 states, including 13,000 plus members in Arizona. I joined the Sierra Club in part because of my concern over threats to our national forests, National Parks, and public wildlands administered by the Bureau of Land Management. This present lawsuit to protect the Tusayan Ranger District of the Kaibab National Forest (headwaters for Havasu Creek), the Grand Canyon watershed, and the Colorado River from the Canyon Mine advances the reasons I joined and remain a member of the Sierra Club.

5. As a member of the Sierra Club, I also serve on the Executive Committee for the Utah Chapter of the Sierra Club. In that capacity I assist with monitoring activities of the U.S. Forest Service on the three national forests in Arizona, including the Kaibab National Forest, which is located near Grand Canyon National Park. I also develop wilderness and wildlife habitat area recommendations; distribute press releases and conduct follow-up media work related to forest management issues in Arizona; and attend forest health and general forest issue meetings and workshops.

6. One of Sierra Club's campaigns is known as the Grand Canyon Protection campaign that encompasses the entire Grand Canyon watershed. I and other members of the Sierra Club have worked for many years to protect the region from harmful projects and take affirmative actions to restore degraded areas, including projects and campaigns designed to:

a. stop water diversion projects from the Colorado River, including a proposal for a water pipeline from Jackass Canyon;

b. prevent excessive groundwater pumping;

c. restore natural flows out of Glen Canyon Dam;

d. advocate for threatened and endangered species in the watershed such as humpback chub and the desert tortoise;

e. protect the water quality and quantity of the Grand Canyon's fragile seeps and springs; and

f. protect the region's watershed from excessive grazing and from bad logging projects.

7. Since 1969, and continuing today, my family and I have extensively explored by hiking and by four-wheel drive the public lands adjacent to Grand Canyon National Park. Until our recent move back to Utah in the summer of 2010, the Tusayan Ranger District was essentially our backyard for thirty years, and we explored the forest from our home on the South Rim of Grand Canyon National Park by hiking and 4-wheel drive, as well as regularly jogged its many trails leading in and out of Grand Canyon National Park. Gii Giidwissa (Red Butte), sacred to the Havasupai, is the most conspicuous landmark on the Tusayan Forest. An ancient lava flow remnant caps the only Mesozoic rocks close to the South Rim, and its sheltered recesses allow a unique stand of aspen to persist. I have on several occasions visited the site to inspect the Mesozoic formations and the better-known archaeological sites, but respectfully decline to hike the summit. On my frequent visits to the South Rim, I generally stop to contemplate the spiritual significance the Havasupai give the place as well as to admire the small mountain and its symbolic importance to me

personally. Evidence of past mining activities provides vivid incentives to stop further outrageous desecration.

8. I regularly return to the Grand Canyon and both the Tusayan and North Kaibab Ranger Districts of the Kaibab National Forest—at least a half-dozen times a year - not only for recreational activities and to visit friends, but also as part of my professional responsibilities with my employer, Grand Canyon Wildlands Council (GCWC). I have one extended visit planned for mid-May to provide logistic support for the Grand Canyon portion of an epic Mexico to Canada hiking and biking journey called Trek West (http://trekwest.org/). On my periodic visits to the South Rim to visit colleagues and other friends, I generally stop to revisit old growth forest sites to locate bird and other wildlife that frequent the area. I routinely use the quiet forest for camping rather than the busy Park campgrounds.

9. I am very concerned that the proposed and ongoing uranium mining activities will impair my ability to enjoy the Forest surrounding Grand Canyon National Park. For over 40 years, Grand Canyon National Park and its native wildlife have played a central role in my life. From my first hike in 1969 (a week before my first deployment to Vietnam), to my eight years as a Grand Canyon river guide, to the 20 years as a National Park river ranger and wilderness manager, and including the additional ten years as a resident, "The Canyon" and its wildlife (especially its mammalian carnivores and raptors, all vulnerable to disruptions caused by mining activities), remain important to me.

10. In my opinion, the Tusayan Ranger District of the Kaibab National Forest is not being properly managed according to federal environmental laws. This leaves the exceptional resource found on the District, Grand Canyon National Park, and the Colorado River, such as wildlife habitat, scenic values, water quality, and so forth, at risk when controversial uranium mining projects like the Canyon Mine are allowed to go forward without current analysis of all of the potential environmental impacts. I am deeply concerned that the Forest Service is not adequately protecting the Tusayan Ranger District resources from mining projects like Canyon Mine, including the region's groundwater

resources that are necessary to maintain seeps and springs that sustain wildlife populations and habitat.

11. I along with other members of the Sierra Club regularly comment on and participate in the public processes associated with projects on the Kaibab National Forest, such as the Canyon Mine. The Forest Service has precluded our ability to participate in the process associated with the Canyon Mine project in this case. The Forest Service has not required Energy Fuels to submit a new or revised plan of operations for the Mine, has failed to consider and disclose the environmental impacts of the Canyon Mine as required under the National Environmental Policy Act (NEPA) prior to allowing activities at Canyon Mine to recommence, has failed to complete the required Section 6 consultation under the National Historic Preservation Act (NHPA) and has failed to require adequate permitting for the emissions of radon occurring in connection with mining activities at the Mine. If the Forest Service was ordered to comply with NEPA and the NHPA, I and the Sierra Club would have the opportunity to be involved in the decisionmaking process, and would insure that the responsible agency decisionmakers have the information they need concerning potential impacts to the environment prior to making their decisions.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 3, 2013

Kim Crumbo

Kim H. Crumbo
3275 Taylor Avenue
Ogden, UT 84403

USDA United States Department of Agriculture | Forest Service | Kaibab National Forest | 800 South Sixth Street Williams, AZ 86046-2899 (928) 635-8200

File Code: 2810
Date: September 23, 2011

MR HAROLD R ROBERTS
EXECUTIVE VICE PRESIDENT - US OPERATIONS
DENISON MINES (USA) CORP
1050 17TH ST
STE 950
DENVER, CO 80265

Dear Mr. Roberts:

I appreciated the opportunity to meet with you and your colleagues here in my office earlier this month, when we discussed your intent to resume mining operations at the Canyon Mine. Thank you for your letter of September 13 that followed up on our meeting.

The Forest Service's next steps are to conduct a review of possible new information since the NEPA decision was made and also to complete a mineral exam at the Mine.

The guidance regarding reviews of new information after a decision has been made is included in the Forest Service's NEPA Handbook (FSH 1909.15, Chapter 18.1). I have enclosed a copy of that policy for your review. The review is scheduled for October. As you will see in the enclosure, the outcome of that review will inform our next steps.

A mineral exam is scheduled to determine that your company has valid existing rights for the Canyon Mine location. This is a requirement for any public domain lands managed by the Forest Service that have been withdrawn from mineral entry (Federal Register/Vol. 74, No. 138/ July 21, 2009/ Notices, pp 35887-88) and must be completed prior to approving the plan of operation. The field work for the exam is scheduled to take place in October and the final report released by the end of December.

We will inform you regarding the outcomes of the new information review and the mineral exams when they are completed. Please contact John Brown at 928/635-8275 or Tom Mutz at 928/635-5661 if you would like further information.

Sincerely,

/s/ Michael R. Williams
MICHAEL R. WILLIAMS
Forest Supervisor

Enclosure

cc: Nicholas Larson, Michael A Linden, Liz M Schuppert, John W Brown, Thomas Mutz

18.1 - Review and Documentation of New Information Received After Decision Has Been Made

If new information or changed circumstances relating to the environmental impacts of a proposed action come to the attention of the responsible official after a decision has been made and prior to completion of the approved program or project, the responsible official should review the information carefully to determine its importance. Consideration should be given to whether or not the new information or changed circumstances are within the scope and range of effects considered in the original analysis.

If, after an interdisciplinary review and consideration of new information within the context of the overall program or project, the responsible official determines that a correction, supplement, or revision to an environmental document is not necessary, implementation should continue.

Document the results of the interdisciplinary review in the appropriate program or project file. This documentation is sometimes called a supplemental information report (SIR) and should conclude with whether or not a correction, supplement, or revision is needed, and if not, the reasons why.

A SIR is not a NEPA document and therefore cannot be used to fulfill the requirements for a revised or supplemental EA or EIS. A SIR cannot repair deficiencies in the original environmental analysis or documentation, nor can it change a decision.

If the responsible official determines that a correction, supplement, or revision to an environmental document is necessary, follow the relevant direction in sections 18.2 - 18.4.

18.2 - Reconsideration of Decisions Based on an Environmental Impact Statement

1. Correction. Use errata sheets to make simple corrections.

2. Supplement.

   (c) Agencies:

   (1) Shall prepare supplements to either draft or final environmental impact statements if:

   (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

   (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

(3) Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.

(4) Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council. (40 CFR 1502.9(c))

3. Revision.

If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion . . . (40 CFR 1502.9(a))

If the responsible official determines, based on evaluations described in section 18.1, that a supplement to or revision of an EIS is appropriate, issue a notice of intent to supplement or revise an EIS.

Distribute any corrections, supplements, and revisions to all holders of the subject EIS. If there is good reason to believe the holder of the EIS will have a copy of the draft or final EIS, only the supplement needs to be circulated. However, if there is reason to believe the holder will not have the entire EIS, both the supplement and the EIS itself should be circulated.

After completion of the final supplement or final EIS, issue a new record of decision consistent with the scope of the supplement or revision. Follow the instructions in chapter 20.

18.3 - Reconsideration of Decisions Categorically Excluded From Environmental Documentation

Take no further action if an interdisciplinary review of the new information shows that the proposed action still fits within the identified category in section 31, and no extraordinary circumstances exist. For decisions for which a project or case file and decision memo have been prepared, document the review in the project or case file. For decisions for which a decision memo was not prepared, no documentation of the review is necessary.

If the new information or changed circumstances require a new or changed decision that can be categorically excluded from documentation, follow the instructions in chapter 30. If the new information indicates that extraordinary circumstances are now present and the proposed action may have a significant impact on the human environment, file a notice of intent to prepare an EIS. Follow the instructions in chapter 20.

If the new information indicates that extraordinary circumstances are now present but the significance of the impacts on the human environment are uncertain, prepare an EA. Follow the instructions in chapter 40.

FILING FEE $10.00

DEPARTMENT OF WATER RESOURCES (DWR)
NOTICE OF INTENTION TO DRILL OR DEEPEN A WELL
OUTSIDE OF AN ACTIVE MANAGEMENT AREA

AUG 1986 DEPARTMENT OF WATER RESOURCES

OCT 1986 DEPARTMENT OF WATER RESOURCES

Section 45-596, Arizona Revised Statutes, provides: In an area not subject to active management, a person may not drill or cause to be drilled any well or deepen an existing well without first filing a Notice of Intention to Drill with the Department.

NORTH
NW 1/4 — NE 1/4
X
WEST — EAST
SW 1/4 — SE 1/4
SOUTH

INDICATE WELL LOCATION BY X
(Above diagram represents one 640 acre section)

WELL/LAND LOCATION:

1. Township 29N N/S
2. Range 3E E/W
3. Section 20
4. ~~NW 1/4~~, ~~SE 1/4~~, NW 1/4
   10 acre subdivision
5. County Coconino
6. Owner of well:
   Energy Fuels Nuclear, Inc.
   Name
   1200 17th St. Suite 2500
   Address
   Denver, CO 80202
   City State Zip
   Telephone (303) 623-8317
7. Owner of land:
   Energy Fuels Nuclear, Inc
   Name
   1200 17th St. Suite 2500
   Address
   Denver, CO 80202
   City State Zip

602-774-0609 - 643-7321

DESCRIPTION OF WELL:

8. Diameter 6-10 inches
   Depth 3000-4000 feet
9. Type of casing Steel
10. Design pump capacity:
    10-20 gallons per minute
11. Estimate of total annual pumping: 7 acre feet
12. Principal use of water:
    Culinary water supply for ~~mine and offices.~~
    (Be Specific)
13. Other uses intended:
    Drill water and dust control
    (Be Specific)
14. If for irrigation, state the number of acres to be irrigated:
    N/A acres
15. Construction will start about:
    October 1986
    Month Year

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
FILE NO. A (29-3) 20 bcd ~~bdb~~
FILED 10-6-86 BY S.V.
INPUT ENTERED OCT 08 1986 BY
DUPLICATE MAILED 10-7-86 BY S.V.
REGISTRATION NO. 55-515772
INA
W/S 02 S/B

PLACE OF USE:

16. Township 29N N/S
17. Range 3E E/W
18. Section 20
19. Legal description of land Section 20, T.29N., R.3E., Coconino County
20. Type well:
    X Exempt
    ✓ Non-Exempt
21. Action Requested:
    Drill X Deepen Replace
    55-
22. This notice filed by:
    Owner XXX
    Lessee
    Energy Fuels Nuclear, I
    Name
    1200 17th St. Suite 25
    Address
    Denver, CO 80202
    City State Zip
    Telephone (303) 623-8317
23. Driller's Name:
    Bob James Drilling & Expl.
    Name
    5804 Cedarwood Drive
    Address
    Farmington, N.M. 87401
    City State Zip
    437 none
    DWR License Number

GENERAL INSTRUCTIONS

1. Fill out this form in duplicate and send to 99 East Virginia, Suite 100, Phoenix, Az. 85004.
2. For specific instructions, limitations and conditions, see the reverse side of this form.
3. This form is to be used to drill, deepen or replace a well outside of an Active Management Area.
4. If the well is a replacement or deepening of a [illegible] state the registration number of the existing well in Item 21.
5. Construction standards for new and replacement [illegible] and abandonment of existing wells shall be in accordance with Department [illegible] Regulations.

MICROFILMED

I state that this Notice is filed in compliance with ARS §45-596 and is complete and correct to the best of my knowledge and belief and that I understand the limitations under which I must operate this well set forth on the reverse side of this form.

DATE 8/5/86 Signature of Person Filing Lawrence L. Casebolt

DWR-55-41-10/83

005556

SPECIFIC INSTRUCTIONS, LIMITATIONS AND CONDITIONS

1. Upon receipt of the return of this annotated Notice, the owner is authorized to proceed in drilling or deepening the well as set forth on this Notice.

2. An exempt well means a well having a pump with a maximum capacity of not more than thirty-five (35) gallons per minute and may include the application of water to less than two (2) acres of land to produce plants or parts of plants for sale, human consumption or for use as feed for livestock, range livestock or poultry.

3. Only one exempt well may be drilled or used to serve the same use at the same location.

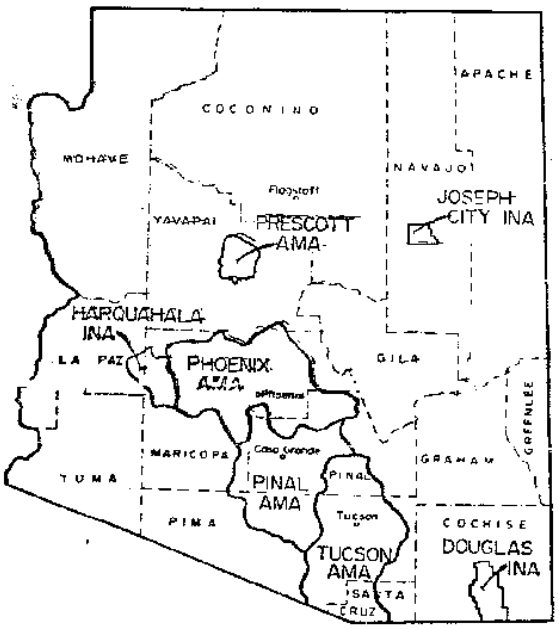
4. A non-exempt well is any well which exceeds the limitations, as indicated in paragraph 2 above. However, water from a non-exempt well located in an Irrigation Non-Expansion Area, may not be withdrawn to irrigate any acres which are not eligible to be irrigated pursuant to ARS §45-434 or §45-437. Also, owners of non-exempt wells located in Irrigation Non-Expansion Areas, are subject to the measuring device and annual report requirements of ARS §45-437.

5. The drilling or deepening of this well shall be completed within one (1) year of the date of this Notice.

6. Within thirty (30) days after the installation of pumping equipment on this well, the registered well owner shall file the prescribed Completion Report. A form for this purpose will be furnished to the registered owner with the return of an annotated copy of this Notice.

7. The person to whom a well is registered shall notify the Department of a change in ownership or a change in data relating to this well. The prescribed form for these purposes will be furnished to the registered owner with the return of the annotated copy of this Notice.

8. A sketch map showing the general boundaries of the Active Management Areas and Irrigation Non-Expansion Areas is shown at the right. Maps of greater detail are available on request.



DEC 1986
DEPARTMENT OF WATER RESOURCES

STATE OF ARIZONA
DEPARTMENT OF WATER RESOURCES
99 EAST VIRGINIA AVENUE
PHOENIX, ARIZONA 85004

WELL DRILLER REPORT

This report should be prepared by the driller in all detail and filed with the Department within 30 days following completion of the well.

1. Owner Energy Fuels Nuclear, Inc.
Name
P.O. Box 36 Fredonia, Arizona 86022
Mailing Address

2. Driller Bob James Drilling and Exploration Company
Name
5804 Cedar wood Drive, Farmington, NM 87401
Mailing Address

3. Location of well: 29 N 3 E Sec. 20 NW ¼ SE ¼ NW ¼ Cocorino County, AZ

4. Permit No. (if issued) REgistration No. 55-515772

DESCRIPTION OF WELL

5. Total depth of hole 3,086 ft.

6. Type of casing Steel, short threaded and coupled

7. Diameter and length of casing 8 5/8 in. from 0 to 2,281, 5½ in from 2,116 to 3,086.

8. Method of sealing at reduction points Portland Cement Grout

9. Perforated from 2,584 to 2,960, from ____ to ____, from ____ to ____.

10. Size of cuts 3/16 in. by 3 in. long Number of cuts per foot 16

11. If screen was installed: Length N/A ft. Diam ____ in. Type ____

12. Method of construction Rotary Drilled
drilled, dug, driven, bored, jetted, etc.

13. Date started November 16, 1986
Month Day Year

14. Date completed December 2 1986
Month Day Year

15. Depth to water N/A ft. (If flowing well, so state.)

16. Describe point from which depth measurements were made, and give sea-level elevation if available Depth measurements were taken from well collar, which is 6,507ft above sea-level.

17. If flowing well, state method of flow regulation: N/A

18. Remarks: Water was encountered at a depth of 2,870 feet and rose in the well to a static depth of 2,525 feet from the surface.

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
Registration No. 55-515772
Received ____ By ____
Entered ENTERED DEC 16 1986 By ____
File No. A(29-3)20 bdb

DWR-55-6-Rev. 8/85

LOG OF WELL

Indicate depth at which water was first encountered, and the depth and thickness of water bearing beds. If water is artesian, indicate depth at which encountered, and depth to which it rose in well.

From (feet)	To (feet)	Description of formation material
0	50	Moenkopi Formation- Mudstone Lt. red-pink with minor chert fragments.
50	340	Kaibab Formation- Interbedded siltstones, VF grained sandstones yellow tan-gray, limestones F grained Lt. yellow tan-gray.
340	550	Toroweap Form.- Quartz Sandstone, VF grained white to dark gray with minor dark gray to black shale beds. Pyrite noted locally.
550	1,125	Coconino Sandstone- Quartz Sandstone, F-med. grained Lt. tan-white, locally contains pyrite in small amounts.
1,125	1,237	Hermit Shale- Mudstone, red brown with thin interbedded VF grained quartz sandstones and siltstones.
1,237	2,242	Supai Group- Interbedded quartz sandstones, siltstones and mudstones, redbrown to Lt.orange VF-F grained. Locally transparent, brown to red chert fragments near lower contact.
2,242	2,670	Redwall Limestone- Limestone, massive Lt.gray-buff aphaniti with gray to darkbrown chert frag. and darkbrown aphanitic basal dolostone.
2,670	2,780	Temple Butte Formation- Dolostone, wh.-lt tan aphanitic, massive.
2,780	2,980	Muav Limestone-Dolostone, Lt.tan-brown aphantic, massive, thin bedded limestones Lt. gray.
2,980	3,086T.D.	Bright Angel Shale-Shale, Magenta-dk.gray very micaceous, green fissile,

A minor water flow of approximately 5 gpm was encountered from 1,100 to 1,125 ft. This water flow was sealed off with steel casing and Portland cement grout. The main water flow was first encountered at a depth of 2,870 ft., and continued to be produced to 2,980 feet. The water rose from the point of entry to a static water level of 2,525 as determined from an electric log.

I hereby certify that this well was drilled by me (or under my supervision), and that each and all of the statements herein contained are true to the best of my knowledge and belief.

Driller Lawrence L. Casebolt for Bob James Drilling
Name

5804 Cedarwood Drive
Address

Farmington, New Mexico 87401
City State Zip

Date December 12, 1986

DEPARTMENT OF WATER RESOURCES
99 East Virginia Avenue
Suite 100
Phoenix, Arizona 85004

RECEIVED MAY 13 1987 DEPT. OF WATER RESOURCES

CHANGE OF WELL INFORMATION

Registration Number 55- 515772

I request the following information be changed in Well File Number A(29-3) 20 bcd

The pumping equipment originally installed in this well have been replaced with equipment of the following description and capacity. Pump is an electric, submersible centrifugal type with a horsepower rating of 60 H.P. The pump capacity is 45 gpm. This installation was completed on 4/26/87. Test pumping was approximately 40gpm determined by measured volumn method, static groundwater level was 2,561 feet, draw down was 351 feet. Total pumping lift was 2,912.

Date May 8, , 19 87

Lawrence L. Casebolt for
Energy Fuels Nuclear, Inc.
Signature of Well Owner

STATEMENT OF CHANGE OF WELL OWNERSHIP

I, N/A, state that I am (no longer) the (new) owner of the well described below:

Township____ Range____ Section ____, ____ ¼ ____ ¼ ____ ¼

Registration #55-____ File No. ____

Previous Owner	New Owner
Address	Address
City State Zip	City State Zip

NOTE: ARS §45-593 requires that the Department be notified of change of well ownership and that the well owner is required to keep the Department's Well Registration records current and accurate. Well data and ownership changes must be submitted within 30 days after changes take place.

NOTE: SAVE THIS FORM TO REPORT FUTURE CHANGES IN OWNERSHIP OR WELL DATA SUCH AS PUMP CAPACITY, ETC.

DWR-55-51-12/83

DEPARTMENT OF WATER RESOURCES
99 East Virginia
Phoenix, Arizona 85004

Registration No. 55-515772

Owner of Well Site Energy Fuels Nuclear, Inc.

File No. A(29-3) 20 bcd

COMPLETION REPORT

1. Per A.R.S. §45-600, the Completion Report to be filed with the Department within 30 days after installation of pump equipment by the registered well owner.
2. Drawdown of the water level for a non-flowing well should be measured in feet after not less than 4 hours of continuous operation and while still in operation and for a flowing well the shut-in pressure should be measured in feet above the land or in pounds per square inch at the land surface.
3. The static groundwater level should be measured in feet from the land surface immediately prior to the well capacity test.
4. The tested pumping capacity of the well in gallons per minute for a non-flowing well should be determined by measuring the discharge of the pump after continuous operation for at least 4 hours and for a flowing well by measuring the natural flow at the land surface.

MAR 1987 DEPARTMENT OF WATER RESOURCES

LOCATION OF THE WELL:

29 North	3 East	20	NW SW SE
Township	Range	Section	¼ ¼ ¼

EQUIPMENT INSTALLED:

Kind of pump Moyno
Turbine, centrifugal, etc.

Kind of power Electric — H.P. Rating of Motor 25
Electric, natural gas, gasoline, etc.

Pumping Capacity 15 — Date installed 12/2/86
Gallons per minute

WELL TEST:

Test pumping capacity 15 — Date Well Tested 12/2/86
Gallons per minute

Method of Discharge Measurement Measured Volume
Weir, orifice, current meter, etc.

Static Groundwater Level 2,525 ft. Drawdown unknown ft.

Total Pumping Lift 2,525 ft. Drawdown N/A lbs
(Flowing Well)

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

December 12, 1986
DATE

Lawrence L. Casebolt
Signature Lawrence L. Casebolt for Energy Fuels Nuclear, Inc

P.O. Box 36
Address

Fredonia, AZ 86022
City State Zip

RECEIVED

DWR-55-7-3/84

ENTERED MAR 16 1987

005561

DEPARTMENT OF WATER RESOURCES
99 East Virginia Avenue
Suite 100
Phoenix, Arizona 85004

CHANGE OF WELL INFORMATION

Registration Number 55-515772

I request the following information be changed in Well File Number A(29-3)20 bdb

The discovery of an error in the well location survey necessitates a change in the description of the well location. The accurate location for the well is as follows: Township 29N., Range 3E., Section 20. SE ¼, SW ¼, NW ¼. Energy Fuels Nuclear, Inc. also requests a change of well status from exempt to non-exempt.

Date January 13, 19 87 for Energy Fuels Nuclear, Inc. by Lawrence T. Casebolt
Signature of Well Owner

STATEMENT OF CHANGE OF WELL OWNERSHIP

I, N/A, state that I am (no longer) the (new) owner of the well described below:

Township____ Range____ Section ____, ____ ¼ ____ ¼ ____ ¼

Registration #55-____ File No. ____

Previous Owner	New Owner
Address	Address
City State Zip	City State Zip

ENTERED JAN 23 1987

NOTE: ARS §45-593 requires that the Department be notified of change of well ownership and that the well owner is required to keep the Department's Well Registration records current and accurate. Well data and ownership changes must be submitted within 30 days after changes take place.

NOTE: SAVE THIS FORM TO REPORT FUTURE CHANGES IN OWNERSHIP OR WELL DATA SUCH AS PUMP CAPACITY, ETC.

RECEIVED JAN 20 1987 DEPT. OF WATER RESOURCES

DWR-55-51-12/83

State of Arizona

DEPARTMENT OF WATER RESOURCES

99 E. Virginia Avenue, Phoenix, Arizona 85004

BRUCE BABBITT, Governor
KATHLEEN FERRIS, Director

ENERGY FUELS NUCLEAR, INC.
1200 17th St. Ste 2500
Denver, Co. 80202

OCTOBER 7, 1986

File No. A(29-3)20 bdb
Registration No. 55-515772

Dear Well Owner:

Enclosed for your records is a copy of the Notice of Intention to Drill a well which was recently filed with this Department. This is returned to you as evidence of compliance with ARS §45-596. Also enclosed is a Completion Report to be submitted when pump equipment is installed. Your driller has been mailed separately a Well Drilling Card and a Well Drilling Report form. Your driller may not begin to drill your well until he has received the Well Drilling Card, and is required to display the Drilling Card on his rig while drilling. If you elect to change drillers, you are required to notify this Department of that fact and who the new driller is. Please ensure that any driller you elect to use is properly licensed to drill the type of well you require since licensed well drillers must pass an examination that proves they understand professional well drilling methods and they are familiar with the laws and regulations which govern well construction in Arizona.

In the event that you determine it necessary to change the location of the proposed well, you should obtain the written permission of the Department of Water Resources before proceeding with the drilling. A properly signed amended Drilling Card must be in the possession of the driller before drilling commences at a different location than originally authorized.

ARS §45-600 requires the registered well owner to submit a Completion Report within 30 days after the installation of pumping equipment. It also requires the driller to furnish this Department a complete and accurate log of the well within 30 days after completion of drilling. You should insist and ensure that both of these are done.

For your <u>future</u> use, a Change of Well Information form is enclosed should it become needed. Per ARS §45-593, the person to whom a well is registered shall notify this Department of a change in ownership of the well and/or information pertaining to the physical characteristics of the well in order to keep the well registration file current and accurate.

Sincerely,

Richard A. Cessner
Chief, Operations Division

RAC: SV
Enclosures

Think Conservation!

DWR-55-1-10/84 (Revised)

Office of Director 255-1554
Administration 255-1550, Water Resources and Flood Control Planning 255-1566, Dam Safety 255-1541,
Flood Warning Office 255-1548, Water Rights Administration 255-1581, Hydrology 255-1586.

ENERGY FUELS NUCLEAR, INC.
1200 17th St. Ste 2500
Denver, Co 80202

STATE OF ARIZONA
DEPARTMENT OF WATER RESOURCES
WATER RIGHTS ADMINISTRATION
99 EAST VIRGINIA
PHOENIX, ARIZONA 85004

RECEIPT

KIND ENTRY	FILE REFERENCE NO.
55	515772
	THRU

ACCOUNT NO. FUND SOURCE	AGENCY	CHAPTER	DIV.	INT. ACCT.	ITEM DESCRIPTION	RATE	$ AMOUNT
					FILING FEE FOR NOTICE OF INTENT TO DRILL	10.00	10.00
					OR DEEPEN 1 EXEMPT WELL OUTSIDE OF AN		
					ACTIVE MANAGEMENT AREA		
					REG. NO. 55-515772		
					FILE NO. A(29-3)20 bdb		
					CHECK NO. 2251 10-8-86 sv		

TOTAL $ 10.00

OCT 1986 PAID

As soon as you know your new address, mail this card to all of the people, businesses, and publications who send you mail.

For publications, tape an old address label over name and old address sections and complete new address.

Your Name (Print or type. Last name, first name, middle initial.)
Energy Fuels Nuclear, Inc.

Old Address	No. & Street: P.O. BOX	Apt./Suite No.	PO Box: 1320	RR No.	Rural Box No.
	City: KANAB,	State: UT	ZIP+4: 8 4 7 4 1 –		
New Address	No. & Street: HC 64, Box 152	Apt./Suite No.	PO Box	RR No.	Rural Box No.
	City: Fredonia,	State: AZ	ZIP+4: 8 6 0 2 2 –		
Sign Here	ENTERED NOV 24 1992	Date new address in effect: 9/1/92		Keyline No. (If any)	

PS Form 3576, November 1990 RECEIVER: Be sure to record the above new address.

A(29-3)20 BCD
515772

UNCLAIMED

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT
Form 20. Notice of Intent to Unseal

Instructions for this form: http://www.ca9.uscourts.gov/forms/form20instructions.pdf

9th Cir. Case Number(s) 20-16401

Case Name Grand Canyon Trust, et al., v. Provencio, et al.

Pursuant to Circuit Rule 27-13(f), I intend to file the following document or set of documents publicly although the document or set of documents were filed under seal in the district court or agency. The document or set of documents filed herewith provisionally under seal are:

Appellants' Further Excerpts of Record: Volume 2 of 2 (containing Administrative Record Doc. 674)

☒ I understand that unless any other party files a motion to maintain the seal **within 21 days**, these documents will be unsealed without further notice.

Position of the other party or parties, if known:

Signature s/ Aaron M. Paul **Date** June 1, 2021

*(use "*s/[typed name]*" to sign electronically-filed documents)*

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Form 15. Certificate of Service for Electronic Filing

Instructions for this form: http://www.ca9.uscourts.gov/forms/form15instructions.pdf

9th Cir. Case Number(s) 20-16401

I hereby certify that I electronically filed the foregoing/attached document(s) on this date with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit using the Appellate Electronic Filing system.

Service on Case Participants Who Are Registered for Electronic Filing:

☒ I certify that I served the foregoing/attached document(s) via email to all registered case participants on this date because it is a sealed filing or is submitted as an original petition or other original proceeding and therefore cannot be served via the Appellate Electronic Filing system.

Service on Case Participants Who Are NOT Registered for Electronic Filing:

☐ I certify that I served the foregoing/attached document(s) on this date by hand delivery, mail, third party commercial carrier for delivery within 3 calendar days, or, having obtained prior consent, by email to the following unregistered case participants *(list each name and mailing/email address)*:

Description of Document(s) *(required for all documents)*:

Form 20, Notice of Intent to Unseal and Appellants' Further Excerpts of Record: Volume 2

Signature s/ Aaron M. Paul **Date** June 1, 2021

(use "s/[typed name]" to sign electronically-filed documents)

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

No. 20-16401

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GRAND CANYON TRUST, *et al.*,
Plaintiffs-Appellants,

v.

HEATHER PROVENCIO, *et al.*,
Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA) INC., *et al.*,
Intervenor-Defendants-Appellees.

Appeal from the United States District Court for the District of Arizona
No. 3:13-CV-8045 (Hon. David G. Campbell)

INTERVENOR-DEFENDANTS-APPELLEES' UNOPPOSED MOTION TO SEAL PLAINTIFFS-APPELLANTS' FURTHER EXCERPTS OF RECORD: VOLUME 2 OF 2 (2-FER-161)

GALLAGHER & KENNEDY, P.A.
Bradley J. Glass (Bar No. 022463)
brad.glass@gknet.com
2575 East Camelback Road
Phoenix, Arizona 85016-9225
(602) 530-8000

Attorney for Intervenor-Defendants-Appellees

June 23, 2021

MOTION TO SEAL

Pursuant to Circuit Rule 27-13(g), Intervenor-Defendants-Appellees Energy Fuels Resources (USA) Inc. and EFR Arizona Strip LLC (collectively, "EFR") hereby move the Court to seal Plaintiffs-Appellants Grand Canyon Trust, Center for Biological Diversity, and Sierra Club's (collectively, the "Trust") Further Excerpts of Record ("FER"): Volume 2 of 2 (2-FER-161) because it contains EFR's confidential information that is exempt from public disclosure under the Freedom of Information Act ("FOIA"), applicable United States Forest Service ("Forest Service") regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, and applicable guidance for mineral examiners. EFR has repeatedly and consistently taken measures to ensure that its business information has been maintained as confidential and it has not been publicly disclosed by EFR, the Forest Service, or the District Court, which entered a protective order that prevented the disclosure of the confidential information and sealed that information from public disclosure. For the reasons set forth below, EFR requests that the Court seal FER Volume 2 of 2 (2-FER-161) to avoid the public disclosure of EFR's confidential business information and to prevent harm to EFR.

The Federal-Defendants-Appellees (hereinafter, the "Forest Service") do not object to or oppose this Motion. The Trust does not oppose the relief EFR seeks in this Motion but takes the position—based on *Kamakana v. City & County of*

Honolulu, 447 F.3d 1172, 1185 (9th Cir. 2006)—that it does not "suffice to show … that a document merits sealing because it would be exempt from disclosure under the Freedom of Information Act."

SUPPORTING MEMORANDUM

A. FACTUAL BACKGROUND

1. The Withdrawal

In January 2012, the Secretary of the Department of the Interior ("DOI"), pursuant to the Federal Land Policy and Management Act ("FLPMA"), 42 U.S.C. § 1714(A), withdrew approximately 633,547 acres of public lands and 360,002 acres of National Forest System lands for up to 20 years from location and entry under the Mining Law of 1872 (the "Withdrawal"). 77 Fed. Reg. 2317-01, 2012 WL 122658 (Jan. 18, 2012). The Withdrawal, which included the location of the Pinyon Plain Mine (the "Mine"),[1] had been proposed by DOI in 2009. 74 Fed. Reg. 35,887, 2009 WL 2143370 (July 21, 2009). DOI undertook extensive study and preparation of an Environmental Impact Statement ("EIS") before finalizing the Withdrawal. The EIS noted the existence of the Mine and stated its assumption that the Mine would continue operations. 2-ER-262-63.

[1] EFR changed the name of the Mine from the "Canyon Mine" to the "Pinyon Plain Mine" to clarify that the Mine is not located in or directly next to the Grand Canyon National Park. The Mine is located in a naturally cleared plain that is approximately nine miles from the South Rim of the Grand Canyon and six miles from the boundary of the Grand Canyon National Park.

2. The VER Determination

In August 2011, EFR notified the Forest Service that it intended to resume operations at the Mine under its Plan of Operations that was approved in 1986. 2-SER-358. In response, the Forest Service, while acknowledging it was not required, decided to complete the VER Determination. 2-ER-208-53. The purpose of the VER Determination was to confirm that EFR had valid existing rights to the uranium mineral deposits. *Id*. Although EFR asserted that it had valid existing rights to the uranium mineral deposits, had a valid Plan of Operations, and did not believe any additional government approvals were required before the Mine reopened, EFR agreed to withhold shaft sinking until the VER Determination was complete. 1-ER-6.

The VER Determination was completed on April 18, 2012 and confirmed that EFR had valid existing rights at the Mine. 2-ER-208-53. The VER Determination detailed how the Forest Service's certified mineral examiners completed their work. The mineral examiners completed their work consistent with the DOI, Bureau of Land Management's H-3890-Handbook for Mineral Examiners (the "Handbook"), which is the guide for mineral examiners and contains guidance on how to request and handle confidential information from private parties. 2-ER-209. The VER Determination used reasonable and conservative assumptions and concluded the Mine's profitability is $29,350,736. 2-ER-231. It concluded EFR

could mine, remove, transport, mill, and market uranium at a profit and the Mining Law's test for the discovery of a valuable mineral had been met and EFR had valid existing rights. 2-ER-232.

3. The Confidential Information

While completing the VER Determination, the Forest Service asked EFR to submit confidential cost information for both the Mine and EFR's Arizona 1 Mine, which is a similar ore deposit with similar capital and operating costs, so that the mineral examiners could review, assess, and verify the cost information for the mines. On November 17, 2011, EFR transmitted certain mineral and financial information to the Forest Service. *See* A.R. 012426-012428 (2013 Supplement).[2] This information included a drillhole database, geologic information, graphics and photographs, a technical report, and internal cost estimates for the Mine and the Arizona Mine. *Id.* EFR identified and clearly marked the information as confidential information. Specifically, EFR stated "**NOTICE OF CONFIDENTIAL BUSINESS INFORMATION SUBMITTED UNDER 7 C.F.R. PART 1, SUBPART 1**" at the top of the letter and stated:

> Pursuant to the provisions of 7 C.F.R. Part 1, Subpart A, which are applicable to U.S. Department of Agriculture agencies, [EFR] hereby designates the transmitted documents and information listed above as confidential business

[2] EFR has provided the Court with citations to the administrative record ("A.R.") filed in the District Court because the referenced confidential information has not been lodged with the Court.

> information. The documents and information qualify as confidential business information because they are not publicly available, and disclosure of the information therein likely would cause substantial harm to [EFR's] competitive position. The documents and information have been provided for the exclusive use of the U.S. Forest Service on the express understanding that the information therein will be treated as confidential. Accordingly, the entirety of the documents and information should be treated as confidential by the U.S. Forest Service, as should any part thereof.
>
> Pursuant to 7 C.F.R., Part 1, Subpart A, the U.S. Forest Service should maintain the enclosed documents and information as confidential, and exempt them from public records or disclosure laws, including but not limited to the Freedom of Information Act. If a request is made for public review of the documents or information, the U.S. Forest Service must notify [EFR] and provide the company with a reasonable time in which to object to their disclosure, or seek an injunction preventing disclosure.

A.R. 012426-27 (2013 Supplement). Additionally, EFR included a cover sheet for the documents that stated:

> **CONFIDENTIAL BUSINESS INFORMATION**
>
> The mineral and financial information contained herein is not publicly available and is being provided to the United States Forest Service ("USFS") for its exclusive use on the express understanding that it will be treated as confidential. [EFR] is submitting the confidential information to USFS pursuant to the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and the rules and procedures promulgated thereunder.
>
> Under the confidentiality provisions of 7 C.F.R, Part 1, Subpart A, USFS is obligated to hold the documents and information as confidential and prevent public review until a determination is made as to whether the information is confidential. In the event USFS is inclined to deny the request

> to keep the information contained herein confidential, USFS must notify [EFR] so that it may have a reasonable time in which to object to its disclosure, or seek an injunction preventing disclosure. This information should not be reproduced in whole or in part for any purpose or furnished to any other person until [EFR] has had a reasonable time in which to object to the disclosure of any specified portion of the information or seek an injunction to prevent disclosure.

A.R. 012428 (2013 Supplement). Pursuant to EFR's request, the Forest Service handled, stored, and treated the documents as confidential as required by FOIA, applicable Forest Service regulations, and guidance for mineral examiners.

On February 27, 2012, EFR provided three redacted uranium sales agreements to the Forest Service and asked that those agreements be maintained as confidential. A.R. 012436 (2013 Supplement). On March 28, 2012, EFR provided an Excel spreadsheet that contained an internal economic analysis of the Mine (the "Spreadsheet") to the Forest Service. A.R. 012396-400 (2019 Supplement). This Motion relates to a single page from the Spreadsheet, which includes detailed cashflow information for the Mine. 2-FER-161. EFR identified and clearly marked the Spreadsheet and this additional information as confidential. Notably, EFR's transmittal letter stated "**NOTICE OF CONFIDENTIAL BUSINESS INFORMATION SUBMITTED UNDER 7 C.F.R. PART 1, SUBPART A AND PURSUANT TO EXEMPTION 4 OF THE FREEDOM OF INFORMATION ACT**" at the top and asserted:

> The information contained in this letter and in the spreadsheets, market report and price memorandum attached is being provided to the United States Forest Service ("USFS") for its exclusive use on the express understanding that it will be treated as confidential. [EFR] is submitting the confidential information to USFS pursuant to the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and the rules and procedures promulgated thereunder, and Exemption 4 of the Freedom of Information Act, 5 U.S.C. § 552.
>
> Under the confidentiality provisions of 7 C.F.R. Part 1, Subpart A, and Exemption 4 of the Freedom of Information Act, USFS is obligated to hold the documents as confidential and prevent pubic review until a determination is made as to whether the information is confidential. In the event USFS is inclined to deny the request to keep the information contained herein confidential, USFS must notify [EFR] so that it may have a reasonable time in which to object to its disclosure, or seek an injunction preventing disclosure. This information should not be reproduced in whole or in part for any purpose or furnished to any other person until [EFR] has had a reasonable time in which to object to the disclosure of any specified portion of the information or seek an injunction to prevent disclosure.

A.R. 012396-97 (2019 Supplement). EFR also provided the Forest Service with an internal memorandum regarding its view of the appropriate uranium price for the VER Determination. A.R. 012401 (2019 Supplement). EFR again requested that the Forest Service maintain the memorandum as confidential.

After completing the VER Determination, the Forest Service returned the paper copies of EFR's confidential information, including the Spreadsheet, on April 26, 2012 and permanently removed and deleted electronic copies of the confidential information from its files. A.R. 012443-45 (2013 Supplement).

4. FOIA and the Forest Service Regulations

FOIA generally requires federal agencies to disclose information requested by the public unless the information falls under one of nine exemptions. Exemption 4 exempts from disclosure materials that constitute "trade secrets and commercial or financial information obtained from a person which is privileged or confidential." 5 U.S.C. § 552(b)(4). Further, the Forest Service's regulations allow operators to submit confidential information and data to the Forest Service, in connection with a locatable minerals operation:

> [I]nformation and data submitted by the operator as confidential concerning trade secrets or privileged commercial or financial information will not be available for public examination. Information and data to be withheld from public examination may include . . . commercial information which relates to competitive rights of the operator.

36 C.F.R. § 228.6. The rationale behind FOIA's Exemption 4 and the Forest Service's regulation is that they allow the Forest Service to obtain information it needs to carry out its statutory duties while allowing a private party to insure that the confidential information it provides to the Forest Service will remain confidential and not be disclosed to the public, competitors, or litigants. EFR relied upon these authorities when submitting the Spreadsheet to the Forest Service, which has maintained the information as confidential and not released it publicly, including in response to several FOIA requests by the Trust.

5. Forest Service Guidance

The Forest Service's mineral examiners marked and treated the VER Determination as confidential because it included citations to EFR's confidential information. They also attached some of EFR's confidential information to the VER Determination as Appendix C: Cost Information (Company Confidential Cost Information); Appendix E: Assay Data (Company Confidential Information); and Appendix F: Apex Cost Models (Company Confidential Information). 2-ER-208-53. This approach is consistent with the guidance in the DOI, Bureau of Land Management's H-3890-3 Validity Mineral Reports, which supplements the Handbook. A.R. 006767-006816. This guidance provides:

> E. Confidential Information. Confidential information used in the mineral report cannot be released without the written consent of the owner of such information. (*See* 18 U.S.C. 1905).
>
> > 1. Claimant Responsibility. Confidential information must be marked by the claimant in a manner that meets the requirements at 43 CFR 2.13. The handling and storage of confidential information is covered in BLM Manual Section 1278 – Access to External Information, and 3060.06 – Mineral Reports – Preparation and Review.
> >
> > 2. Treatment of Confidential Data in the Mineral Report. Confidential information must be summarized in the proper portion of the mineral report. The confidential data and analysis or discussion that refers directly to such data must be attached to the report as a stand-alone, detachable appendix. Confidential information provided

> by a claimant in support of the discovery may fall into any one or more of the following categories:
>
> a. Sales and marketing contracts;
> b. Labor contracts;
> c. Individual drill hole logs and assays;
> d. Subsurface geology and structure derived solely from the claimant's drilling and analysis;
> e. Reserve Data. Ore reserve calculations, grades, and tonnages derived solely from the claimant's data; and
> f. Capital Costs. Company-supplied capital costs not published or not supplied to a government agency for an environmental permit.

A.R. 006779. Throughout the VER Determination and this litigation, the Forest Service treated, handled, and used EFR's confidential information consistent with this guidance for mineral examiners.

6. Protective Order

When the original administrative record was filed with the District Court in this litigation, the Forest Service did not file the Spreadsheet. After the Court remanded the matter to the District Court, the Trust filed a Motion to Complete the Administrative Record. To resolve that Motion, the Parties negotiated and agreed to a Protective Order (District Court Dkt. 209) that both resolved the Trust's Motion and protected EFR's confidential information from public disclosure. The Protective Order also created a process: (1) to allow the Forest Service and EFR to produce, with limited redactions, the documents sought by Trust via the Trust's

Motion to Complete the Administrative Record; (2) for the Parties to then seek to resolve any remaining disputes regarding the redactions; and (3) for the Forest Service to then file the documents with the District Court under the safeguards of the Protective Order as part of the administrative record in this matter. Ultimately, the Court entered the Protective Order (District Court Dkt. 209); the Parties worked through their remaining disputes regarding EFR's confidential information, with the exception of a dispute about the relevance of sunk costs and a redaction of EFR's sunk costs; and the Forest Service filed the documents, including the Spreadsheet, as part of the administrative record with the safeguards of the Protective Order under seal.

7. <u>The Notice of Intent to Unseal</u>

On June 2, 2021, the Trust filed a Notice of Intent to Unseal a single page of the Spreadsheet (2-FER-161) pursuant to Circuit Rule 27-13(f). EFR now requests the Court seal that page because EFR maintains the information as confidential; the information is not publicly available; its release will harm EFR' competitive position; EFR clearly marked and submitted the information as confidential information under FOIA; EFR only agreed to provide the confidential information after the Parties negotiated and agreed to the Protective Order; the confidential information is exempt from public disclosure under FOIA Exemption 4, applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, and

applicable guidance for mineral examiners; and there is a compelling reason to seal and protect EFR's confidential information.

B. LEGAL ARGUMENT

1. Legal Standard

It has long been recognized that the public has a general right of access "to inspect and copy . . . judicial records and documents." *GoDaddy.com LLC v. RPost Commc'ns Ltd.*, 2016 WL 1158851, *2 (D. Ariz. Mar. 24, 2016) *modified on rehearing by* 2016 WL 1274120 (quoting *Nixon v. Warner Commc'ns, Inc.*, 435 U.S. 589, 597 (1978)). In the Ninth Circuit, when a court permits a litigant to seal information attached to a dispositive motion from the public purview, "it must base its decision on a compelling reason and articulate the factual basis for its ruling, without relying on hypothesis or conjecture." *Kamakana v. City & Cnty. of Honolulu*, 447 F.3d 1172, 1178-79 (9th Circ. 2006). Thus, the moving party must provide the Court with particular reasons as to why the material merits sealing treatment. *See, e.g., id.* at 1184 ("Simply mentioning a general category of privilege, without any further elaboration or any specific linkage with the documents, does not satisfy the burden."); Circuit Rule 27-13(a) ("This Court has a strong presumption in favor of public access to documents.").

2. EFR's confidential information should not be publicly disclosed because FOIA Exemption 4, applicable Forest Service regulations, and guidance for mineral examiners provide a compelling reason to seal the confidential information.

The Trust has filed a Notice of Intent to Unseal EFR's confidential information in the Spreadsheet (2-FER-161), which was provided to the Trust and filed with the District Court pursuant to the terms of the Protective Order. As noted above, EFR's information in the Spreadsheet constitutes confidential business information because EFR maintains the information as private and confidential; it is not publicly available; and EFR provided the information to the Forest Service under an assurance of privacy under FOIA and applicable Forest Service regulations, 5 U.S.C. § 552(b)(4) & 26 C.F.R. § 228.6, which is demonstrated by EFR's transmittal and clear marking on such correspondence that designated the Spreadsheet as confidential. Notwithstanding its belief that all of the Spreadsheet constitutes confidential information, EFR negotiated with the Trust, agreed to the Protective Order entered by the District Court, and produced, with limited redactions of irrelevant information, the documents sought by the Trust. Pursuant to the terms of the Protective Order, EFR produced the Spreadsheet and redacted certain information both due to its nature as confidential information and because it was not relevant to the Trust's remaining claim. The Spreadsheet was labeled "Confidential Business Information-Subject to Protective Order" when it was filed

with the District Court, which maintained the Spreadsheet under seal throughout this litigation.

EFR's confidential information in the Spreadsheet is exempt from public disclosure under FOIA Exemption 4, U.S.C. § 552(b)(4), applicable Forest Service regulations, 26 C.F.R. § 228.6, and applicable guidance for mineral examiners. EFR has repeatedly and consistently taken measures to insure that its business information has been maintained as confidential and has not been publicly disclosed by the Forest Service or in the District Court. Consequently, pursuant to Circuit Rule 27-13(d), there is a statutory and procedural basis to seal the Spreadsheet (2-FER-161), and EFR requests that the Court do so to prevent harm to EFR's competitive position.

3. <u>Disclosure of the confidential information will harm EFR's competitive position</u>.

EFR is the only uranium mining company that has successfully mined breccia pipe uranium mines on the federal lands subject to the Withdrawal. It also owns and operates the White Mesa Mill, which is the only operating conventional uranium mill in the United States. As a result of these unique mining experiences and assets, EFR has developed valuable, confidential, and proprietary information relating to the mining of breccia pipe uranium mines and milling of uranium-bearing ores. This confidential information includes mining methods, cost estimates and budgets, economic analyses, and operational information relating to

the Mine and EFR's Arizona 1 Mine. The information was developed through EFR's past operations and experience and is proprietary and extremely valuable. As a result, EFR maintains the information as confidential and it has not been publicly released to date. The Spreadsheet (2-FER-161) contains some of EFR's confidential cashflow and cost information relating to the Mine. If publicly filed and unsealed as proposed by the Trust, competing uranium mining companies could obtain and use the information to their competitive advantage and to EFR's competitive disadvantage. Additionally, if publicly available, the Trust could potentially distribute and use EFR's confidential information to harm EFR's competitive position. EFR's confidential information is proprietary and commercially valuable, which provides a compelling reason for the Court to continue to maintain the information in the administrative record under seal as the District Court did.

4. **The confidential information at issue is not publicly available.**

EFR's detailed, comprehensive cost estimates in the Spreadsheet have never been disclosed or made publicly available. As mentioned above, the disclosure of the information in the Spreadsheet, even with the entirely redacted line-item numbers, will disclose the manner in which EFR analyzes the economics of its breccia pipe mines, including the organization of cost categories and cost line items, all of which is proprietary to EFR as the only recent miner of similar

deposits in the United States, and would therefore result in substantial competitive harm to EFR if disclosed to its competitors. As noted above, the administrative record before both the District Court and this Court confirms that the confidential business information at issue has not been released publicly. This consistent practice of maintaining the Spreadsheet as confidential provides a compelling reason for the Court to seal the Spreadsheet (2-FER-161) to protect EFR's confidential information under FOIA, applicable Forest Service regulations, and guidance for mineral examiners.

C. CONCLUSION

Pursuant to Circuit Rule 27-13, EFR requests that the Court seal the Spreadsheet in FER: Volume 2 of 2 (2-FER-161) because it contains EFR's confidential business information that is exempt from public disclosure under FOIA Exemption 4, 5 U.S.C. § 552(b)(4), applicable Forest Service regulations, 26 C.F.R. § 228.6, and applicable guidance for mineral examiners; EFR has maintained the information as confidential; the information has not been publicly released; and the release of the confidential information will harm EFR's competitive position.

RESPECTFULLY SUBMITTED this 23rd day of June, 2021.

GALLAGHER & KENNEDY, P.A.

By: */s/ Bradley J. Glass*

Bradley J. Glass
2575 East Camelback Road
Phoenix, Arizona 85016-9225

Attorney for Intervenor-Defendants-Appellees

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CMECF system on June 23, 2021.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

/s/ Bradley J. Glass

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Attorney for Intervenor-Defendants-Appellees

8553745v2/21569-0005

FILED

JUN 29 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERSITY; SIERRA CLUB,

Plaintiffs-Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants-Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants-Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
District of Arizona,
Prescott

ORDER

Intervenor-Defendants-Appellees' Unopposed Motion to Seal Plaintiffs Further Excerpts of Record is GRANTED. The Clerk shall publicly file the Reply Brief and further excerpts of Volume 1, and shall file Volume 2 under seal.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Allison Fung
Deputy Clerk
Ninth Circuit Rule 27-7

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

JUN 29 2021

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

ORDER

The reply brief submitted on June 1, 2021 is filed.

Within 7 days of this order, appellants are ordered to file 6 copies of the brief in paper format with gray covers, accompanied by certification (attached to the end of each copy of the brief) that the brief is identical to the version submitted electronically. The Form 18 certificate is available on the Court's website at http://www.ca9.uscourts.gov/forms/.

The further excerpts of record submitted on June 1, 2021 are filed. Volume 2 of the excerpts is filed under seal. Within 7 days of this order, appellants are ordered to file 3 copies of the excerpts in paper format securely bound on the left side, with white covers.

The paper copies shall be submitted to the principal office of the Clerk. The address for regular U.S. mail is P.O. Box 193939, San Francisco, CA 94119-3939. The address for overnight mail is 95 Seventh Street, San Francisco, CA 94103-1526.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: Liora Anis
Deputy Clerk
Ninth Circuit Rule 27-7

FOR PUBLICATION

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

GRAND CANYON TRUST; CENTER FOR BIOLOGICAL DIVERSITY; SIERRA CLUB, *Plaintiffs-Appellants*,	No. 20-16401
and	D.C. No. 3:13-cv-08045-DGC
HAVASUPAI TRIBE, *Plaintiff*,	OPINION
v.	
HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture, *Defendants-Appellees*,	
and	
ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC, *Intervenor-Defendants-Appellees.*	

Appeal from the United States District Court
for the District of Arizona
David G. Campbell, District Judge, Presiding

Argued and Submitted August 30, 2021
San Francisco, California

Filed February 22, 2022

Before: Mary M. Schroeder, Johnnie B. Rawlinson, and
Jay S. Bybee, Circuit Judges.

Opinion by Judge Bybee

SUMMARY*

Mining Law

The panel affirmed the district court's summary judgment in favor of the United States Forest Service and intervenors Energy Fuels Resources (USA), Inc. and EFR Arizona Strip LLC in an action by environmental groups (collectively, the Trust) challenging the Forest Service's determination that Energy Fuels held a valid existing right to operate Canyon Mine, a uranium mine in the Kaibab National Forest.

Canyon Mine is located within an area of public lands that have been withdrawn from new mining claims by the

* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

Secretary of the Interior, although the withdrawal did not extinguish "valid existing rights."

When this court last considered this case, the court held that the Trust had Article III standing with respect to its fourth claim – that the Forest Service violated federal law by failing to take various costs into account when determining whether Canyon Mine could be operated at a profit. The panel held that the district court did not err in finding that the law of the case doctrine applied to the issue of standing.

The Trust argued that sunk costs – costs that have already been incurred and that cannot be recovered – should be considered when evaluating whether the discovery of a "valuable mining deposit" was made under the Mining Act.

The panel held that it was not arbitrary and capricious for the Forest Service to ignore sunk costs in determining that Energy Fuels had a claim to "valuable mineral deposits," 30 U.S.C. § 22. Applying *Chevron* analysis, the panel held at step one that the critical term in the Mining Act – "valuable mineral deposits" – was ambiguous. Proceeding to step two, the panel held that the Department of the Interior ("DOI")'s interpretation of the Mining Act – in which sunk costs are not considered when determining whether a mine is profitable – was a permissible one. First, the fact that the DOI excludes sunk costs from its profitability analysis was not manifestly contrary to the Mining Act because this interpretation was consistent with the prudent person and marketability tests, which the Supreme Court has repeatedly upheld. Second, DOI's interpretation was not arbitrary and capricious in substance because it was consistent with established economic principles. It is a basic principle of economics that sunk costs should be ignored when making a rational decision

about whether to make further expenditures. Since the panel would be required to give DOI deference under the *Chevron* doctrine, it was appropriate for the Forest Service to do so as well in its valid existing rights determination. Accordingly, it was not arbitrary and capricious for the Forest Service to rely on DOI's interpretation of the Mining Act.

COUNSEL

Aaron M. Paul (argued), Grand Canyon Trust, Denver, Colorado; Marc Fink, Center for Biological Diversity, Duluth, Minnesota; Neil Levine, Public Justice, Denver, Colorado; Roger Flynn, Western Mining Action Project, Lyons, Colorado; for Plaintiffs-Appellants.

Thekla Hansen-Young (argued), Andrew C. Mergen, Michael T. Gray, and Sean C. Duffy, Attorneys; Jean E. Williams, Acting Assistant Attorney General; Environment and Natural Resources Division, United States Department of Justice, Washington, D.C.; Nicholas L. Pino, Attorney, Office of General Counsel, United States Department of Agriculture, Washington, D.C.; for Defendants-Appellees.

Bradley J. Glass (argued), Gallagher & Kennedy P.A., Phoenix, Arizona, for Intervenor-Defendants-Appellees.

OPINION

BYBEE, Circuit Judge:

This dispute concerns Canyon Mine, a uranium mine operated by Energy Fuels Resources (USA), Inc., and EFR Arizona Strip LLC (collectively, Energy Fuels) in the Kaibab National Forest. Canyon Mine is located within an area of public lands that have been withdrawn from new mining claims by the Secretary of the Interior, although the withdrawal did not extinguish "valid existing rights." The Havasupai Tribe and three environmental groups—Grand Canyon Trust, Center for Biological Diversity, and Sierra Club (collectively, the Trust)—challenge the United States Forest Service's determination that Energy Fuels holds a valid existing right to operate Canyon Mine. The primary question in this appeal is, in determining that Energy Fuels has a claim to "valuable mineral deposits," 30 U.S.C. § 22, whether it was arbitrary and capricious for the Forest Service to ignore sunk costs. The district court held that it was not and granted summary judgment to the defendants. *Grand Canyon Tr. v. Provencio*, 467 F. Supp. 3d 797, 804–05, 812–23 (D. Ariz. 2020). We affirm.

I. BACKGROUND AND PROCEEDINGS

This is the second time this case has come before us. Background concerning the history of Canyon Mine and this case is discussed in *Havasupai Tribe v. Provencio*, 906 F.3d 1155, 1159–61 (9th Cir. 2018). Additional background may be found in *National Mining Ass'n v. Zinke*, 877 F.3d 845, 854–60 (9th Cir. 2017), and *Havasupai Tribe v. United States*, 752 F. Supp. 1471, 1475–77 (D. Ariz. 1990), *aff'd sub nom. Havasupai Tribe v. Robertson*, 943 F.2d 32 (9th Cir.

1991) (per curiam). We will repeat the background here only as necessary for the context of the issues before us.

A. *Background*

1. Canyon Mine

Uranium was first discovered near Grand Canyon National Park in 1947. Uranium is often found in breccia pipes—cylindrical deposits of broken sedimentary rock located thousands of feet underground. *See Nat'l Mining Ass'n*, 877 F.3d at 857. One such breccia pipe was located in the Kaibab National Forest in northern Arizona, a few miles south of Grand Canyon National Park and in the area around Red Butte, a site of religious and cultural significance to the Havasupai Tribe.

In 1984, Energy Fuels Nuclear, Inc. (EFN) submitted a plan of operations to mine uranium from the breccia pipe by building and operating what became known as Canyon Mine. The Forest Service approved the plan in 1986. The Havasupai Tribe challenged the approval, but the district court rejected the tribe's claims and we affirmed the judgment. *See Havasupai Tribe v. Robertson*, 943 F.2d at 34–35. Over the next years, EFN built the mine's surface facilities and sank the first fifty feet of a 1,400-foot shaft. However, EFN suspended operations in 1992 due to a drop in uranium prices. Denison Mines Corp. (later acquired by Intervenor-Defendant Energy Fuels Resources (USA), Inc.) acquired the mine in 1997.

2. The Grand Canyon Mineral Withdrawal

In 2007, a spike in the price of uranium generated renewed interest in mining operations near the Grand Canyon and with it, thousands of new mining claims. The large volume of new claims raised concerns about the potential environmental impact of increased uranium mining on the Grand Canyon area. *Nat'l Mining Assoc.*, 877 F.3d at 857. In response, the Secretary of the Interior published a Notice of Intent to withdraw approximately one million acres of public and National Forest System lands from new uranium mining claims. *Notice of Proposed Withdrawal and Opportunity for Public Meeting; Arizona*, 74 Fed. Reg. 35,887 (July 21, 2009). The withdrawn land would include the land occupied by Canyon Mine. *Grand Canyon Trust*, 467 F. Supp. 3d at 802. However, consistent with the Federal Land Policy and Management Act of 1976 (FLPMA), the Secretary noted that the withdrawal was "subject to valid existing rights." 74 Fed. Reg. 35,887. After two years of study, the Department of the Interior (DOI) issued the order withdrawing the lands. *Public Land Order No. 7787; Withdrawal of Public and National Forest System Lands in the Grand Canyon Watershed; Arizona*, 77 Fed. Reg. 2563 (Jan. 18, 2012). We upheld the withdrawal decision in *National Mining Ass'n*, 877 F.3d at 878. Before the decision became final, Energy Fuels notified the Forest Service, which is within the Department of Agriculture, that it intended to return Canyon Mine to active operations. Although Forest Service approval was not required for Energy Fuels to restart its operations at Canyon Mine, at the Forest Service's request, Energy Fuels agreed not to resume sinking the mineshaft pending review, known as a Valid Existing Rights

Determination (VER Determination), of its claim of existing rights.[1]

3. The Forest Service's VER Determination

The Forest Service issued its VER Determination in April 2012. The Forest Service concluded that "a discovery of a valuable mineral deposit existed" on July 21, 2009 (the date of the Secretary's segregated withdrawal). It also concluded that, under the economic conditions as of January 11, 2012 (the date of the mineral exam), "the uranium deposit on the claims could be mined, removed, transported, milled and marketed at a profit."

Two Forest Service certified mineral examiners conducted the analysis for the VER Determination and their findings were approved by a Forest Service locatable minerals specialist. The mineral examiners conducted their examination over several months, making multiple trips to Canyon Mine as well as Energy Fuels's offices, its Arizona One Mine, and its White Mesa Mill. Their work included verifying claim boundaries, documenting development activities, observing drill core samples, and reviewing various documents provided by Energy Fuels and the United States. They also conducted an economic analysis that considered the

[1] Although the Forest Service did not have to prepare a VER Determination, such a determination was relevant to whether the Forest Service would contest the mining claim before DOI. *See Forest Service Manual* §§ 2814.11, 2819.1–2. *See also* 43 C.F.R. § 4.451 (DOI regulations providing for the government to contest decisions). The Forest Service's determination would have been relevant, even if not binding, to DOI's own decision. *See Havasupai Tribe v. Provencio*, 906 F.3d at 1162–63 (holding that the VER Determination was "final agency action" for APA review).

tonnage and grade of uranium, the capital and operating costs, commodity pricing, and a cash flow feasibility analysis. The economic analysis treated costs incurred prior to 1992 (when operations were suspended) to develop the surface structures and sink the first fifty feet of shaft as "'sunk' costs since they were previously completed for mine development and are fixed assets on the claims." As such, these costs were not incorporated into its calculation of Canyon Mine's "net sum of cash flows." The discounted cash flow feasibility analysis showed that, at a uranium price of $56 per pound, Canyon Mine would have a net sum of cash flows of $29,350,736. The report describes this number as "the stream of income generated by the project as a function of time. The sum of cash flows shows whether the proposed mining operation would result in a profit or a loss."

In addition to the VER Determination, the Forest Service conducted a "Mine Review," dated June 25, 2012. The review was conducted by a thirteen-person interdisciplinary team, which evaluated the 1984 plan of operations as well as environmental, historical, and religious issues related to continued operation of Canyon Mine. The Forest Service concluded that "no modification or amendment to the existing Plan of Operation [was] necessary" and "no new federal action subject to further NEPA analysis [was] required."

B. *Proceedings*

In 2013, the Tribe and Trust asserted four claims under the Administrative Procedure Act to challenge the Forest Service's determination. We found the VER Determination reviewable and affirmed the district court's grant of summary judgment for three claims related to the National Environmental Policy Act of 1969 and the National Historic

Preservation Act of 1966. *Havasupai Tribe v. Provencio*, 906 F.3d at 1163–65. On the fourth claim—that the Forest Service violated federal law by failing to take various costs into account when determining whether Canyon Mine could be operated at a profit—the district court held that the Trust did not have prudential standing. *Id.* at 1165. We reversed, holding that the Trust had prudential standing to pursue claim four because "the FLPMA, and not the Mining Act, forms the legal basis of the Trust's fourth claim" and that the claim fell within the FLPMA's zone of interests. *Id.* at 1166–67. We remanded to the district court for consideration on the merits.

On remand, the parties cross-moved for summary judgment on the fourth claim, and the district court granted summary judgment to the defendants. The district court held that (1) the Trust had Article III standing based on the law of the case doctrine; (2) assuming that environmental monitoring and wildlife-conservation costs were omitted, the error was harmless because the Trust had not shown that such costs would change the Forest Service's finding that Canyon Mine would be profitable; and (3) the Forest Service's failure to consider sunk costs when evaluating the profitability of Canyon Mine was consistent with the Bureau of Land Management's Handbook and the Interior Board of Land Appeal's (IBLA) precedent, the Forest Service's reliance on these sources was not arbitrary and capricious, and any error was harmless. *Grand Canyon Tr.*, 467 F. Supp. 3d at 804–05, 812–23.

The Trust and the Tribe timely appealed the district court's ruling with respect to whether the VER Determination should have considered sunk costs in its appraisal of the mine's profitability. The Forest Service continues to claim that the plaintiffs lack standing.

II. STANDARD OF REVIEW

We review the district court's grant of summary judgment de novo. "Viewing the evidence in the light most favorable to the nonmoving party, we must determine whether there are any genuine issues of material fact and whether the district court correctly applied the relevant substantive law." *Gordon v. Virtumundo, Inc.*, 575 F.3d 1040, 1047 (9th Cir. 2009) (quoting *Devereaux v. Abbey*, 263 F.3d 1070, 1074 (9th Cir. 2001) (en banc)).

The Trust raises its challenge to the VER Determination under the judicial review provisions of the APA, 5 U.S.C. §§ 701–06. In general, "[t]he form of proceeding for judicial review is the special statutory review proceeding relevant to the subject matter." 5 U.S.C. § 703. Because the Mining Act does not contain a "special statutory review" provision, we will review final agency action under § 706. *See id.* § 704; *Whitewater Draw Nat. Res. Conserv. Dist. v. Mayorkas*, 5 F.4th 997, 1006–07 (9th Cir. 2021). Under § 706, we will "hold unlawful and set aside agency action, findings, and conclusions" when they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *see Kalispel Tribe of Indians v. U.S. Dep't of the Interior*, 999 F.3d 683, 688 (9th Cir. 2021).

An open question regarding the appropriate standard under the APA for reviewing the Forest Service's VER Determination will be addressed below. *See infra* Part III.B.2.

III. DISCUSSION

A. *Standing*

The Forest Service argues that the Trust does not have Article III standing to pursue its claim. It reasons that, because the Trust alleges that it is injured by the continuation of mining operations and the VER Determination was not legally required for operations at Canyon Mine to resume, the Trust's injury cannot be traced to the VER Determination and setting aside the VER Determination would not redress the Trust's alleged injury.

When this case was last before us, we held that the Trust had Article III standing with respect to its fourth claim. We noted that:

> While the parties dispute whether continued mining required the Forest Service's approval, we must assume that it did in assessing standing. If the Tribe and Trust are correct that continued mining required approval, then their injuries are fairly traceable to that approval and could be redressed by setting it aside.

Havasupai Tribe v. Provencio, 906 F.3d at 1162 n.3 (citation omitted). The district court held that this conclusion was "both law of the case and binding precedent." *Grand Canyon Tr.*, 467 F. Supp. 3d at 804.

"Under law of the case doctrine, one panel of an appellate court will not as a general rule reconsider questions which another panel has decided on a prior appeal in the same case."

Valenzuela Gallardo v. Barr, 968 F.3d 1053, 1062 (9th Cir. 2020) (alteration omitted) (quoting *Thomas v. Bible*, 983 F.2d 152, 154 (9th Cir. 1993)). "[T]he law of the case doctrine is subject to three exceptions that may arise when '(1) the decision is clearly erroneous and its enforcement would work a manifest injustice, (2) intervening controlling authority makes reconsideration appropriate, or (3) substantially different evidence was adduced at a subsequent trial.'" *Minidoka Irrigation Dist. v. Dep't of Interior*, 406 F.3d 567, 573 (9th Cir.) (quoting *Old Person v. Brown*, 312 F.3d 1036, 1039 (9th Cir. 2002)), *amended on denial of reh'g* No. 03-35697, 2005 WL 1560395 (9th Cir. July 6, 2005). In *Nordstrom v. Ryan*, we held that our prior determination that the plaintiff had standing was "both the law of the case and binding precedent that we must follow" when the case returned "in virtually the same procedural posture." 856 F.3d 1265, 1270 (9th Cir. 2017).

The district court did not err in finding that the law of the case doctrine applied to the issue of standing. The government has not pointed us to any circumstances that would trigger an exception to the general rule. *See Minidoka*, 406 F.3d at 573. We have already held that the Trust has Article III standing, and the present appeal has returned "in virtually the same procedural posture." *See Nordstrom*, 856 F.3d at 1270.

B. *Sunk Costs*

The Trust argues that sunk costs—costs that have "already been incurred and that cannot be recovered," *Black's Law Dictionary* (11th ed. 2019)—should be considered when evaluating whether the discovery of a "valuable mineral deposit" was made under the Mining Act. In order to rule on

this issue, we must first review the relevant law and the standard of review.

1. Statutory and regulatory background

The General Mining Act of 1872 (Mining Act) allows citizens of the United States to gain rights to "valuable mineral deposits" on federal land. 30 U.S.C. § 22. To do so, a claimant must first "locate" a mining claim by following certain statutory and regulatory procedures, including posting notice. *United States v. Shumway*, 199 F.3d 1093, 1099 (9th Cir. 1999). Locating a mining claim gives the claimant a vested possessory right to the real property at issue. *Id.* at 1095. For the claimant to secure an enforceable property right, a claimant must make a "discovery" of a "valuable mineral deposit." *See* 30 U.S.C. §§ 22–23. Congress has delegated the authority to administer the Mining Act to the Secretary of the Interior and the Bureau of Land Management. *Cameron v. United States*, 252 U.S. 450, 459–60 (1920). The Mining Act does not define what constitutes a "valuable mineral deposit," so the Secretary has applied a "prudent person" test to assess whether a claimant has discovered a valuable mineral deposit. In the Secretary's view, the prudent person test means that

> where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing the valuable mine, the requirements of the statute have been met.

Castle v. Womble, 19 Pub. Lands Dec. 455, 457 (D.O.I. 1894). That test has been repeatedly cited with approval by the Supreme Court. *See Watt v. West. Nuclear, Inc.*, 462 U.S. 36, 58 n.18 (1983); *Andrus v. Charlestone Stone Prod. Co.*, 436 U.S. 604, 607 n.4 (1978); *United States v. Coleman*, 390 U.S. 599, 602 (1968); *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 335–36 (1963); *Chrisman v. Miller*, 197 U.S. 313, 322 (1905).

In 1962, the Secretary issued an opinion restating the "prudent person" test in terms of a "marketability test," which requires that a claimant show that a mineral can be "extracted, removed and marketed at a profit" for it to be considered "valuable" under the Mining Act. *See Coleman*, 390 U.S. at 600. The Supreme Court approved the restatement as "an admirable effort to identify with greater precision and objectivity the factors relevant to a determination that a mineral deposit is 'valuable.' It is a logical complement to the 'prudent-man test' which the Secretary has been using to interpret the mining laws since 1894." *Id.* at 602. The Court explained that the Mining Act "was to reward and encourage the discovery of minerals that are valuable in an economic sense." *Id.* "Thus, profitability is an important consideration in applying the prudent-man test, and the marketability test" because if a claimant is pursuing a mineral deposit that lacks "economic value and cannot in all likelihood be operated at a profit" it "may well suggest that a claimant seeks the land for other purposes"—purposes not sustainable under the Mining Act. *Id.* at 602–03.

In 1980, DOI first announced that when determining whether a mine is profitable, it would not consider sunk costs. *United States v. Mannix*, 50 IBLA 110 (1980). In *Mannix*,

the government attorneys argued that "all earlier expenses in development of the property must be considered, *e.g.*, the cost of constructing cabins, shed, and an access road and the purchase of rail and ore cars and that such expenses must be recouped before it can be said the mine is a profitable venture." *Id*. at 119. DOI rejected the argument, reasoning that "[t]here is no case law of which we have knowledge . . . that compels consideration of the above mentioned development costs in determining if an ongoing operation is presently profitable." *Id*. So long as "the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations," the mine may be considered "valuable" under the Mining Act. *Id.* DOI has applied this rule for over forty years. *See United States v. Clouser*, 144 IBLA 110, 131–32 (1998); *United States v. Collord*, 128 IBLA 266, 288 n.24 (1994); *United States v. Copple*, 81 IBLA 109, 129 (1984).

In this case, the mineral examination was conducted by the U.S. Forest Service. Although DOI has primary jurisdiction to determine the validity of mining claims, the Forest Service is authorized to conduct mineral examinations on National Forest System lands and to recommend that DOI initiate administrative contests of invalid mining claims. *See* 16 U.S.C. §§ 478, 482; *Forest Service Manual* §§ 2810.41, 2814.11, 2819, 2819.1–2.

2. Standard of review

The Forest Service determined that Energy Fuels has a valid existing right to operate Canyon Mine. The VER Determination relied on the legal standard for discovery of a valuable mineral deposit announced by DOI. It twice cited DOI's core decision in *Castle v. Womble*, and it noted which

costs it regarded as sunk. The parties disagree over what standard of review we should apply here. The Trust argues that we can review DOI's interpretation of the Mining Act de novo, because it is a pure question of law. The district court disagreed, finding that the question was whether the Forest Service's reliance on DOI's construction of the act was arbitrary and capricious, rather than whether the interpretation itself was valid. *See Grand Canyon Tr.*, 467 F. Supp. 3d at 819–21. The Forest Service argues that, since an action by DOI is not being challenged and DOI is not a party to this lawsuit, the validity of DOI's interpretation is not before us.

The district court was correct. When reviewing the Forest Service's VER Determination, the proper standard of review is arbitrary and capricious. We have consistently applied the arbitrary and capricious standard to cases in which an agency relies on or defers to the opinions or interpretations of another agency. *See, e.g.*, *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 640 (9th Cir. 2014); *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010); *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990). The Trust argues that arbitrary and capricious review applies only when an agency defers to another agency's judgment about factual matters, as opposed to pure questions of law. Our law is to the contrary. In *Defenders of Wildlife v. U.S. EPA*, we concluded that the Fish and Wildlife Service had prepared a biological opinion that relied on legal errors. 420 F.3d 946 (9th Cir. 2005), *rev'd on other grounds and remanded sub nom. Nat'l Ass'n of Home Builders v. Defs. of Wildlife*, 551 U.S. 644 (2007). EPA had, in turn, relied on the biological opinion. We held EPA was arbitrary and capricious when it relied on the flawed opinion. *Id.* at 976. Although we observed that an agency

"should be able to rely on the expert judgments that underlie [a] Biological Opinion[]" prepared by another agency, in this case "the Biological Opinion's flaws are *legal* in nature. Discerning them requires no technical or scientific expertise." *Id.* They were errors "EPA should have understood." *Id.*

Since the VER Determination cited and applied DOI's interpretation of the Mining Act,[2] we may reach through the VER Determination and review DOI's interpretation "only to the extent that [it] demonstrate[s] whether [the Forest Service's] reliance on the [interpretation] is 'arbitrary and capricious.'" *Pyramid Lake*, 898 F.2d at 1415 (quoting *Stop H-3 Ass'n v. Dole*, 740 F.2d 1442, 1460 (9th Cir. 1984)). Because DOI has authority to administer the Mining Act, its interpretation is analyzed under *Chevron, U.S.A., Inc. v. National Resources Defense Council, Inc.*, 467 U.S. 837 (1984).[3] *Lambert v. Saul*, 980 F.3d 1266, 1275 (9th Cir.

[2] Although the VER Determination cited *Castle v. Womble*, it did not refer explicitly to *Mannix*. That suggests the possibility that the Forest Service expressed its own views on the irrelevance of sunk costs, rather than reflecting DOI's view of such costs. Since both agencies took the same view of sunk costs, and we conclude that such position is not arbitrary and capricious, we do not need to explore further this question. The result would be the same in either case.

[3] The Trust argues that *Chevron* deference should not apply because DOI failed to provide the "minimal level of analysis" required. *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016) (requiring that an agency give "adequate reasons for its decisions," meaning that the agency's explanation must be "clear enough that its 'path may be reasonably discerned'" (quoting *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974)). While DOI's analysis in *Mannix* is brief, it cites cases that use language consistent with its interpretation. *See Mannix*, 50 IBLA at 117–18 (citing *Castle*, 19 Pub. Lands Dec. at 457; *United States v. McKenzie*, 20 IBLA 38, 45 (1975) ("[E]vidence should focus on current estimates of costs and prices.")).

2020). If DOI's interpretation of the Mining Act is not entitled to *Chevron* deference, then it is arbitrary and capricious for the Forest Service to rely on the erroneous interpretation. This approach is consistent with that of our sister circuits. *See, e.g.*, *Florida Key Deer v. Paulison*, 522 F.3d 1133, 1145 (11th Cir. 2008) ("If [one agency's opinion is] arbitrary and capricious, an[other] agency's decision to adopt [it] is likewise arbitrary and capricious and may be challenged."); *CTIA-Wireless Ass'n v. FCC*, 466 F.3d 105, 117 (D.C. Cir. 2006) (finding that, if the court must defer to the agency's interpretation, it is not arbitrary and capricious for another agency to do so).

3. *Chevron* deference

Chevron analysis has two steps: "[W]e must first exhaust the traditional tools of statutory construction to determine whether Congress has directly spoken to the precise question at issue." *Turtle Island Restoration Network v. U.S. Dep't of Com.*, 878 F.3d 725, 733 (9th Cir. 2017) (internal quotations omitted). If the statute is "silent or ambiguous on the question at hand, then at *Chevron* step two we must respect the agency's interpretation so long as it is based on a permissible construction of the statute"—that is, one not "arbitrary, capricious, or manifestly contrary to the statute." *Id.* (internal quotations omitted).

This would indicate that DOI was reading the Mining Act to be consistent with its prior case law on the prudent person and marketability tests, which the Supreme Court approved of on multiple occasions. This is sufficient for us to proceed with a *Chevron* analysis. *See Encino Motorcars*, 579 U.S. at 222 ("[S]ummary discussion may suffice . . . .").

At *Chevron* step one, "[t]o maintain the proper separation of powers between Congress and the executive branch, we must 'exhaust all the traditional tools of construction' before we 'wave the ambiguity flag.'" *Route v. Garland*, 996 F.3d 968, 978 (9th Cir. 2021) (quoting *Medina Tovar v. Zuchowski*, 982 F.3d 631, 634 (9th Cir. 2020)). In this case, however, we have little difficulty determining that the critical term in the Mining Act—"valuable mineral deposits"—is ambiguous. *See* 30 U.S.C. §§ 22–23. It is neither a defined term nor a term of art in the industry. In *Chrisman*, the Court first considered, and approved the Secretary's "prudent person" test. 197 U.S. at 322–23. The Court stated the statutory requirement in the most general of terms: "[T]here must be such a discovery of mineral as gives reasonable evidence of the fact, either that there is a vein or lode carrying the precious mineral, or, if it be claimed as placer ground, that it is valuable for such mining." *Id.* at 323.

Examining the purpose and history of the Mining Act similarly yields no definitive understanding of the term. In *Coleman*, the Supreme Court said that the purpose of the Mining Act was to make "public lands available to people for the purpose of mining valuable mineral deposits and not for other purposes. The obvious intent was to reward and encourage the discovery of minerals that are valuable in an economic sense." 390 U.S. at 602. That description is far too general to cabin the definition of "valuable mineral deposits." That does not mean that an enforcing agency such as DOI can define it in any way it pleases, but it also means that we may not insist that the phrase is so clear as to be capable of a single meaning.

If the terms of the statute are not capable of precise definition at step one, we cannot see how we could determine

that "valuable mineral deposits"—which the agency has concluded means that the deposits would be pursued by a prudent person—forecloses how the agency accounts for "sunk costs," which is not a statutory term, but is a commonly used economic phrase. Concluding that the statute is ambiguous, we may now proceed to step two.

At *Chevron* step two, we hold that DOI's interpretation of the Mining Act—in which sunk costs are not considered when determining whether a mine is profitable—is a permissible one and not "arbitrary and capricious in substance, or manifestly contrary to the statute." *Mayo Found. for Med. Educ. & Rsch. v. United States*, 562 U.S. 44, 53 (2011) (quoting *Household Credit Servs., Inc. v. Pfennig*, 541 U.S. 232, 242 (2004)). First, we find that the fact that DOI excludes sunk costs from its profitability analysis is not manifestly contrary to the Mining Act because this interpretation is consistent with the prudent person and marketability tests, which the Supreme Court has repeatedly upheld. *See West. Nuclear, Inc.*, 462 U.S. at 58 n.18; *Coleman*, 390 U.S. at 602. Although the Court has not addressed the question of sunk costs specifically, the language of these tests and the cases in which they are applied suggest that the profitability analysis is forward looking. *See, e.g.*, *Coleman*, 390 U.S. at 602 (". . . a person of ordinary prudence would be justified in the further expenditure of his labor and means."); *see also McKenzie*, 20 IBLA at 38, 45 ("[E]vidence should focus on current estimates of costs and prices."). Sunk costs, on the other hand, are backward looking.

More importantly, DOI's interpretation is not arbitrary and capricious in substance because it is consistent with established economic principles. It is a basic principle of

economics that sunk costs should be ignored when making a rational decision about whether to make further expenditures. *See* N. Gregory Mankiw, *Principles of Economics* 275 (8th ed. 2016) ("Because nothing can be done about sunk costs, you should ignore them when making [rational] decisions about various aspects of life, including business strategy."); Richard A. Posner, *Economic Analysis of Law* 8 (9th ed. 2014) ("'Sunk' (already incurred) costs do not affect a rational actor's decisions on price and quantity. . . . Fully rational people base their decisions on expectations of the future rather than on regrets about the past."); Paul A. Samuelson & William D. Nordhaus, *Economics* 179 (18th ed. 2005) ("One of the most important lessons of economics is that you should look at the marginal costs and marginal benefits of decisions and ignore past or sunk costs." (emphasis omitted)); Thomas Kelly, *Sunk Costs, Rationality, and Acting for the Sake of the Past*, 38 Noûs 60, 61 (2004) ("[I]t is widely agreed that honoring sunk costs is obviously and clearly irrational, and that doing so is, without exception, to be avoided. In economics and business textbooks, the tendency to honor sunk costs is treated as an elementary fallacy."); Armen A. Alchian & William R. Allen, *Exchange and Production: Theory in Use* 288 (1969) (a "fixed or sunk cost" is "'fixed' upon you and irrevocable. For *any subsequent* decision this 'cost' is totally irrelevant and can be forgotten."). Federal courts have acknowledged the validity of the sunk cost principle in other contexts. *See, e.g.*, *Verizon Commc'ns, Inc. v. FCC*, 535 U.S. 467, 499 n.17 (2002) (stating that "costs" in an economic sense do not include sunk costs); *Alenco Commc'ns, Inc. v. FCC*, 201 F.3d 608, 615–16 (5th Cir. 2000); *Fresno Mobile Radio, Inc. v. FCC*, 165 F.3d 965, 969 (D.C. Cir. 1999) (rejecting an argument that a business's actions are motivated by its past investment because "[t]his is a foolish notion that should not be

entertained by anyone who has had even a single undergraduate course in economics," and collecting sources); *MCI Commc'ns Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1117 (7th Cir. 1983). *See also United States v. Park Place Assoc., Ltd.*, 563 F.3d 907, 921 (9th Cir. 2009).

To illustrate, let us suppose that ABC Mining spent $31 million to develop what it thought was a valuable mine, but had to take it out of operation when the market value of the mineral declined. Let us also suppose that if ABC Mining wishes to restart operation of the mine, it will earn $50 million in revenue but incur $20 million in further capital and operating expenses. If we ignore sunk costs, ABC Mining should reopen the mine because the benefit from mining ($50 million) still exceeds the nonsunk cost of operating the mine ($20 million). In fact, the revenue far exceeds the nonsunk cost. The operation stands to make $30 million by extracting the deposit; by any measure that makes the mineral deposit a valuable one.

By contrast, if ABC Mining considers the sunk costs as part of its decision whether to re-start operations, it would refuse to continue operation because it would stand to lose $1 million after considering sunk costs ($31 million + 20 million – 50 million). But if ABC Mining decides not to re-open the mine, it will lose $31 million total, instead of $1 million, because it chose not to offset its prior losses against the promise of a $30 million benefit. No prudent person should follow such a plan. ABC Mining will have misjudged the situation by considering its *total* costs rather than its *nonsunk* costs. It is true that the mine operator will have lost $1 million over the life of the mine, but if the

operator declines to proceed when its revenues will exceed its costs, it will have lost $31 million at the mine.[4]

DOI's sunk costs rule from *Mannix*[5] simply recognizes that a prudent person cannot change sunk costs, and thus those costs should not be considered when determining whether that person is "justified in the further expenditure of his labor and means." *Castle*, 19 Pub. Lands Dec. at 457; *see also* Thomas T. Nagle, John E. Hogan, & Joseph Zale, *The Strategy and Tactics of Pricing: A Guide to Growing More Profitably* 224 (5th ed. 2011) ("Since nonincremental fixed and sunk costs do not change with a pricing decision, they do not affect the relative profitability of one price versus an alternative."); David D. Friedman, *Price*

[4] Of course if a mine operator knew from the outset that it would lose even one dollar over the life of the mine, it would decline to file the mineral claim. But the operator—and DOI, which must approve such claims—can only work off the information they have. They are not responsible for accurately predicting the vagaries of the market over the life of the mine. And DOI has decided not to punish operators whose claims, once unprofitable, have returned to profitability.

[5] The Trust argues that, even if DOI's interpretation is entitled to deference, the Forest Service erred in applying *Mannix* because *Mannix* has an exception for withdrawn land. The Trust relies on the "absent a prior withdrawal" language in the *Mannix* opinion and a concurrence in *Collord*, in which the concurring ALJ stated that the non-existence of the withdrawal was "critical" to the *Mannix* decision. *Mannix*, 50 IBLA at 119; *Collord*, 128 IBLA at 304 (Burski, J., concurring in the result). However, the majority in *Collord* decided to exclude sunk costs even in the face of a withdrawal. *See Collord*, 128 IBLA at 288 n.24. Furthermore, DOI has applied the *Mannix* rule consistently—without an exception for withdrawal—for the past forty years. *See, e.g.*, *Clouser*, 144 IBLA at 131; *Copple*, 81 IBLA at 129. Given this precedent, the Forest Service did not act arbitrarily and capriciously by failing to apply a nonexistent exception for withdrawn land.

Theory: An Intermediate Text ch. 13, pt. 1 (2d ed. 1990), http://www.daviddfriedman.com/Academic/Price_Theory/PThy_ToC.html ("The significance of sunk costs is that a firm will continue to produce even when revenue does not cover total cost, provided that it does cover nonsunk costs (called recoverable costs), since nonsunk costs are all the firm can save by closing down.").

We need not go so far as to pronounce DOI's approach to sunk costs required by the statute or correct as a matter of principle. *See Friends of Santa Clara River v. U.S. Army Corps of Eng'rs*, 887 F.3d 906, 922 (9th Cir. 2018). We do not decide that any other approach would be arbitrary and capricious. It is sufficient that we can conclude that DOI's rule excluding sunk costs is not arbitrary and capricious. And since we would be required to give DOI deference under the *Chevron* doctrine, it was appropriate for the Forest Service to do so as well in its VER Determination. As such, it was not arbitrary and capricious for the Forest Service to rely on DOI's interpretation of the Mining Act.

IV. CONCLUSION

The judgment of the district court is **AFFIRMED.**

Price Theory: An Intermediate Text

by

David D. Friedman

Published by South-Western Publishing Co.

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The chapters given here are from the versions on my hard disk, and differ in minor details from the published versions. The same is true of the figures.

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Chapter 13

. . . And Chance

I returned and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither bread to the wise, nor yet riches to men of understanding, nor yet favour to men of skill; but time and chance happeneth to them all.

-- Ecclesiastes 9.11

PART 1 - SUNK COSTS

So far, I have introduced time into the economy, but not uncertainty; everything always comes out as expected. The real world is not so simple. One of the consequences of uncertainty is the possibility of mistakes; another is the problem of what to do about them.

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You see an advertisement for a shirt sale at a store 20 miles from your home. You were planning to buy some new shirts, and the prices are substantially lower than in your local clothing store; you decide the savings are enough to make it worth the trip. When you arrive, you discover that none of the shirts on sale are your size; the shirts that are your size cost only slightly less than in your local store. What should you do?

You should buy the shirts. The cost of driving to the store is a sunk cost--once incurred, it cannot be recovered. If you had known the prices before you left home, you would have concluded that it was not worth making the trip--but now that you have made it, you must pay for it whether or not you buy the shirts. Sunk costs are sunk costs.

There are two opposite mistakes one may make with regard to sunk costs. The first is to treat them as if they were not sunk--to refuse to buy the shirts because their price is not low enough to justify the trip even though the trip has already been made. The second is to buy the shirts even when they are more expensive than in your local store, on the theory that you might as well get something for your trip. The something you are getting in this case is less than nothing. This is known as throwing good money after bad.

When, as a very small child, I quarrelled with my sister and then locked myself in my room, my father would come to the door and say, "Making a mistake and not admitting it is only hurting yourself twice." When I got a little older, he changed it to "Sunk costs are sunk costs."

In discussing firms' cost curves, one should distinguish between fixed costs and sunk costs--while the same costs are often both fixed and sunk, they need not always be. Fixed costs are costs you must pay in order to produce anything--the limit of total cost as a function of quantity when quantity

approaches zero. One could imagine a case where such costs were fixed but not sunk, either because the necessary equipment could be resold at its purchase price or because the equipment was rented and the rental could be terminated any time the firm decided to stop producing.

The significance of sunk costs is that a firm will continue to produce even when revenue does not cover total cost, provided that it does cover nonsunk costs (called recoverable costs), since nonsunk costs are all the firm can save by closing down. All costs, ultimately, are opportunity costs--the cost of doing one thing is not being able to do something else. Once a factory is built, the cost of continuing to run it does not include what was spent building it, since whatever you do you will not get that back. It does include the cost of not selling it to someone else--which may be more or less than the cost of building it, depending on whether the value of such factories has gone up or down since it was built.

In deriving the supply curve for a competitive industry with open entry in Chapter 9, we saw that firms would always produce at the minimum of average cost, where it crossed marginal cost. The reason was that if, at the quantity for which marginal cost equaled price (where profit is maximized for a price taker), price were above average cost, economic profit would be positive; it would pay other firms to enter the industry. They would do so until price was driven down to the point where it equaled both MC and AC, which occurs where they cross at the minimum of AC.

Does the relevant average cost include sunk costs? That depends on whether we are approaching the equilibrium from above or below and on how long a time we consider. If prices start out above the equilibrium price, firms will only enter the industry as long as the price is above average cost including sunk cost--costs are not sunk until they are incurred, and the new firm starts out with the option of not incurring them. The equilibrium will be reached when price equals average total cost.

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If we approach the equilibrium from below--if there are too many firms (perhaps because demand has recently fallen) and price is insufficient to cover even the average of recoverable costs--firms will leave the market. They will continue to do so until price gets up to average recoverable cost.

If the assets bought with the sunk costs (factories, say) wear out over time, then the number of factories will gradually decline and the price will gradually rise. Until it reaches average total cost, nobody will build any new factories. Eventually price will be equal to average total cost, just as it was when we reached the equilibrium from above, but it may take much longer to get there; it usually takes longer to wear out a factory than to build one.

In the next two sections, I will work through the logic of such situations in some detail while trying to show how it is related to the logic of a different sort of situation that was briefly discussed several chapters ago.

Upside, Downside, Cost Equals Price

In analyzing the industry supply curve in Chapter 9, I assumed an unlimited number of potential firms, all with the same cost curve; if existing firms make a profit, new firms come into existence until the profit is competed down to zero.

One objection to this that I discussed is that firms are not all identical. Some power companies own special pieces of real estate--Niagara Falls, for example--not available to their competitors. Some corporations are run by superb managers or possess the services of an inventive genius such as Browning or Kloss. Surely such fortunate firms can, as a result, produce their output at a lower cost than others--and can therefore make profits at a price at which it does not pay less fortunate firms to enter the industry.

But although firms that have, in this sense, low cost curves appear to make positive profits when less fortunate firms just barely cover their costs, that is an illusion. One should include in cost the cost of using the special assets (location, administrator, inventor, or whatever) that give that firm its advantage. The value of those assets is what the firm could sell them for or, in the case of human assets, what a competitor would pay to hire them away. One of the firm's (opportunity) costs of operating is not selling out, and one of the costs to an inventor of running his own firm is not working for someone else. If the possession of those special assets gives the firm an additional net revenue of, say, $100,000/year (forever--or almost), then the market value of those assets is the present value of that income stream. The interest on that present value is then the same $100,000/year. Since giving up that interest is one of the costs to the firm of staying in business, the firm should subtract it from revenue in calculating its economic profit.

Suppose, for example, that the firm is making an extra $100,000/year as a result of owning its special asset and that the interest rate is 10 percent. The present value of a permanent income stream of $100,000/year is $1,000,000, and the interest on $1,000,000 is $100,000. By using the asset this year, the firm gives up the opportunity to sell it and collect interest on the money it would get for it. We should include $100,000/year as an additional cost--forgone interest. Doing so reduces the profit of the firm to zero--the same as the profit of an ordinary firm. In one sense, this argument is circular; in another sense, it is not.

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The same argument applies in the opposite direction to firms whose revenues fail to cover their sunk costs (firms whose revenues fail to cover their recoverable costs go out of business). Suppose a widget factory costs $1,000,000 to build and lasts forever; further suppose the interest rate is 10 percent, so that the factory must generate net revenue of $100,000/year to be worth building. At the time the factory is built, the price of widgets is $1.10/widget. The factory can produce 100,000 widgets per year at a cost (not including the cost of building the factory) of $0.10/widget, so it is making $100,000/year--just enough to justify the cost of building it. Further suppose that the factory can be used for nothing but building widgets; its scrap value is zero.

The invention of the fimbriated gidget drastically reduces the demand for widgets. Widget prices fall from $1.10 to $0.20. At a price of $0.20, the firm is netting only $10,000/year on its $1,000,000 investment. So are all the other (identical) firms. Are they covering costs?

The factory is a sunk cost from the standpoint of the industry, but any individual firm can receive its value by selling it to another firm. How much will it sell for? Since it generates an income of $10,000/year and since at an interest rate of 10 percent an investment of $100,000 can generate the same income, the factory will sell for $100,000. So the cost of not selling it is $100,000--and the annual cost of not selling it is $10,000, the interest forgone. Ten thousand dollars is the firm's revenue net of costs before subtracting the cost of the factory, so net revenue after subtracting the cost of the factory--economic profit--is zero.

Again the argument is circular but not empty, since it tells us, among other things, what determines the price of a factory in a declining industry. In the case I have just described, the firm loses $900,000 the day the price of widgets drops, since that is the decrease in the value of its factory. Thereafter it just covers costs, as usual.

The assumptions used in this example, although useful for illustrating the particular argument, are not quite consistent with rational behavior. In the market equilibrium before the price drop, economic profit was zero. That is an appropriate assumption for the certain world of Chapters 1-12, but not for the uncertain world we are now discussing. If there is some possibility of prices falling, then firms will bear sunk costs only if the average return justifies the investment. Prices must be high enough that the profit if they do not fall balances the loss if they do. The zero-profit condition continues to apply, but only in an average sense--if the firms are lucky, they make money; if they are unlucky, they lose it. On average they break even. This point will be discussed at greater length later in the chapter.

Sunk Costs in the Shipping Industry

You may find it helpful to work through another example. Consider ships. Suppose that the total cost of building a ship is $10,000,000. For simplicity we assume that operating costs and the interest rate are both zero. Each ship lasts twenty years and can transport 10,000 tons of cargo each year from port A to port B. We assume, again for simplicity, that the ships all come back from B to A empty. It takes a year to build a ship. The demand curve for shipping cargo is shown in Figure 13-1a.

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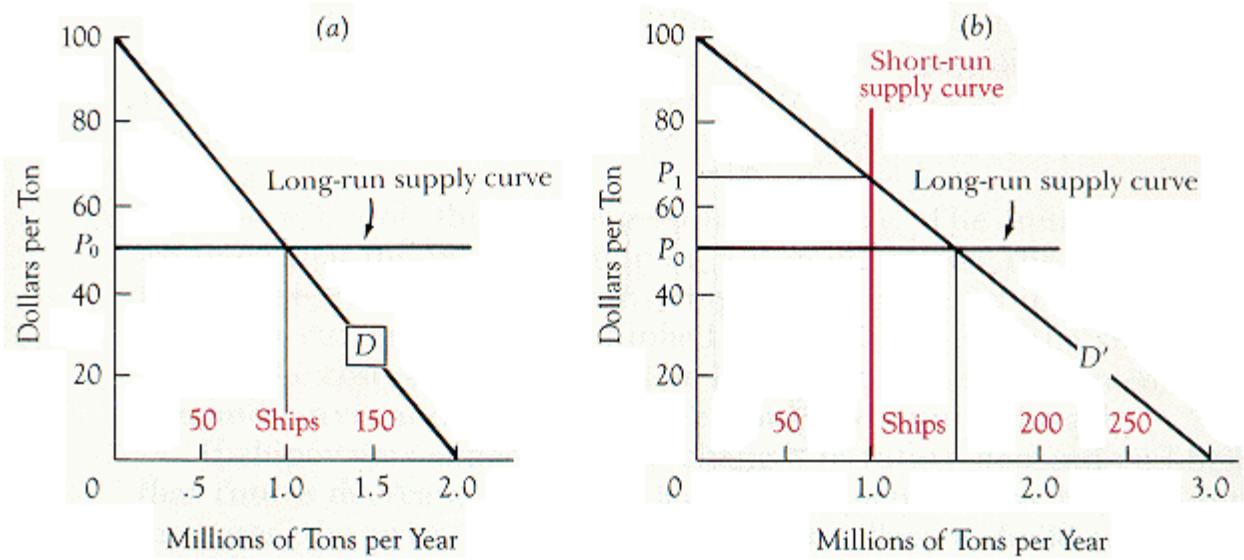
We start with our usual competitive equilibrium--price equals average cost. There are 100 ships and the cost for shipping cargo is $50/ton. Each ship makes $500,000 a year; at the end of twenty years, when the ship collapses into a pile of rust, it has just paid for itself. Every year five ships are built to replace the five that have worn out. If the price for shipping were any higher, it would pay to build more ships, since an investment of $10,000,000 would produce a return of more than $10,000,000; if it were lower, no ships would be built. The situation is shown in Figure 13-1a.

Figure 13-1b shows the effect of a sudden increase in the demand for shipping--from D to D'. In the short run, the supply of shipping is perfectly inelastic, since it takes a year to build a ship. The price shoots up to P_1, where the new demand curve intersects the short-run supply curve.

Figure 13-1



Supply and demand curves for shipping, showing the effect of an unanticipated increase in demand. Figure 13-la shows the situation before the increase and Figure 13-lb after. The horizontal axis shows both quantity of cargo carried each year and the equivalent number of ships. The short-run supply curve is vertical at the current number of ships (and amount of cargo they carry). The long-run supply curve is horizontal at the cost of producing shipping (the annualized cost of building a ship divided by the number of tons it carries).

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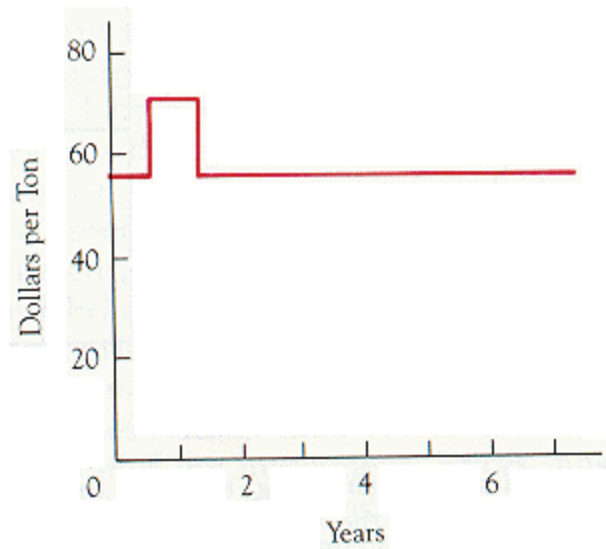
Shipyards immediately start building new ships. At the end of a year, the new ships are finished and the price drops back down to the old level. Figure 13-2 shows the sequence of events in the form of a graph of price against time.

Looking again at Figure 13-lb, note that it has two supply curves--a vertical short-run supply curve and a horizontal long-run supply curve. No ships can be built in less than a year, so there is no way a high price can increase the supply of shipping in the short run. Since operating costs are, by assumption, zero, it pays shipowners to operate the ships however low the price; there is no way a low price can reduce the supply of shipping in the short run. So in the short run, quantity supplied is independent of price for any price between zero and infinity.

Figure 13-2



A possible pattern of freight rates over time. At $T = 0$ there is an unexpected increase in demand, as shown on Figure 13-1*b*; price rises above its long-run equilibrium, then falls back when additional new ships are completed.

The situation in the long run is quite different. At any price where ships more than cover their construction cost, it pays to build ships; so in the long run, the industry will produce an unlimited quantity of shipping at any price above P0 = $50/ton. As ships are built, the short-run supply curve shifts out. At any price below P0, building a ship costs more than the ship is worth, so quantity supplied falls as the existing ships wear out. So the long-run supply curve is horizontal. It is worth noting that on the "up" side--building ships--the long run is a good deal shorter than on the "down" side.

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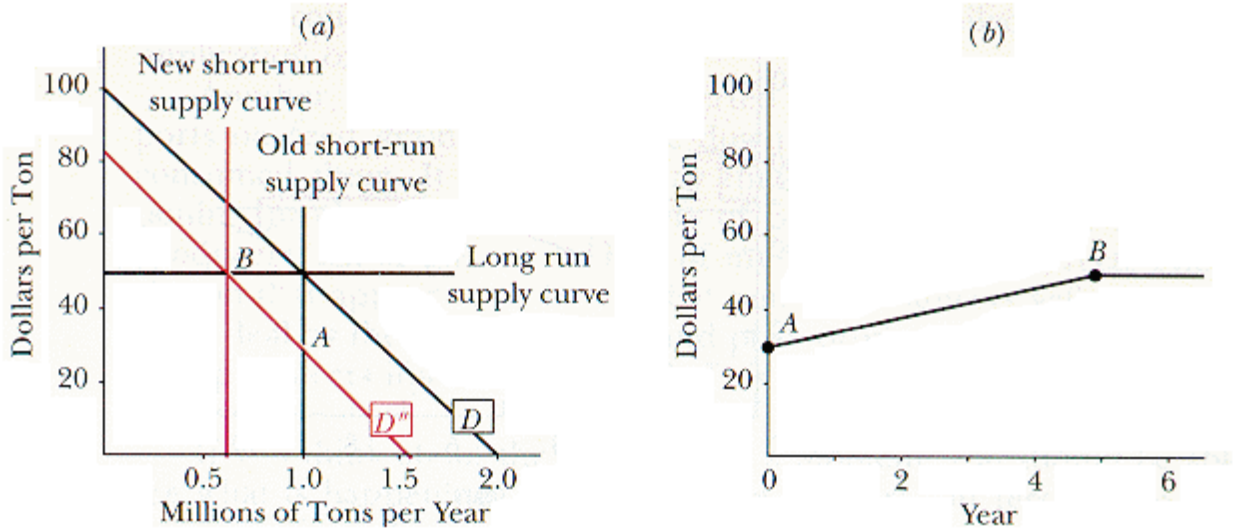
Suppose that instead of the increase in demand shown in Figure 13-1b, there is instead a decrease in demand, from D to D", as shown in Figure 13-3a. Price drops. Since there are no operating costs, existing ships continue to carry cargo as long as they get any price above zero. The price is at the point where the old (short-run) vertical supply curve intersects the new demand curve (A).

Building a ship is now unprofitable, since it will not, at the new price, repay its construction costs. No ships are built. Over the next five years, 25 ships wear out, bringing the long-run quantity supplied (and the short-run supply curve) down to a point where the price is again $50/ton (B). Figure 13-3b shows how the price and the number of ships change with time.

There is one thing wrong with this story. The initial equilibrium assumed that the price of shipping was going to stay the same over the lifetime of a ship--that was why ships were produced if and only if the return at current prices, multiplied by the lifetime of the ship, totaled at least the cost of production. The later developments assumed that the demand curve, and hence the price, could vary unpredictably.

Figure 13-3



The effect of an unexpected decrease in demand for shipping. Figure 13-3*a* shows the situation after the demand curve shifts. Figure 13-3*b* shows the resulting pattern of prices over time.

The effect of an unexpected decrease in demand for shipping. Figure 13-3a shows the situation after the demand curve shifts. Figure 13-3b shows the resulting pattern of prices over time.

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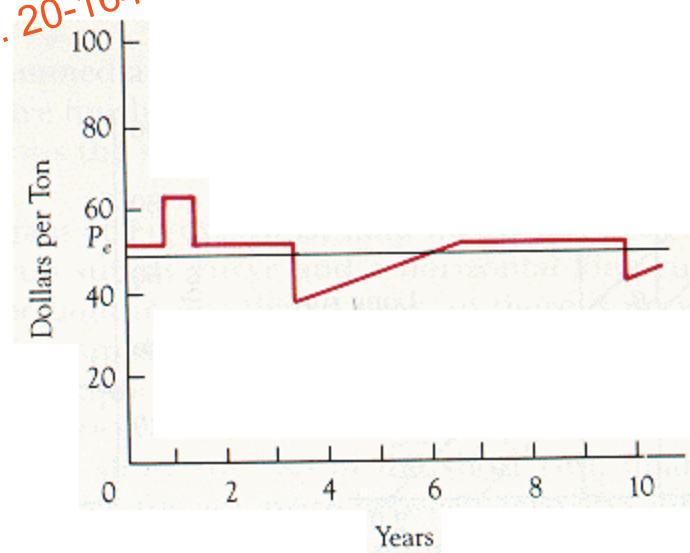
Figure 13-4



A possible pattern of freight rates over time. Unlike Figure 13-2, this figure assumes that the producers expect unpredictable shifts in demand. The average return from carrying freight must be enough to just cover the costs.

A possible pattern of freight rates over time. Unlike Figure 13-2, this figure assumes that the producers expect unpredictable shifts in demand. The average return from carrying freight must be

enough to just cover the costs.

If shipowners expect random changes in future demand and believe that future decreases will be at least as frequent and as large as future increases, the price at which they are just willing to build will be more than $50/ton. Why? Because ships can be built quickly, so that the gain from an increase in demand is short-lived, but wear out slowly, so that the loss from a decrease in demand continues for a long time. Compare the short period of high prices in Figure 13-2 with the long period of low prices in Figure 13-3b. If the current price is high enough (Pe on Figure 13-4) that any increase causes ships to be built, then an increase in demand will hold prices above Pe for only a year. A decrease can keep prices below Pe for up to twenty years. If Pe were equal to $50/ton, the price at which ships exactly repay the cost of building them, the average price would be lower than that and ships, on average, would fail to recover their costs. So Pe must be above $50/ton.

This is the same point that I made earlier in describing the effect of sunk costs in the widget industry. In order to make the behavior of the shipowners rational, we must assume that they do not start building ships until the price is high enough that the profits if demand does not fall make up for the losses if it does. The pattern of price over time in the industry then looks something like Figure 13-4.

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How to Lie While Telling the Truth--

A True Story

Many years ago, while spending a summer in Washington, I came across an interesting piece of economic analysis involving these principles. The congressman I was working for had introduced a bill that would have abolished a large part of the farm program, including price supports for feed grains (crops used to feed animals). Shortly thereafter the agriculture department released a "study" of the effects of abolishing those particular parts of the farm program. Their conclusion, as I remember, was that farm income would fall by $5 billion while the government would save only $3 billion in reduced expenditure, for a net loss of $2 billion.

The agriculture department's calculations completely ignored the effect of the proposed changes on consumers--although the whole point of the price support program was (and is) to raise the price of farm products and thus of food. Using the agriculture department's figures, the proposed abolition would have saved consumers (as I remember) about $7 billion, producing a net gain of $5 billion. The agriculture department, which of course opposed the proposed changes, failed to mention that implication of its analysis.

Another part of the report asserted that the abolition of price supports on feed grains would drive down the prices of the animals that consumed them. It went on to say that the price drop would first hit poultry producers, then producers of pork and lamb, and finally beef producers. All of this, to the best of my knowledge, is correct. The conclusion that appears to follow is that poultry producers

will be injured a great deal by the abolition, lamb and pork producers somewhat less, and beef producers injured least of all. This is almost the precise opposite of the truth.

If you think about the situation for a moment, you should be able to see what is happening. Removing price supports on feed grains lowers the cost of production for poultry, pork, lamb, and beef--feed grains are probably the largest input for producing those foods. In the case of poultry, the flocks can be rapidly increased, so the poultry producers will receive an above-normal profit (cost of production has fallen, price of poultry has not) for only a short time. Once the flocks have increased, the price of chickens falls and the return to their producers goes back to normal. The herds of pigs and sheep take longer to increase, so their producers get above-normal returns for a longer period, and the beef producers get them for longer still. The situation is just like the situation of the shipowners when demand increases, except that there is a drop in production cost rather than an increase in the demand schedule. The agriculture department appeared to be saying that the beef producers would receive the least injury and the poultry producers the greatest injury from the proposed change; what their analysis actually implied was that the beef producers would receive the largest benefit and the poultry producers the smallest benefit.

PART 2 - LONG-RUN AND

SHORT-RUN COSTS

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So far, we have been analyzing the influence of uncertainty on prices by taking account of the effect of sunk costs on the behavior of profit-maximizing firms. A more technical description of what we are doing is that we are analyzing the effect of uncertainty in terms of Marshallian quasi-rents--"Marshallian" because this approach, along with much of the rest of modern economics, was invented by Alfred Marshall about a hundred years ago and "quasi-rents" because the return on sunk costs is in many ways similar to the rent on land. Both can be viewed as the result of a demand curve intersecting a perfectly inelastic supply curve--although in the case of sunk costs, the supply curve is inelastic only in the short run.

The more conventional way of analyzing these questions is in terms of short-run and long-run cost curves and the resulting short-run and long-run supply curves. I did not use that approach in Chapter 9, where supply curves were deduced from cost curves, and so far I have not used it here. Why?

The reason for ignoring the distinction between long-run and short-run costs in Chapter 9 was explained there; in the unchanging world we were analyzing, long run and short run are the same. The reason I did not introduce the ideas of this chapter in that form is that the way in which I did introduce it provides a more general and more powerful way of analyzing the same questions. It is more general because it allows us to consider productive assets--such as ships and factories--with a variety of lifetimes and construction times, not merely the extreme (and arbitrary) classes of "short-" and "long-" lived. It is more powerful because it not only gives us the long-run and short-run supply curves but also shows what happens in between, both to the price of the productive assets and to the price of the goods they produce.

The simplest way to demonstrate all of this--and to prepare you for later courses that will assume you are familiar with the conventional approach--is to work out the short-run/long-run analysis as a special case of the approach we have been following. While doing so, we will also be able to examine some complications that have so far remained hidden behind the simplifying assumptions of our examples.

Factory Size and the Short-Run Supply Curve

We start with an industry. Since we used up our quota of widgets earlier in the chapter, we will make it the batten industry. Battens are produced in batten factories. There are many batten firms, so each is a price taker. A firm entering the industry--or a firm already in the industry that is replacing a worn-out factory--must choose what size factory to build. A small factory is inexpensive to build but expensive to operate--especially if you want to produce a large amount of output. Larger factories cost more to build but are more efficient for producing large quantities. A firm can only operate one factory at a time.

Figures 13-5 through 13-7 show the cost curves for three different factories. The first costs $1 million to build, the second $3 million, and the third $5 million. A factory has no scrap value, so the investment is a sunk cost. Each factory lasts ten years. The interest rate is zero, so the annual cost associated with each factory is one tenth the cost of building it. One could easily enough do the problem for a more realistic interest rate, but that would complicate the calculations without adding anything important.

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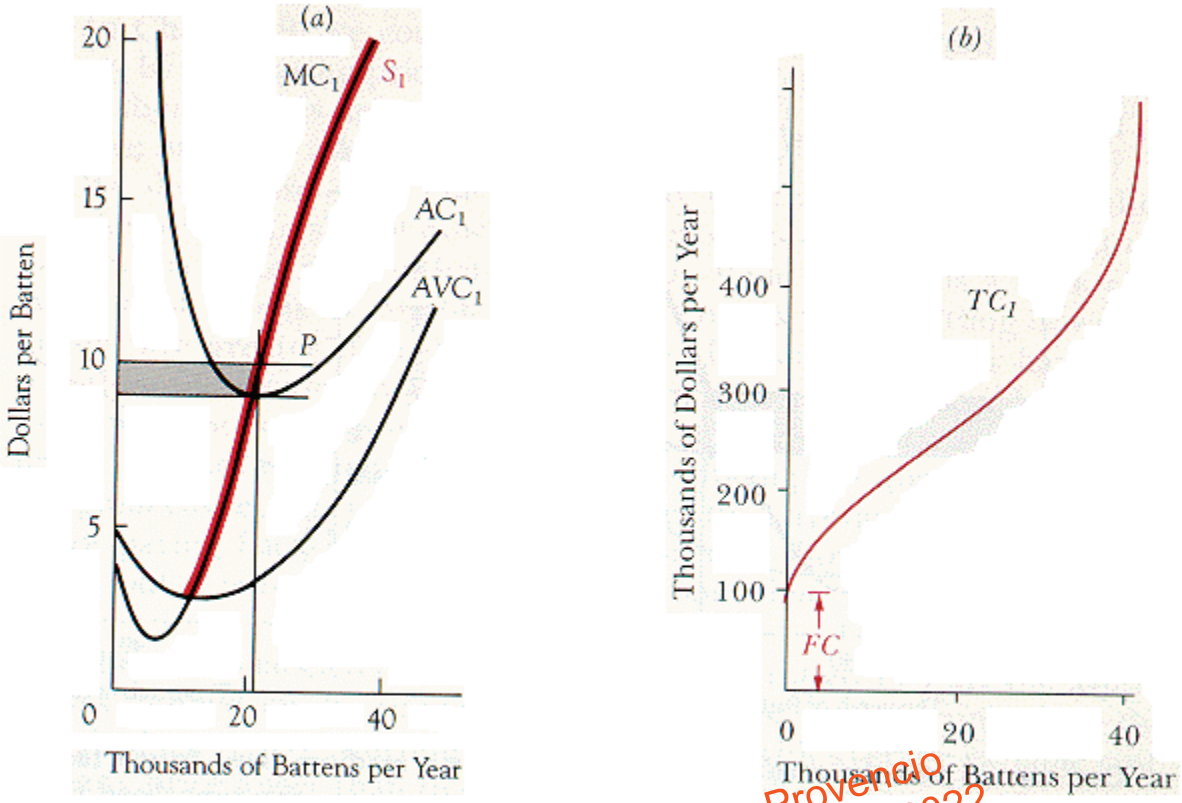
Total cost is the sum of fixed cost and variable cost. The figures are drawn on the assumption that the only fixed cost in producing battens is the cost of building the factory; all other costs are variable. Since this implies that the fixed cost and the sunk cost are identical, so are variable cost (total cost minus fixed cost) and recoverable cost (total cost minus sunk cost). The figures show average variable cost (AVC); it might just as well have been labeled ARC for "average recoverable cost."

Figure 13-5



Cost curves and the resulting supply curve for a small batten factory. The factory costs $1 million to build. Since it lasts for ten years, the annualized fixed cost (*FC*) is $100,000/year. The shaded area shows the profit at a price of $10/batten.

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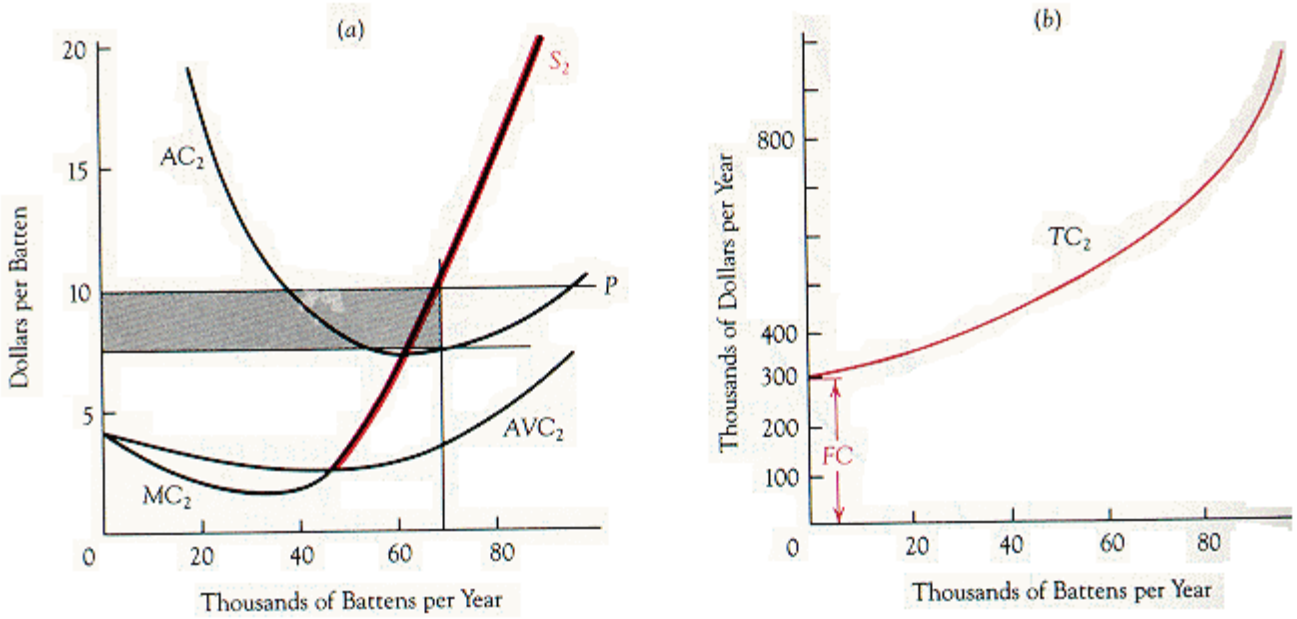
Figure 13-6



Cost curves and the resulting supply curve for a medium-sized batten factory. The factory costs $3 million to build. Since it lasts for ten years, the annualized fixed cost (*FC*) is $300,000/year. The shaded area shows the profit at a price of $10/batten.

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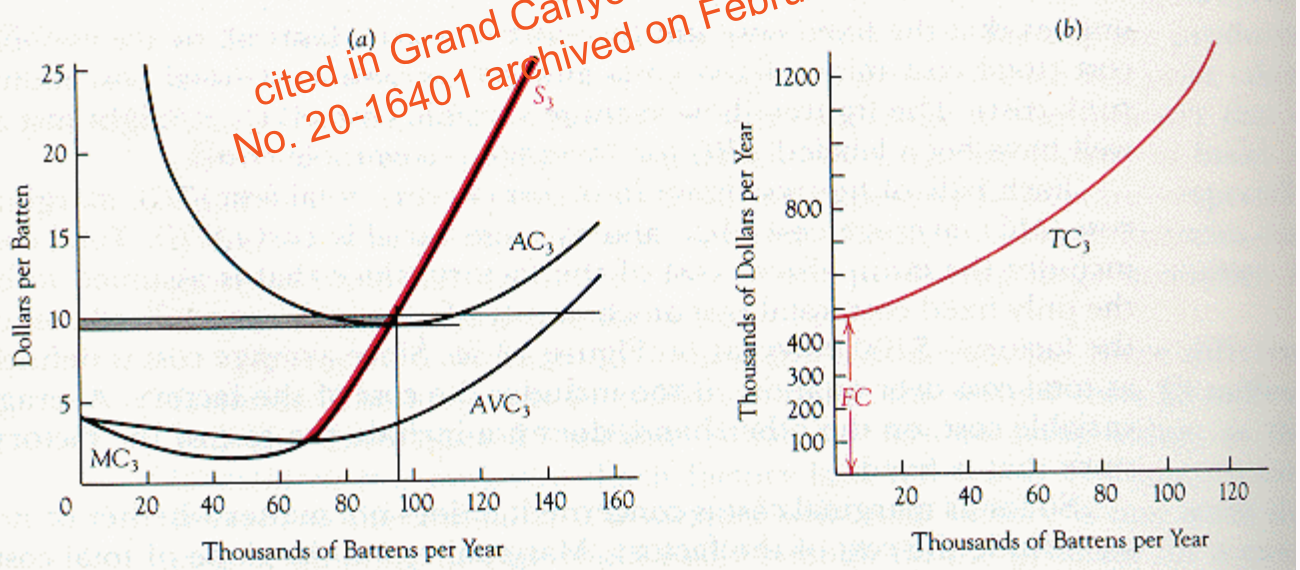
Figure 13-7



Cost curves and the resulting supply curve for a large batten factory. The factory costs $5 million to build. Since it lasts for ten years, the annualized fixed cost (*FC*) is $500,000/year. The shaded area shows the profit at a price of $10/batten.

Each pair of figures shows four cost curves--total cost (TC), marginal cost (MC), average cost (AC), and average variable cost (AVC). Total cost includes the (annualized) cost of the factory; since that is assumed to be the only fixed cost, total cost at a quantity of zero is the annualized cost of the factory--$100,000/year on Figure 13-5b. Since average cost is defined as total cost over quantity, it

too includes the cost of the factory. Average variable cost, on the other hand, does not include the cost of the factory, since that is fixed.

So far as marginal cost is concerned, it does not matter whether or not we include the cost of the factory. Marginal cost is the slope of total cost; adding a constant term to a function simply shifts it up without affecting its slope.

Suppose the batten firm has built the factory of Figure 13-5. The market price of a batten is P; the firm must decide how many to produce each year. Just as in Chapter 9, the firm maximizes its profit by producing the quantity for which MC = P, provided that at that quantity it is not losing money.

In Chapter 9, we could see whether the firm was making or losing money by comparing price to average cost; if average cost is greater than price, then profit is negative and the firm should go out of business. This time we have two average costs--AC and AVC. Which should we use?

We should use AVC. The firm already has the factory; it is deciding whether or not to shut it down. If the firm shuts down the factory, it will not get back the money that was spent to build it--that is a sunk cost. What it will save is its variable cost. If the savings from shutting down the factory are greater than the loss from no longer having any battens to sell, then the factory should be shut down. Otherwise it should continue to operate. So as long as price is greater than average variable cost, the firm continues to operate the factory, producing the quantity for which marginal cost equals price. If price is lower than average cost, the factory is not paying back its cost of construction and should never have been built--but it is too late to do anything about that. Sunk costs are sunk costs.

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The curves labeled S_1-S_3 on Figures 13-5 through 13-7 are the supply curves implied by the previous two paragraphs. Each S runs along the marginal cost curve, starting at its intersection with average variable cost. For any price lower than that, quantity supplied is zero.

The Long-Run Supply Curve

These are the short-run supply curves. They correctly describe the behavior of a firm that already owns a functioning factory. But in the long run, factories wear out and must be replaced. A firm that is about to build a factory is in a different situation, in two respects, from a firm that already has a factory. First, the cost of building the factory is not yet sunk--the firm has the alternative of not building and not producing. The firm will build only if it expects price to be above average cost--including in the average the cost of building the factory.

The second difference is that a firm about to build can choose which size of factory it prefers. Its choice will depend on what the price is. So the long-run supply curve must take account of the relation between the price of battens and the size of the factories in which they will be produced.

How do we find the long-run supply curve of a firm? We consider a firm that is about to build a factory and expects the market price of battens to remain at its present level for at least the next ten years--the lifetime of the factory. The firm's long-run supply curve is then the relation between the quantity the firm chooses to produce and the price.

We solve the problem in two steps. First we figure out, for each size of factory, how many battens the firm will produce if it decides to build a factory of that size. Then we compare the resulting profits, in order to find out which factory the firm will choose to build. Once we know which factory the firm chooses to build and how much a firm with a factory of that size chooses to produce, we know quantity supplied at that price. Repeat the calculation for all other prices and we have the firm's long-run supply curve.

Figures 13-5 through 13-7 show the calculations for a price of $10/batten. As we already know, if a price-taking firm produces at all, it maximizes its profit by producing a quantity for which MC = P. So for each size of factory, a firm that chose to build that factory would produce the quantity for which marginal cost was equal to price.

Having done so, what would the firm's profit be? Profit per unit is simply price minus average cost. The firm should include the cost of building the factory in deciding which factory to build, so the relevant average is average cost, not average variable cost. Total profit is profit per unit times number of units--the shaded rectangle in each figure. It is largest for Figure 13-6, so the firm builds a $3 million factory and produces that quantity for which, in such a factory, price equals marginal cost.

Figure 13-8 shows the result of repeating the calculations for many different prices. As I have drawn the curves, the less expensive factories have a lower average cost for low levels of output and a higher average cost for high levels. The result is that as price (and quantity) increase, so does the optimal size of the factory. The long-run supply curve for the firm (Figure 13-8b) is then pieced together from portions of the short-run supply curves of Figures 13-5 through 13-7. In doing so, we limit ourselves to the part of each short-run supply curve above the corresponding average cost (AC not AVC), since that is the long-run supply curve for that size of factory. We end up with the long-run supply curve for a firm that is free to vary factory size as well as other inputs.

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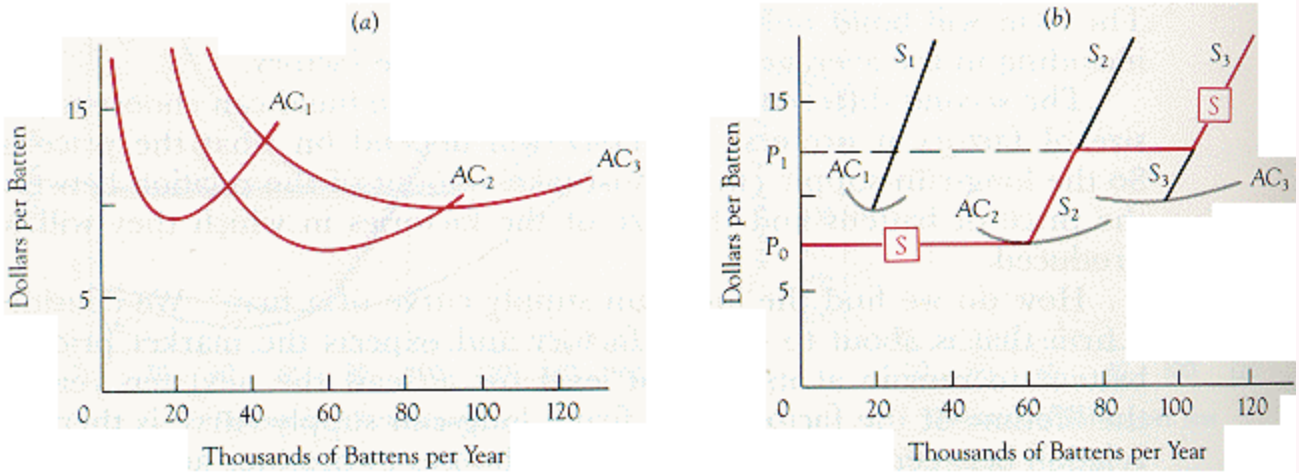
Looking at Figure 13-8b, we see that the smallest size of factory is irrelevant to the firm's supply curve, since there is no price of battens at which it would be worth building such a factory. If the market price is below P0, none of the three sizes of factory can make enough money to justify the cost of building it, so the firm produces nothing. For prices between P0 and P_1 on Figure 13-8b, the firm maximizes its profit by building a $3 million factory and producing the quantity for which the marginal cost (MC2 on Figure 13-6a) equals the price. For prices above P_1, it does better building a $5 million factory and producing along the MC3 curve of Figure 13-7a. So S is the firm's long-run supply curve.

Figure 13-8



The short-run average cost curves and the short-run and long-run supply curves for a firm producing battens. *AC* and *S* are drawn on the assumption that there are only three possible factory sizes, corresponding to Figures 13-5, 13-6, and 13-7. For any price, the firm builds the factory that produces the largest profit at that price.

An alternative way of deriving the long-run supply curve of the firm is to consider the factory itself as one more input in the production function. Just as in Chapter 9, one then calculates the lowest cost bundle of inputs for each level of output; the result tells you, for any quantity of output, how much it costs to produce and what inputs--including what size of factory--you should use. You then go on to calculate average cost (the same curve shown on Figure 13-8a), marginal cost, and the supply curve. Since we are considering the long-run supply curve, we are (temporarily) back in the unchanging world of Chapters 1-11.

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Figure 13-9a shows what the firm's long-run average cost curve would be like if, instead of limiting the firm to only three sizes of factory, we allowed it to choose from a continuous range of factory sizes. The solid line LAC on the figure is the resulting long-run average cost curve; the gray lines are average cost curves for several different factory sizes, including those shown on Figures 13-5 through 13-7. Since for any quantity, the firm chooses that factory size which produces that quantity at the lowest possible cost, the average cost curve for a factory can never lie below the average cost curve for the firm. Every point on the firm's long-run average cost curve is also on the average cost curve for some size of factory--the size the firm chooses to build if it expects to produce that quantity of output. The result is what you see on Figure 13-9a; the average cost curves for the different factory sizes lie above the firm's long-run average cost curve and are tangent to it.

One feature of figures such as 13-9a that some people find puzzling is that the point where a factory average cost curve touches the firm's long-run average cost curve is generally not at the minimum average cost for that size of factory. AC1, for example, touches LAC not at point B, which is its minimum, but at point A, and similarly for all the others except AC2. Mathematically, the reason for this is quite simple. AC1 is tangent to LAC at point A. At the point of tangency, the two curves have the same slope. Unless LAC is at its minimum--as it is at point C, where it touches AC2--its slope is not zero. Since the slope of LAC is not zero at the point of tangency, neither is the slope of AC1; so AC1 cannot be at its minimum. The same applies to all of the points of tangency except C.

As I have commented before, one can read through a proof without ever understanding why the conclusion is correct; for some of you, the previous paragraph may be an example of that. Another way of putting the argument is to point out that while the firm that chooses to produce quantity QA could lower its average cost by expanding output to QB, it would then be producing a larger quantity; if it wished to produce that quantity, it could do so at an even lower average cost by using a bigger factory. B shows the minimum average cost for producing in a $1 million factory. It does not show the minimum average cost for producing a quantity QB, so it does not show what the average cost would be for a firm that wished to produce that quantity and was free to build whatever size factory it preferred. Similarly, D is the minimum point on AC3, but there is another (unlabeled) average cost curve lying below it, providing a lower cost way of producing QD--at point F.

Figure 13-9a shows the short-run and long-run average cost curves for a firm that can choose from a continuous range of factory sizes. Figure 13-9b shows the long-run average cost curve and the long-run supply curve for such a firm. Every time the price goes up a little, the optimal size of factory shifts up as well. The result is the smooth supply curve of Figure 13-9b.

In Chapter 9, after finding the supply curve for a firm, we went on to find the supply curve for an industry made up of many such firms. We can do the same thing here. In the short run, the number of factories is fixed; there is not enough time to build more or for existing factories to wear out. So the short-run supply curve for the industry is simply the horizontal sum of the short-run supply curves for all the existing factories--just as in the case of the competitive industry with closed entry discussed in Chapter 9.

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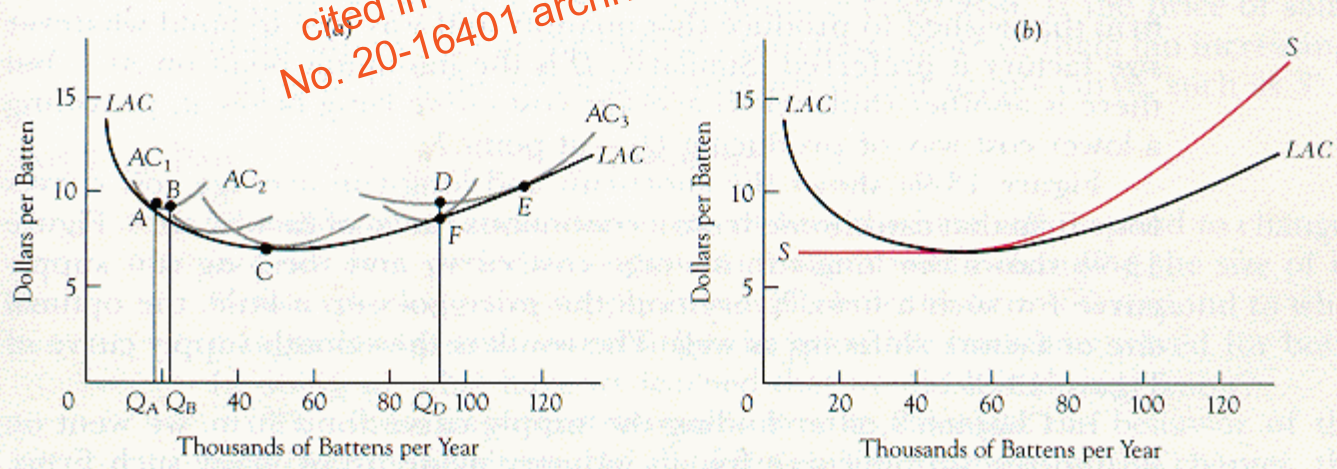
Figure 13-9

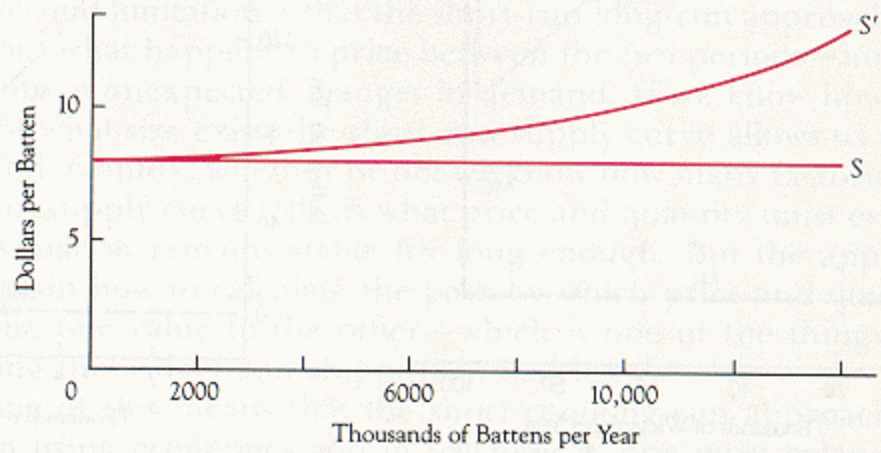


The long-run average cost curve and supply curve for a firm producing battens. *LAC* and *S* are drawn on the assumption that there is a continuous range of possible factory sizes. For any level of output desired, the firm builds the factory that produces that output at the lowest cost. For any price, it builds the factory that produces the largest profit at that price.

In the long run, the number of factories can vary; firms may build new factories or fail to replace existing factories as they wear out. Unless there are barriers to entry, such as laws against building new factories, we are in the second case of Chapter 9--a competitive industry with free entry. If the inputs to the industry are in perfectly elastic supply so that their price does not depend on industry output, the (constant-cost) industry's long-run supply curve is S on Figure 13-10--a horizontal line at

price = marginal cost = minimum average cost. If the price of some of the inputs rises as the industry purchases more of them (an increasing-cost industry), the result is an upward-sloped supply curve, such as S'.

Figure 13-10



Two possible long-run supply curves for the batten industry. S, which is horizontal at a price equal to minimum average cost, is drawn on the assumption that inputs are available in perfectly elastic supply. S' is drawn on the assumption that as quantity increases, input prices are bid up.

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Part 1 vs Part 2--Two Approaches Compared

The short-run supply curve tells us how the firm will respond to changes in price over periods too short to make it worth changing the size of its factory; the long-run supply curve tells how the firm will respond to what it regards as permanent changes in price. We have now solved for both. In doing so, what have we learned that we did not already know?

The most important lesson is how to calculate the behavior of the firm over the short run. In all of the earlier examples of this chapter, the firms had simple all-or-none patterns of production. A widget factory either produced at capacity or shut down; a ship continued to carry a full load of freight as long as it got anything at all for doing so. We were, in effect, assuming the cost curves shown in Figures 13-11a and 13-11b--marginal cost constant up to some maximum level of production and infinite beyond that. We were also assuming that there was only one kind of factory and one kind of ship.

In analyzing the batten factory, we allowed for more realistic cost curves. By doing so, we saw how, even in the short run, quantity supplied can vary continuously with price. We could have done the same thing in the earlier analysis; I chose not to. All-or-none production was a simplifying

assumption used to avoid complications that were, at that point, inessential. The discussion of long-run and short-run supply curves was a convenient point at which to drop that simplification.

What are the disadvantages of the short-run/long-run approach? One of them is that it encourages students to confuse sunk costs and fixed costs. In the examples that are used, the two are generally the same, but there is no reason why they have to be.

In the batten industry, as I pointed out earlier, the curve labeled average variable cost could also have been labeled average recoverable cost, since the two are equal. I labeled it AVC in deference to convention; that is how you will generally see it in other textbooks. It would have been more correct to have labeled it ARC. It is the fact that the cost is recoverable, not the fact that it is variable, that is essential to the way in which the curve is related to the short-run supply curve. If we were considering a situation in which variable cost and recoverable cost were not the same, we could have simply drawn the ARC curve and forgotten about AVC.

One of the faults of the short-run/long-run approach is that it encourages confusion between fixed and sunk costs. One of its limitations is that it distinguishes between only two kinds of costs--short-run and long-run. The more general approach to sunk cost, which we developed earlier in the chapter, can be used to analyze a much broader range of situations, including ones in which there are several long-lived productive assets with different lifetimes.

Figure 13-11

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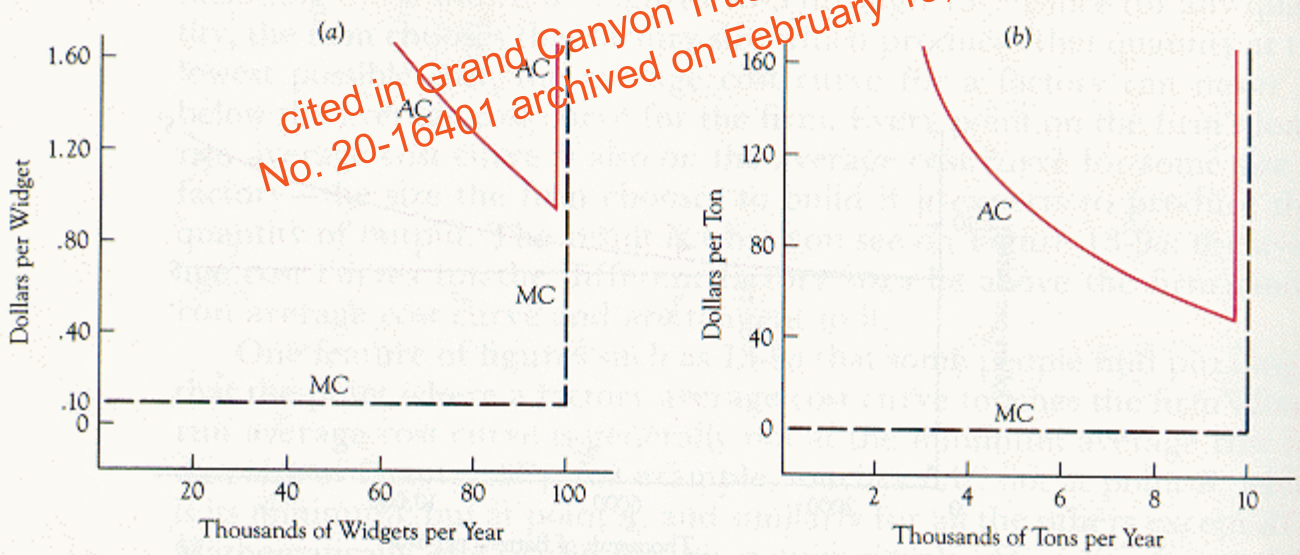

Cost curves for widgets and shipping. The figures show the cost curves for the widget (11*a*) and shipping (11*b*) industries discussed in Part 1 of the chapter.

A second limitation is that the short-run/long-run approach says nothing about what happens to price between the two periods--how it adjusts over time to unexpected changes in demand. If we know how many factories of what size exist, the short-run supply curve allows us to calculate price and quantity; whether or not we know how many factories exist, the long-run supply curve tells us what price and quantity must eventually be if the situation remains stable for long enough. But the approach does not explain how to calculate the path by which price and quantity move from the one

value to the other--which is one of the things we did in analyzing the widget and shipping industries.

None of this means that the short-run/long-run approach is wrong. Both in using economics and in teaching it, one must balance the costs and benefits of different degrees of simplicity. The short-run/long-run approach described in this section has the advantages and the disadvantages of greater simplicity; it is easier to teach but tells us less of what we want to know than the approach used earlier in the chapter.

In one sense, the difference is entirely pedagogical. Once you understand either approach, you can develop the other out of it. Starting with short- and long-run cost curves, you could, with a little ingenuity, figure out how to analyze more complicated cases or how to trace the path of price and quantity over time. Starting with sunk costs, you can work out short-run and long-run cost curves as special cases--not only in the shipping industry of Figures 13-l through 13-4 but in more complicated situations as well. By teaching the material in both ways, I hope I have allowed you to learn it in whichever way you found more natural. That is a benefit. Its cost is measured in additional pages of book and additional hours of time--mine in writing and yours in reading. The production of textbooks involves the same sort of trade-off between costs and benefits as does the production of anything else--or any other action requiring choice.

PART 3 - SPECULATION

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It is difficult to read either newspapers or history books without occasionally coming across the villainous speculators. Speculators, it sometimes seems, are responsible for all the problems of the world--famines, currency crises, high prices.

How Speculation Works

A speculator buys things when he thinks they are cheap and sells them when he thinks they are expensive. Imagine, for example, that you decide there is going to be a bad harvest this year. If you are right, the price of grain will go up. So you buy grain now, while it is still cheap. If you are right, the harvest is bad, the price of grain goes up, and you sell at a large profit.

There are several reasons why this particular way of making a profit gets so much bad press. For one thing, the speculator is, in this case at least, profiting by other people's bad fortune, making money from, in Kipling's phrase, "Man's belly pinch and need." Of course, the same might be said of farmers, who are usually considered good guys. For another, the speculator's purchase of grain tends to drive up the price, making it seem as if he is responsible for the scarcity.

But in order to make money, the speculator must sell as well as buy. If he buys when grain is plentiful, he does indeed tend to increase the price then; but if he sells when it is scarce (which is

what he wants to do in order to make money), he increases the supply and decreases the price just when the additional grain is most useful.

A different way of putting it is to say that the speculator, acting for his own selfish motives, does almost exactly what a benevolent despot would do. When he foresees a future scarcity of wheat, he induces consumers to use less wheat now. The speculator gets consumers to use less wheat now by buying it (before the consumers themselves realize the harvest is going to be bad), driving up the price; the higher price encourages consumers to consume less food (by slaughtering meat animals early, for example, to save their feed for human consumption), to import food from abroad, to produce other kinds of food (go fishing, dry fruit, . . .), and in other ways to prepare for the anticipated shortage. He then stores the wheat and distributes it (for a price) at the peak of the famine. Not only does he not cause famines, he prevents them.

More generally, speculators (in many things, not just food) tend, if successful, to smooth out price movements, buying goods when they are below their long-run price and selling them when they are above it, raising the price towards equilibrium in the one case and lowering it towards equilibrium in the other. They do what governmental "price-stabilization" schemes claim to do--reduce short-run fluctuations in prices. In the process, they frequently interfere with such price-stabilization schemes, most of which are run by producing countries and designed to "stabilize" prices as high as possible.

Cui Bono

Why indeed should we welcome you, Master Stormcrow? Lathspell I name you, ill-news; and ill news is an ill guest they say.

--Grima to Gandalf in The Two Towers by J.R.R. Tolkien

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At least part of the unpopularity of speculators and speculation may reflect the traditional hostility to bearers of bad news; speculators who drive prices up now in anticipation of a future bad harvest are conveying the fact of future scarcity and are forcing consumers to take account of it. Part also may be due to the difficulty of understanding just how speculation works. Whatever the reason, ideas kill, and the idea that speculators cause shortages must be one of the most lethal errors in history. If speculation is unpopular it is also difficult, since the speculator depends for his profit on not having his stocks of grain seized by mob or government. In poor countries, which means almost everywhere through almost all of history, the alternative to speculation in food crops is periodic famine.

One reason people suspect speculators of causing price fluctuations is summarized in the Latin phrase cui bono; a loose translation would be "Who benefits?" If the newspapers discover that a gubernatorial candidate has been receiving large campaign donations from a firm that made $10 million off state contracts last year, it is a fair guess that the information was fed to them by his opponent. If a coup occurs somewhere in the Third World and the winners immediately ally themselves with the Soviet Union (or the United States), we do not have to look at the new ruler's bank records to suspect that the takeover was subsidized by Moscow (or Washington).

While cui bono is a useful rule for understanding many things, it is not merely useless but positively deceptive for understanding price movements. The reason is simple. The people who benefit from an increase in the price of something are those who produce it, but by producing, they drive the price not up but down. The people who benefit by a price drop are those who buy and consume the good, but buying a good tends to increase its price, not lower it. The manufacturer of widgets may spend his evenings on his knees praying for the price of widgets to go up, but he spends his days behind a desk making it go down. Hence the belief that price changes are the work of those who benefit by them is usually an error and sometimes a dangerous one.

Speculators make money by correctly predicting price changes, especially those changes that are difficult to predict. It is natural enough to conclude, according to the principle of cui bono, that speculators cause price fluctuations.

The trouble with this argument is that in order to make money, a speculator must buy when prices are low and sell when they are high. Buying when prices are low raises low prices; selling when prices are high lowers high prices. Successful speculators decrease price fluctuations, just as successful widget makers decrease the price of widgets. Destabilizing speculators are, of course, a logical possibility; they can be recognized by the red ink in their ledgers. The Hunt brothers of Texas are a notable recent example. A few years ago, they lost several billion dollars in the process of driving the price of silver up to what turned out to be several times its long-run equilibrium level.

It is true, of course, that a speculator would like to cause instability, supposing that he could do so without losing money; more precisely, he would like to make the prices of things he is going to sell go up before he sells them and of things he is going to buy go down before he buys them. He cannot do this by his market activities, but he can try to spread misleading rumors among other speculators; and, no doubt, some speculators do so. His behavior in this respect is like that of a producer who advertises his product; he is trying to persuade people to buy what he wants to sell. The speculator faces an even more skeptical audience than the advertiser, since it is fairly obvious that if he really expected the good to go up he would keep quiet and buy it himself. So the private generating of disinformation, while it undoubtedly occurs, is unlikely to be very effective.

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I once heard a talk by an economist who had applied the relationship between stabilization and profitable speculation in reverse. The usual argument is that speculators, by trying to make a profit, provide the useful public service of stabilizing prices. The reverse argument involved not private speculators but central banks. Central banks buy and sell currencies, supposedly in order to stabilize exchange rates (an exchange rate is the price of one kind of money measured in another). They are widely suspected (by economists and speculators) of trying to keep exchange rates not stable but above or below their market clearing levels.

If profitable speculation is stabilizing, one might expect successful stabilization of currencies to be profitable. If the banks are buying dollars when they are temporarily cheap and selling them when they are temporarily expensive, they should be both stabilizing the value of the dollar and making a profit. One implication of this argument is that the central banks are superfluous--if there are profits to be made by stabilizing currencies, speculators will be glad to volunteer for the job. A second implication is that we can judge the success of central banks by seeing whether they in fact make or lose money on their speculations. The conclusion of the speaker, who had studied precisely that question, was that they generally lost money.

OPTIONAL SECTION

CHOICE IN AN UNCERTAIN WORLD

In Chapters 1-11, we saw how markets work to determine prices and quantities in a certain and unchanging world. In Chapter 12, we learned how to deal with a world that was changing but certain. In such a world, any decision involves a predictable stream of costs and benefits--so much this year, so much next year, so much the year after. One simply converts each stream into its present value and compares the present values of costs and benefits, just as we earlier compared annual flows of costs and benefits.

The next step is to analyze individual choice in an uncertain world. Again our objective is to convert the problem we are dealing with into the easier problem we have already solved. To describe an uncertain world, we assume that each individual has a probability distribution over possible outcomes. He does not know what will happen but he knows, or believes he knows, what might happen and how likely it is to happen. His problem, given what he knows, is how to achieve his objectives as successfully as possible.

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The Rational Gambler

Consider, for example, an individual betting on whether a coin will come up heads or tails. Assuming the coin is a fair one, half the time it will come up heads and half the time tails. The gambler's problem is to decide what bets he should be willing to take.

The answer seems obvious--take any bets that offer a payoff of more than $1 for each $1 bet; refuse any that offer less. If someone offers to pay you $2 if the coin comes up heads, on condition that you pay him $1 if it comes up tails, then on average you gain by accepting the bet and should do so. If he offers you $0.50 for the risk of $1, then on average you lose by accepting; you should refuse the bet.

In these examples, you are choosing between a certain outcome (decline the bet--and end up with as much money as you started with) and an uncertain outcome (accept the bet--end up with either more or less). A more general way of putting the rule is that in choosing among alternatives, you should choose the one that gives you the highest expected return, where the expected return is the sum of the returns associated with the different possible outcomes, each weighted by its probability.

Maximizing Expected Return. This is the correct answer in some situations but not in all. If you make a fifty-fifty bet many times, you are almost certain to win about half the time; a bet that on

average benefits you is almost certain to give you a net gain in the long term. If, for instance, you flip a fair coin 1,000 times, there is only a very small chance that it will come up heads more than 600 times or fewer than 400. If you make $2 every time it comes up heads and lose $1 every time it comes up tails, you are almost certain, after 1,000 flips, to be at least $200 ahead.

The case of the gambler who expects to bet many times on the fall of a coin can easily be generalized to describe any game of chance. The rule for such a gambler is "Maximize expected return." Since we defined expected return as the sum, over all of the possible outcomes, of the return from each outcome times the probability of that outcome, we have:

$$\langle R \rangle \equiv \sum_i p_i R_i. \text{ (Equation 1)}$$

Here p_i is the probability of outcome number i occurring, R_i is the return from outcome number i, and <R> is the expected return.

When you flip a coin, it must come up either heads or tails; more generally, any gamble ends up with some one of the alternative outcomes happening, so we have:

$$\sum_i p_i = 1. \text{ (Equation 2)}$$

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In the gamble described earlier, where the gambler loses $1 on tails and gains $2 on heads, we have:

$$p_1 = 0.5;\ R_1 = +\ \$2 \text{ (heads)}$$

$$p_2 = 0.5;\ R_2 = -\ \$1 \text{ (tails)}$$

$$\langle R \rangle = (p_1 \times R_1) + (p_2 \times R_2) = [0.5 \times (+\ \$2)] + [0.5 \times (-\ \$1)] = +\ \$0.50.$$

Here p_1 and p_2, the probabilities of heads and tails respectively, are each equal to one half; your expected return is $0.50. If you play the game many times, you will on average make $0.50 each time you play. The expected return from taking the gamble is positive, so you should take it--provided you can repeat it many times. The same applies to any other gamble with a positive expected return. A gamble with an expected return of zero--you are on average equally well off whether or not you choose to take it--is called a fair gamble.

We now know how a gambler who will take the same gamble many times should behave. In choosing among several gambles, he should take the one with the highest expected return. In the particular case where he is accepting or declining bets, so that one of his alternatives is a certainty of no change, he should take any bet that is better than a fair gamble.

Maximizing Expected Utility. Suppose, however, that you are only playing the game once--and that the bet is not $1 but $50,000. If you lose, you are destitute--$50,000 is all you have. If you win, you gain $100,000. You may feel that a decline in your wealth from $50,000 to zero hurts you more than an increase from $50,000 to $150,000 helps you. One could easily enough imagine situations in which losing $50,000 resulted in your starving to death while gaining $100,000 produced only a modest increase in your welfare.

Such a situation is an example of what we earlier called declining marginal utility. The dollars that raise you from zero to $50,000 are worth more per dollar than the additional dollars beyond $50,000. That is precisely what we would expect from the discussion of Chapter 4. Dollars are used to buy goods; we expect goods to be worth less to you the more of them you have.

When you choose a profession, start a business, buy a house, or stake your life savings playing the commodity market, you are betting a large sum, and the bet is not one you will repeat enough times to be confident of getting an average return. How can we analyze rational behavior in such situations?

The answer to this question was provided by John Von Neumann, the same mathematician mentioned in Chapter 11 as the inventor of game theory. He demonstrated that by combining the idea of expected return used in the mathematical theory of gambling (probability theory) with the idea of utility used in economics, it was possible to describe the behavior of individuals dealing with uncertain situations--whether or not the situations were repeated many times.

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The fundamental idea is that instead of maximizing expected return in dollars, as in the case described above, individuals maximize expected return in utiles--expected utility. Each outcome i has a utility U_i. We define expected utility as:

$$\langle U \rangle \equiv \sum_i p_i U_i. \text{ (Equation 3)}$$

Your utility depends on many things, of which the amount of money you have is only one. If we are considering alternatives that only differ with regard to the amount of money you end up with, we can write:

$$U_i = U(R_i).$$

Or, in other words, the utility you get from outcome i depends only on how much more (or less) money that outcome gives you. If utility increases linearly with income, as shown on Figure 13-12, we have:

$$U(R) = A + (B \times R);$$

$$\langle U \rangle = \sum_i p_i U_i = \sum_i p_i(A + BR_i) = A\sum_i p_i + B \sum_i p_i R_i =$$

$$= A + B\langle R \rangle. \text{ (Equation 4)}$$

Comparing the left and right-hand sides of Equation 4, we see that whatever decision maximizes <R> also maximizes <U>. In this case--with a linear utility function--the individual maximizing his expected utility behaves like the gambler maximizing his expected return.

A Methodological Digression. In going from gambling games to utility graphs, we have changed somewhat the way in which we look at expected return. In the case of gambling, return was defined relative to your initial situation--positive if you gained and negative if you lost. That was a convenient way of looking at gambling because the gambler always has the alternative of refusing to bet and so ending up with a return of zero. But in an uncertain world, the individual does not usually have that alternative; sometimes--indeed almost always--he is choosing among alternatives all of which are uncertain. In that context, it is easier to define zero return as ending up with no money at all and to measure all other outcomes relative to that. We can then show the utility of any outcome on a graph such as Figure 13-12 as the utility of the income associated with that outcome. If you start with $10,000 and bet all of it at even odds on the flip of a coin--heads you win, tails you lose--then the utility to you of the outcome "heads" is the utility of $20,000. The utility to you of the outcome "tails" is the utility of zero dollars.

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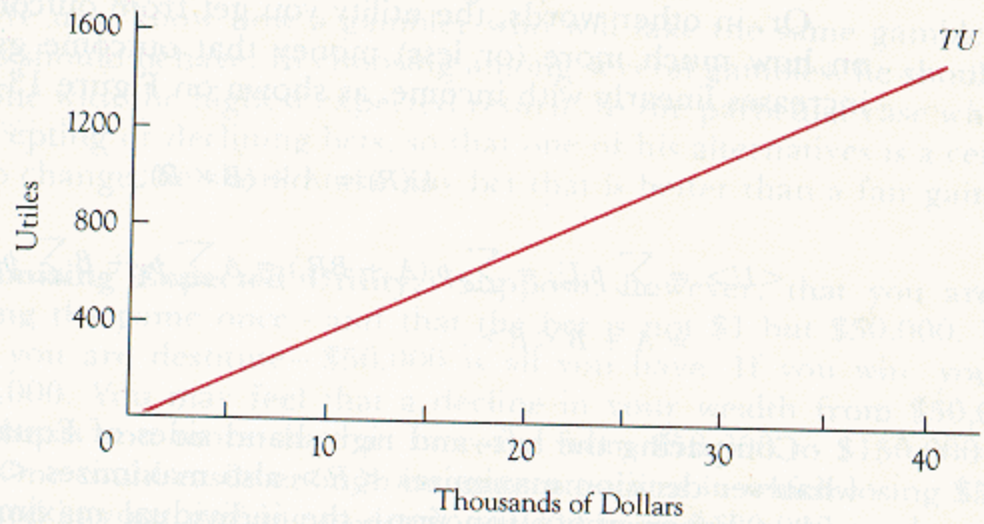
Figure 13-12



Total utility of income for a risk-neutral individual.

A second difficulty with Figure 13-12 is the ambiguity as to just what is being graphed on the horizontal axis--what is utility a function of? Is it income (dollars per year) or money (dollars)? Strictly speaking, utility is a flow (utiles per year) that depends on a flow of consumption (apples per year). The utility we get by consuming 100 apples, or whatever else we buy with our income, depends in part on the period of time over which we consume them.

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If I were being precise, I would do all the analysis in terms of flows and compare alternatives by comparing the present values of those flows, in dollars or utiles. This would make the discussion a good deal more complicated without adding much to its content. It is easier to think of Figure 13-12, and similar figures, as describing either someone who starts with a fixed amount of money and is only going to live for a year, or, alternatively, someone with a portfolio of bonds yielding a fixed income who is considering gambles that will affect the size of his portfolio. The logic of the two situations is the same. In the one case, the figure graphs the utility flow from a year's expenditure; in the other case, it graphs the present value of the utility flow from spending the same amount every year forever. Both approaches allow us to analyze the implications of uncertainty while temporarily ignoring other complications of a changing world. To make the discussion simpler, I will talk as if we are considering the first case; that way I can talk in "dollars" and "utiles" instead of "dollars per year" and "utiles per year." The amount of money you have may still sometimes be described as your income--an income of x dollars/year for one year equals x dollars.

Risk Preference and the Utility Function

Or

As I Was Saying When I So Rudely Interrupted Myself

Figure 13-12 showed utility as a linear function of income; Figure 13-13a shows a more plausible relation. This time, income has declining marginal utility. Total utility increases with income, but it increases more and more slowly as income gets higher and higher.

Suppose you presently have $20,000 and have an opportunity to bet $10,000 on the flip of a coin at even odds. If you win, you end up with $30,000; if you lose, you end up with $10,000.

In deciding whether to take the bet, you are choosing between two different gambles. The first, the one you get if you do not take the bet, is a very simple gamble indeed--a certainty of ending up with $20,000. The second, the one you get if you do take the bet, is a little more complicated--a 0.5 chance of ending up with $10,000 and a 0.5 chance of ending up with $30,000. So for the first gamble, we have:

$p_1 = 1$; Rl = $20,000; $U_1 = U(R_1) = U(\$20,000) = 1,000$ utiles (from Figure 13-13a)

$\langle U \rangle = p_1 \times U_1 = 1,000$ utiles.

For the second gamble, we have:

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$p_1 = 0.5$; $R_1 = \$10,000$; $U_1 = U(R_1) = U(\$10,000) = 600$ utiles (from Figure 13-13a)

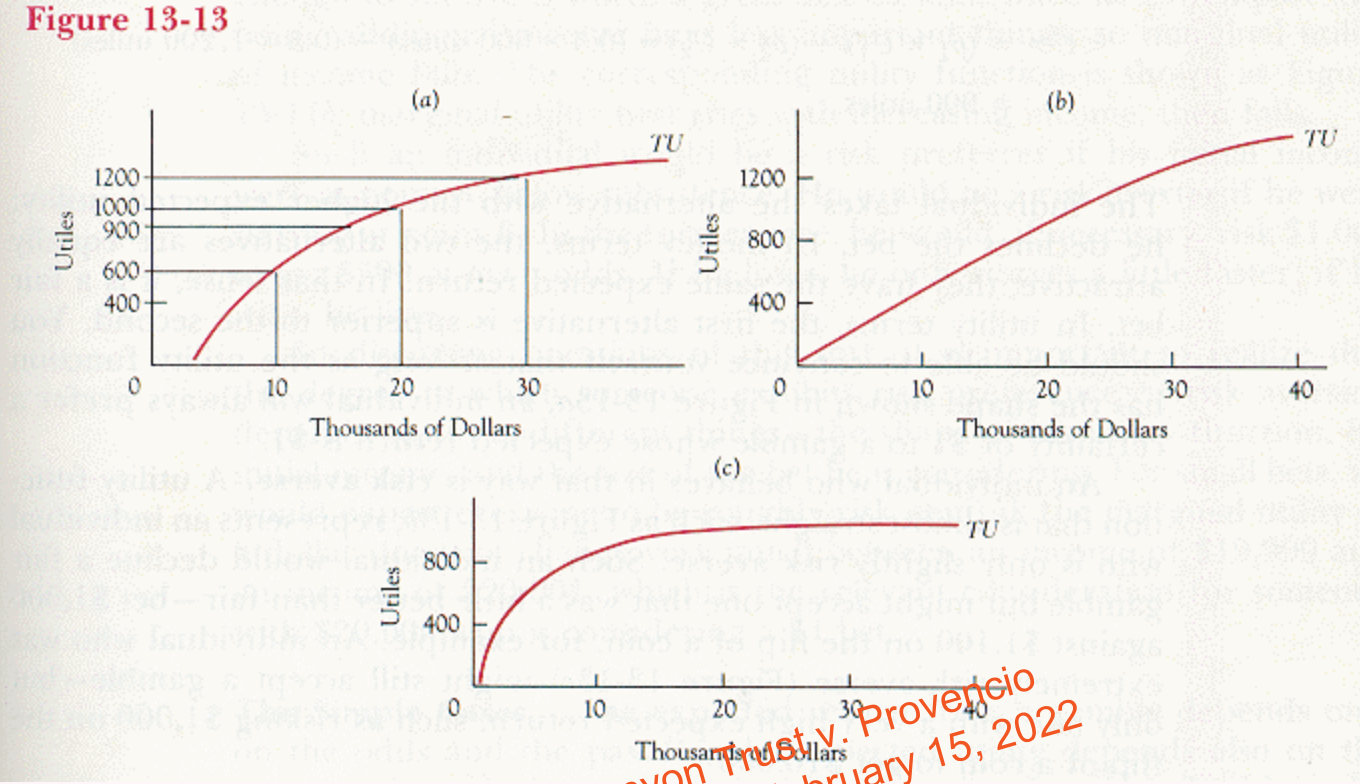
$p_2 = 0.5$; $R_2 = \$30,000$; $U_2 = U(R_2) = U(\$30,000) = 1,200$ utiles (from Figure 13-13a)

$\langle U \rangle = (p_1 \times U_1) + (p_2 \times U_2) = (0.5 \times 600 \text{ utiles}) + (0.5 \times 1,200 \text{ utiles}) = 900$ utiles.

The individual takes the alternative with the higher expected utility; he declines the bet. In money terms, the two alternatives are equally attractive; they have the same expected return. In that sense, it is a fair bet. In utility terms, the first alternative is superior to the second. You should be able to convince yourself that as long as the utility function has the shape shown in Figure 13-13a, an individual will always prefer a certainty of $1 to a gamble whose expected return is $1.

An individual who behaves in that way is risk averse. A utility function that is almost straight, such as Figure 13-13b, represents an individual who is only slightly risk averse. Such an individual would decline a fair gamble but might accept one that was a little better than fair--bet $1,000 against

$1,100 on the flip of a coin, for example. An individual who was extremely risk averse (Figure 13-13c) might still accept a gamble--but only one with a very high expected return, such as risking $1,000 on the flip of a coin to get $10,000.



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Total utility of income for a risk-averse individual. Figure 13-13b corresponds to an individual who is only slightly risk averse; he will refuse a fair gamble but accept one that is slightly better than fair. Figure 13-13c corresponds to an individual who is very risk averse; he will accept a gamble only if it is much better than a fair gamble.

Figure 13-14a shows the utility function of a risk preferrer. It exhibits increasing marginal utility. A risk preferrer would be willing to take a gamble that was slightly worse than fair--although he would still decline one with a sufficiently low expected return. An individual who is neither a risk preferrer nor a risk averter is called risk neutral. The corresponding utility function has already been shown--as Figure 13-12.

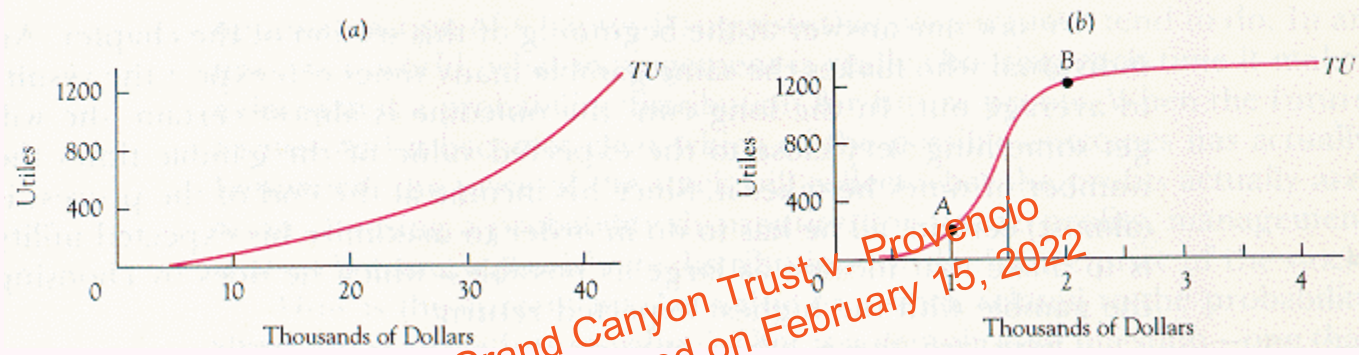
Consider an individual who requires a certain amount of money in order to buy enough food to stay alive. Increases in income below that point extend his life a little and so are of some value to him, but he still ends up starving to death. An increase in income that gives him enough to survive is worth a great deal to him. Once he is well past that point, additional income buys less important things, so marginal utility of income falls. The corresponding utility function is shown as Figure 13-14b; marginal utility first rises with increasing income, then falls.

Such an individual would be a risk preferrer if his initial income were at point A, below subsistence. He would be a risk averter if he were starting at point B. In the former case, he would, if necessary, risk $1,000 to get $500 at even odds. If he loses, he only starves a little faster; if he wins, he lives.

In discussing questions of this sort, it is important to realize that the degree to which someone exhibits risk preference or risk aversion depends on three different things--the shape of his utility function, his initial income, and the size of the bet he is considering. For small bets, we would expect everyone to be roughly risk neutral; the marginal utility of a dollar does not change very much between an income of $19,999 and an income of $20,001, which is the relevant consideration for someone with $20,000 who is considering a $1 bet.

The Simple Cases. The expected return from a gamble depends only on the odds and the payoffs; the expected utility depends also on the tastes of the gambler, as described by his utility function. So it is easier to predict the behavior of someone maximizing his expected return than of someone maximizing expected utility. This raises an interesting question--under what circumstances are the two maximizations equivalent? When does someone maximize his utility by maximizing his expected return?

Figure 13-14



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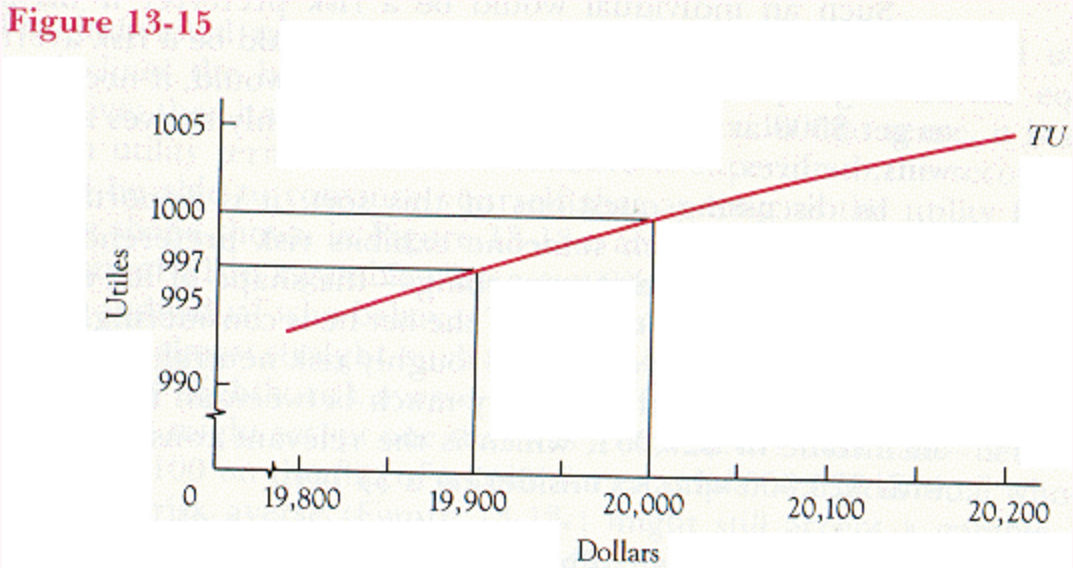
Total utility of income for a risk preferrer and for someone who is risk preferring for some incomes and risk averse for others. Figure 13-14b shows total utility of income for someone who requires about $1,500 to stay alive. Below that point, the marginal utility of income (the slope of total utility) increases with increasing income; above that point, it decreases.

We saw one answer at the beginning of this section of the chapter. An individual who makes the same gamble many times can expect the results to average out. In the long run, the outcome is almost certain--he will get something very close to the expected value of the gamble times the number of times he takes it. Since his income at the end of the process is (almost) certain, all he has to do in order to maximize his expected utility is to make that income as large as possible--which he does by choosing the gamble with the highest expected return.

There are three other important situations in which maximizing expected utility turns out to be equivalent to maximizing expected return. One is when the individual is risk-neutral, as shown on Figure 13-12. A second is when the size of the prospective gains and losses is small compared to one's income. If we consider only small changes in income, we can treat the marginal utility of income as constant; if the marginal utility of income is constant, then changes in utility are simply proportional to changes in income, so whatever choice maximizes expected return also maximizes expected utility.

One can see the same thing geometrically. Figure 13-15 is a magnified version of part of Figure 13-13a. If we consider only a very small range of income--between $19,900 and $20,000, for instance--the utility function is almost straight. For a straight-line utility function, as I showed earlier, maximizing expected utility is equivalent to maximizing expected return. So if we are considering only small changes in income, we should act as if we were risk neutral.

Figure 13-15



Magnified version of part of Figure 13-13a. Although the total utility curve shown on Figure 13-13a is curved, corresponding to risk aversion, any small section of it appears almost straight. This corresponds to the fact that the marginal utility of income is almost constant over small ranges of income; individuals are almost risk neutral for small gambles.

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Next consider the case of a corporation that is trying to maximize the market value of its stock--as the discussion of takeover bids in the optional section of Chapter 9 suggests that corporations tend to do. In an uncertain world, what management is really choosing each time it makes a decision is a probability distribution for future profits. When the future arrives and it becomes clear which of the possible outcomes has actually happened, the price of the stock will reflect what the profits actually are. So in choosing a probability distribution for future profits, management is also choosing a probability distribution for the future price of the stock.

How is the current market value of a stock related to the probability distribution of its future value? That is a complicated question--one that occupies a good deal of the theory of financial markets; if you are an economics major, you will probably encounter it again. The short, but not entirely correct, answer is that the current price of the stock is the expected value of the future price--the average over all possible futures weighted by the probability of each. The reason is that the buyer of stock is in the same position as the gambler discussed earlier; he can average out his risks by buying a little stock in each of a large number of companies. If he does, his actual return will be very close to his expected return. If the price of any particular stock were significantly lower than the expected value of its future price, investors would all want to buy some of it; if the price were higher than the expected value of its future price, they would all want to sell some. The resulting market pressures force the current price toward the expected value of future prices.

If, as suggested above, management wishes to maximize the present price of its stock, it must try to maximize the expected value of its future price. It does that by maximizing the expected value of future profits. So it acts like the gambler we started with; it maximizes expected returns.

This is true only if the firm is trying to maximize the value of its stock. The threat of takeover bids has some tendency to make it do so. It is not clear how strong that tendency is--how closely that threat constrains management. To the extent that management succeeds in pursuing its own goals rather than those of the stockholders, the conclusion no longer holds. If the firm takes a risk and goes bankrupt, the (present and future) income of the chief executive may fall dramatically. If so, he may well be unwilling to make a decision that has a 50 percent chance of leading to bankruptcy even if it also has a 50 percent chance of tripling the firm's value.

Insurance. The existence of individuals who are risk averse provides one explanation for the existence of insurance. Suppose you have the utility function shown in Figure 13-13a. Your income is $20,000, but there is a small probability --0.01--of some accident that would reduce it to $10,000. The insurance company offers to insure you against that accident for a price of $100. Whether or not the accident happens, you give them $100. If the accident happens, they give you back $10,000. You now have a choice between two gambles--buying or not buying insurance. If you buy the insurance, then, whether or not the accident occurs, the outcome is the same--you have $20,000 minus the $100 you paid for the insurance (I assume the accident only affects your income). So for the first gamble, you have:

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$p_1 = 1$; $R_1 = \$19{,}900$; $\langle U \rangle = p_1 \times U(R_1) = 997$ utiles.

If you do not buy the insurance, you have:

$p_1 = 0.99$; $R_1 = \$20{,}000$; $U(R_1) = 1{,}000$ utiles;

$p_2 = 0.01$; $R_2 = \$10{,}000$; $U(R_2) = 600$ utiles;

$\langle U \rangle = [p_1 \times U(R_1)] + [p_2 \times U(R_2)] = 990$ utiles $+ 6$ utiles $= 996$ utiles.

You are better off with the insurance than without it, so you buy the insurance.

In the example as given, the expected return--measured in dollars--from buying the insurance was the same as the expected return from not buying it. Buying insurance was a fair gamble--you paid $100 in exchange for one chance in a hundred of receiving $10,000. The insurance company makes

hundreds of thousands of such bets, so it will end up receiving, on average, almost exactly the expected return. If insurance is a fair gamble, the money coming in to buy insurance exactly balances the money going out to pay claims. The insurance company neither makes nor loses money; the client breaks even in money but gains in utility.

Insurance companies in the real world have expenses other than paying out claims--rent on their offices, commissions to their salespeople, and salaries for their administrators, claim investigators, adjusters, and lawyers. In order for an insurance company to cover all its expenses, the gamble it offers must be somewhat better than a fair one from its standpoint. If so, it is somewhat worse than fair from the standpoint of the company's clients.

The clients may still find that it is in their interest to accept the gamble and buy the insurance. If they are sufficiently risk averse, an insurance contract that lowers their expected return may still increase their expected utility. In the case discussed above, for example, it would still be worth buying the insurance even if the company charged $130 for it. It would not be worth buying at $140. You should be able to check those results for yourself by redoing the calculations that showed that the insurance was worth buying at $100.

Earlier I pointed out that with regard to risks that involve only small changes in income, everyone is (almost) risk neutral. One implication of this is that it is only worth insuring against large losses. Insurance is worse than a fair gamble from the standpoint of the customer, since the insurance company has to make enough to cover its expenses. For small losses, the difference between the marginal utility of income before and after the loss is not large enough to convert a loss in expected return into a gain in expected utility.

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The Lottery-Insurance Puzzle. Buying a ticket in a lottery is the opposite of buying insurance. When you buy insurance, you accept an unfair gamble--a gamble that results, on average, in your having less money than if you had not accepted it--in order to reduce uncertainty. When you buy a lottery ticket, you also accept an unfair gamble--on average, the lottery pays out in prizes less than it takes in--but this time you do it in order to increase your uncertainty. If you are risk averse, it may make sense for you to buy insurance--but you should never buy lottery tickets. If you are a risk preferrer it may make sense for you to buy a lottery ticket--but you should never buy insurance.

This brings us to a puzzle that has bothered economists for at least 200 years--the lottery-insurance paradox. In the real world, the same people sometimes buy both insurance and lottery tickets. Some people both gamble when they know the odds are against them and buy insurance when they know the odds are against them. Can this be consistent with rational behavior?

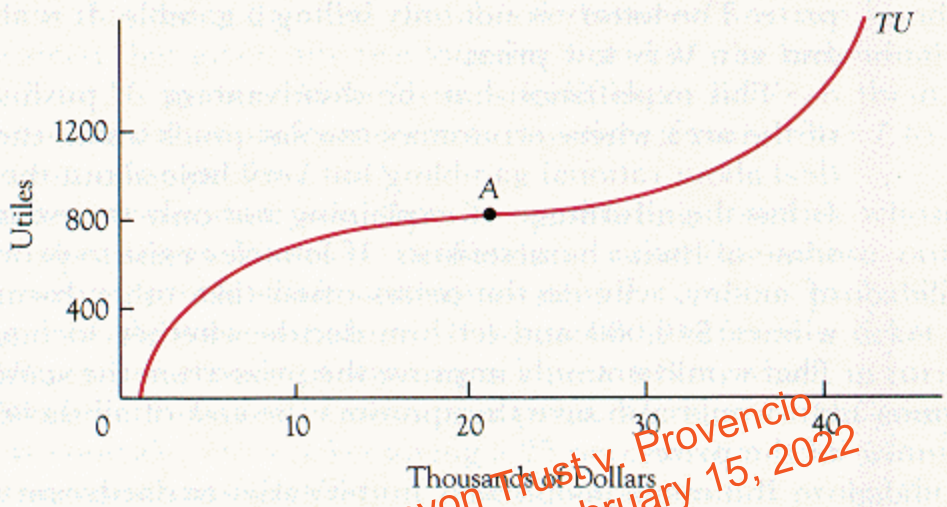
There are at least two possible ways in which it can. One is illustrated on Figure 13-16. The individual with the utility function shown there is risk averse for one range of incomes and risk preferring for another, higher, range. If he starts at point A, in between the two regions, he may be interested in buying both insurance and lottery tickets. Insurance protects him against risks that move his income below A--where he is risk averse. Lottery tickets offer him the possibility (if he wins) of an income above A--where he is risk preferring.

This solution is logically possible, but it does not seem very plausible. Why should people have such peculiarly shaped utility functions, with the value to them of an additional dollar first falling

with increasing income then rising again? And if they do, why should their incomes just happen to be near the border between the two regions?

Another explanation of the paradox is that in the real-world situation we observe, one of the conditions for our analysis does not hold. So far, we have been considering situations where the only important difference among the outcomes is money; the utility of each outcome depends only on the amount of money it leaves you with. It is not clear that this is true for the individuals who actually buy lottery tickets.

Figure 13-16



One solution to the lottery-insurance puzzle. The total utility function shows declining marginal utility of income (risk aversion) to the left of point *A* and increasing marginal utility of income (risk preference) to the right. An individual at *A* may increase his expected utility by buying both insurance and lottery tickets.

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One solution to the lottery-insurance puzzle. The total utility function shows declining marginal utility of income (risk aversion) to the left of point A and increasing marginal utility of income (risk preference) to the right. An individual at A may increase his expected utility by buying both insurance and lottery tickets.

Consider the lotteries you have yourself been offered--by Reader's Digest, Publisher's Clearinghouse, and similar enterprises. The price is the price of a stamp, the payoff--lavishly illustrated with glossy photographs--a (very small) chance of a new Cadillac, a Caribbean vacation, an income of $20,000 a year for life. My rough calculations--based on a guess of how many people respond to the lottery--suggest that the value of the prize multiplied by the chance of getting it comes to less than the cost of the stamp. The expected return is negative.

Why then do so many people enter? The explanation I find most plausible is that what they are getting for their stamp is not merely one chance in a million of a $40,000 car. They are also getting a certainty of being able to daydream about getting the car--or the vacation or the income--from the time they send in the envelope until the winners are announced. The daydream is made more satisfying by the knowledge that there is a chance, even if a slim one, that they will actually win the prize. The lottery is not only selling a gamble. It is also selling a dream--and at a very low price.

This explanation has the disadvantage of pushing such lotteries out of the area where economics can say much about them; we know a good deal about rational gambling but very little about the market for dreams. It has the advantage of explaining not only the existence of lotteries but some of their characteristics. If lotteries exist to provide people a chance of money, why do the prizes often take other forms; why not give the winner $40,000 and let him decide whether to buy a Cadillac with it? That would not only improve the prize from the standpoint of the winner but would also save the sponsors the cost of all those glossy photographs of the prizes.

But many people may find it easier to daydream about their winnings if the winnings take a concrete form. So the sponsors (sometimes) make the prizes goods instead of money--and provide a wide variety of prizes to suit different tastes in daydreams. This seems to be especially true of "free" lotteries--ones where the price is a stamp and the sponsor pays for the prizes out of someone's advertising budget instead of out of ticket receipts. Lotteries that sell tickets seem more inclined to pay off in money--why I do not know.

In Chapter 1, I included in my definition of economics the assumption that individuals have reasonably simple objectives. You will have to decide for yourself whether a taste for daydreams is consistent with that assumption. If not, then we may have finally found something that is not an economic question--as demonstrated by our inability to use economics to answer it.

Von Neumann Utility

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Near the beginning of this section, I said that John Von Neumann was responsible for combining the ideas of utility and choice under uncertainty. So far, I have shown how the two ideas are combined but have said very little about exactly what Von Neumann (in conjunction with economist Oskar Morgenstern) contributed. You may reasonably have concluded that the great idea was simply to assert "People maximize expected utility" and keep talking--in the hope that nobody would ask "Why?"

What Von Neumann and Morgenstern actually did was both more difficult and more subtle than that. They proved that if you assume that individual choice under uncertainty meets a few simple consistency conditions, it is always possible to assign utilities to outcomes in such a way that the decisions people actually make are the ones they would make if they were maximizing expected utility.

Von Neumann and Morgenstern start by considering an individual choosing among "lotteries." A lottery is a collection of outcomes, each with a probability. Some outcome must occur, so all the probabilities together add up to one. Just as, in considering ordinary utility functions, we assume that the individual can choose between any two bundles, so they assumed that given any two lotteries L and M, the individual either prefers L to M, prefers M to L, or is indifferent between them. They further assumed that preferences are transitive; if you prefer L to M and M to N, you must prefer L to N.

Another assumption was that in considering lotteries whose payoffs are themselves lotteries--probabilistic situations whose outcomes are themselves probabilistic situations--people combine probabilities in a mathematically correct fashion. If someone is offered a ticket giving him a 50 percent chance of winning a lottery ticket, which in turn gives him a 50 percent chance of winning a prize, he regards that compound lottery as equivalent to a ticket giving a 25 percent chance of winning the same prize--and similarly for any other combination of probabilities.

The remaining two assumptions involve the continuity of preferences. One is that if I prefer outcome A to outcome B, I also prefer to B any lottery that gives me some probability of getting A and guarantees that if I do not get A, I will get B. The final assumption is that if I prefer outcome A to outcome B and outcome B to outcome C, then there is some probability mix of A and C--some lottery containing only those outcomes--that I consider equivalent to B. To put it in different words, this says that as I move from a certainty of A to a certainty of C via various mixtures of the two, my utility changes continuously from U(A) to U(C). Since by assumption U(A) > U(B) > U(C)--that is what the "if" clause at the beginning of this paragraph says--as my utility moves continuously from U(A) to U(C) it must at some intermediate point be equal to U(B).

All of these assumptions seem reasonable as part of a description of "rational" or "consistent" behavior under uncertainty. If an individual's behavior satisfies them, it is possible to define a Von Neumann utility function--a utility for every outcome--such that the choices he actually makes are the choices he would make if he were trying to maximize his expected utility. That is what Von Neumann and Morgenstern proved.

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In the optional section of Chapter 3, I pointed out that utility as then defined contained a considerable element of arbitrariness: utility functions were supposed to describe behavior, but exactly the same behavior could be described by many different utility functions. We could deduce from observing individuals' choices that they preferred A to B, but not by how much. Even the principle of declining marginal utility, to which I several times referred, is, strictly speaking, meaningless in that context; if you cannot measure the amount by which I prefer one alternative to another, then you cannot say whether the additional utility that I get when my income increases from $9,000/year to $10,000 is more or less than when it increases from $10,000 to $11,000. Declining marginal utility then has content only in the form of the declining marginal rate of substitution--a concept that, as I pointed out at the time, is closely related but not equivalent.

Once we accept the Von Neumann-Morgenstern definition of utility under uncertainty, that problem vanishes. The statement "I prefer outcome C to outcome B by twice as much as I prefer B to A" is equivalent to "I am indifferent between a certainty of B and a lottery that gives me a two-thirds chance of A and a one-third chance of C."

To see that the two statements are equivalent, we will work out the expected utilities for the two alternatives described in the second statement and show that the first statement implies that they are equal, as follows:

Let Lottery 1 consist of a certainty of B, Lottery 2 of a two-thirds chance of A and a one-third chance of C. We have for Lottery 1:

$p_1 = 1$; $U_1 = U(B)$; $<U> = U(B)$.

We have for Lottery 2:

$p_1 = 2/3$; $U_1 = U(A)$;

$p_2 = 1/3$; $U_2 = U(C)$;

$<U> = p_1U_1 + p_2U_2 = 2/3\ U(A) + 1/3\ U(C)$.

Statement 1 tells us that:

$U(C) - U(B) = 2 \times (U(B) - U(A))$.

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Rearranging this gives us:

$U(C) + 2 \times U(A) = 3 \times U(B)$;

$2/3\ U(A) + 1/3\ U(C) = U(B)$. (Equation 5)

The left-hand side of Equation 5 is the expected utility of Lottery 2, and the right-hand side is the expected utility of Lottery 1, so the expected utilities of the two alternatives are the same; the individual is indifferent between them.

We have now shown that Statement 1 implies Statement 2. We could equally well have started with Statement 2 and worked backward to Statement 1. If each statement implies the other, then they are equivalent.

So using utility functions to describe choice among probabilistic alternatives makes the functions themselves considerably less arbitrary. In our earlier discussion of utility, the only meaningful statements were of the form "A has more utility to me than B" or, equivalently, "I prefer A to B."

Now the statement "Going from A to B increases my utility by twice as much as going from C to D" (or, equivalently, "I prefer A to B twice as much as I prefer C to D") has meaning as well. If we can make quantitative comparisons of utility differences, we can also make quantitative comparisons of marginal utilities, so the principle of declining marginal utility means something. We saw exactly what it meant a few pages ago; the statement "My marginal utility for income is declining" is equivalent to "I am risk averse." Similarly, the statement "My marginal utility for ice cream cones is declining" is equivalent to "I am risk averse if expected return is in ice cream cones rather than in dollars. I would not accept a gamble that consisted of a 50 percent chance of getting an ice cream cone and a 50 percent chance of losing one."

We have eliminated much of the arbitrariness from utility functions but not all of it. Nothing we have done tells us how big a utile is, so a change in scale is still possible. If I say that I prefer A to B by 10 utiles, B to C by 5, and C to D by 2, while you insist that the correct numbers are 20, 10, and 4, no possible observation of my behavior could prove one of us right and one wrong. We agree about the order of preferences; we agree about their relative intensity--all we disagree about is the size of the unit in which we are measuring them.

It is also true that nothing we have done tells us where the zero of the utility function is. If I claim that my utilities for outcomes A, B, and C are 0, 10, 30, while you claim they are - 10, 0, and 20, there is again no way of settling the disagreement. We agree about the order, we agree about the differences--all we disagree about is which alternative has zero utility. So changes in the utility function that consist of adding the same amount to all utilities (changing the zero), or multiplying all utilities by the same number (changing the scale), or both, do not really change the utility function. The numbers are different, but the behavior described is exactly the same. This means, for those of you who happen to be mathematicians, that utility functions are arbitrary with respect to linear transformations.

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My own preference is to define zero as nonexistence or death; that, after all, is the one outcome in which one gets, so far as I know, neither pleasure nor pain. A friend and colleague once commented to me that she was not certain whether the present value of utility at birth was positive or negative--meaning that she was not sure whether, on net, life was worth living. I concluded that her life had been much harder than mine.

Buying Information

You have decided to buy a car and are choosing between two alternatives: a Honda Accord and a Nissan Stanza. From previous experience, you expect that you will like one of the cars better than the other, but unfortunately you do not know which. If forced to state your opinions more precisely, you would say that you think your consumer surplus would be $500 higher if you bought the better car, and the probability that the Accord is better than the Stanza is exactly 0.5 .

You consider two strategies. You can randomly choose one of the cars and buy it. Alternatively, you can rent an Accord for your next long trip, a Stanza for the trip after that, and then decide which to buy. You believe that after having driven each car a substantial distance, you will know with

certainty which you like better. Since it is more expensive to rent a car than to use a car you own, the second strategy will cost you an extra $200. Should you do it?

The answer depends on your utility function. You are choosing between two lotteries. The first has payoffs of $0 and $500, each with probability 0.5. The second has a certain payoff of $300, since you get the extra consumer surplus but pay $200 for it. If you are risk neutral or risk averse, you prefer a certainty of $300 to a 0.5 chance of $500, so you rent the cars before you buy. If you are a strong risk preferrer, you prefer the gamble, so you buy without renting.

This simple problem illustrates the general idea of buying information. By paying some search cost you can reduce uncertainty, improving, on average, the outcomes of your decisions. To decide whether the search cost is worth paying, you compare expected utility without search to expected utility with search, remembering to include the cost of the search in your calculation.

In this particular case you had only two alternatives, to search or not to search, and searching gave you complete information--you knew with certainty which car you preferred. In more general cases you may have to decide just how much searching to do; the more you search, the better your information. The correct rule is to search up to the point where the value of the marginal increase in your expected utility from searching a little more is just equal to the cost.

One example of such behavior that has received a great deal of attention is the problem of job search. Many people who consider themselves unemployed could find a job almost instantly--if they were willing to wait on tables, or wash dishes, or drive a cab. What they are looking for is not a job but a good job. The longer they look, the better, on average, will be the best job opportunity they find. Their rational strategy is to keep looking as long as they expect to gain more from additional search than it costs them. Such search unemployment makes up a significant fraction of the measured unemployment rate.

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One implication of this is that increases in unemployment compensation tend to increase the unemployment rate. The reason is not that the unemployed are lazy bums who prefer collecting unemployment to working, but that they are rational searchers. The higher the level of unemployment compensation is, the lower the cost of being unemployed while searching for a job. The less it costs to search, the more searching it pays to do.

Issues associated with acquiring and using information provide some of the most interesting and difficult questions in economics. They first appeared back in Chapter 1, where I briefly mentioned the problem of incorporating information costs into the definition of rationality, and will reappear in Chapter 18.

Where We Are Now

In the first 11 chapters of this book, we used economics to understand how markets work in a certain and unchanging world. It may have occurred to you that doing so was a waste of time, since we live in a world that is uncertain and changing.

Looking back at what we have done in Chapters 12 and 13, you may now see why the book is organized in this way. In Chapter 12, we learned how to analyze choice in a changing (but certain) world using the same tools developed for an unchanging world--simply evaluate costs and benefits in terms of present values instead of annual flows. Now we have learned how to analyze choice in an uncertain world by again using the same tools; we merely evaluate costs and benefits by comparing the expected utilities of probabilistic outcomes instead of the utilities of certain outcomes. Combining the lessons of the two chapters in order to analyze choice in a world that is both changing and uncertain would be straightforward--evaluate choices in terms of the present value of expected utility.

What we have done is to first solve economics in a simple world and then show that the more complicated and realistic world can, for purposes of economic analysis, be reduced to the simple one. Introducing time and change does create some new problems, such as those associated with sunk costs. Yet it is still true that in learning to deal with the simple world of Chapters 1-11 we learned most of the basic ideas of economics, and that in Chapters 12 and 13 we have taken a large step towards making those ideas applicable to the world we live in.

A Philosophical Digression

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The concept of utility originated during the nineteenth century among thinkers interested in both philosophy and economics. It was proposed as an answer to the question "What should a society maximize?" The utilitarians asserted that a society should be designed to maximize the total utility of its members.

Their position has been heavily criticized over the years and is now in poor repute among philosophers. One of the major criticisms was that although we can, in principle, determine whether you prefer A to B by more than you prefer C to D, there seems to be no way of determining whether I prefer A to B by more than you prefer C to D. There is no way of making interpersonal comparisons of utility, no way of deciding whether a change that benefits me (gives me A instead of B) and injures you (gives you D instead of C) increases or decreases total utility.

One possible reply to this criticism of utilitarianism goes as follows. Suppose we define utility in the sense of Von Neumann and Morgenstern and use it to evaluate some question such as "Should the United States abolish all tariffs?" It turns out that the utilitarian rule--"Maximize total utility"--is equivalent to another rule that some find intuitively more persuasive: "Choose that alternative you would prefer if you knew you were going to be one of the people affected but had no idea which."

Why are the two equivalent? If I have no idea who I am going to be, I presumably have an equal probability p of being each person; if there are N people involved, then $p = 1/N$. If we write the utility of person i as U_i, then the lottery that consists of a probability p of being each person has an expected utility:

$<U> = \sum_i p_i U_i = \sum_i pU_i, = p \sum_i U_i.$

But $\sum_i U_i$ is simply the total utility of the society, so whichever alternative maximizes total utility also maximizes <U>.

PROBLEMS

1. How should the developers of a new airliner take account of the plane's design costs in deciding whether to design and build the plane? In determining the price to charge airline companies? Should they suspend production if they find that they cannot obtain a price that will cover design costs?

2. After reading this chapter, you are considering dropping this course. What costs should you take into account in deciding whether to do so? What costs that you should ignore in that decision should you have taken into account in deciding to take the course in the first place?

3. Figure 13-17a shows the cost curves for producing typewriters in a typewriter factory. The inputs are available in perfectly elastic supply; all firms are identical and there are no restrictions on starting new firms. Each firm can run one factory.

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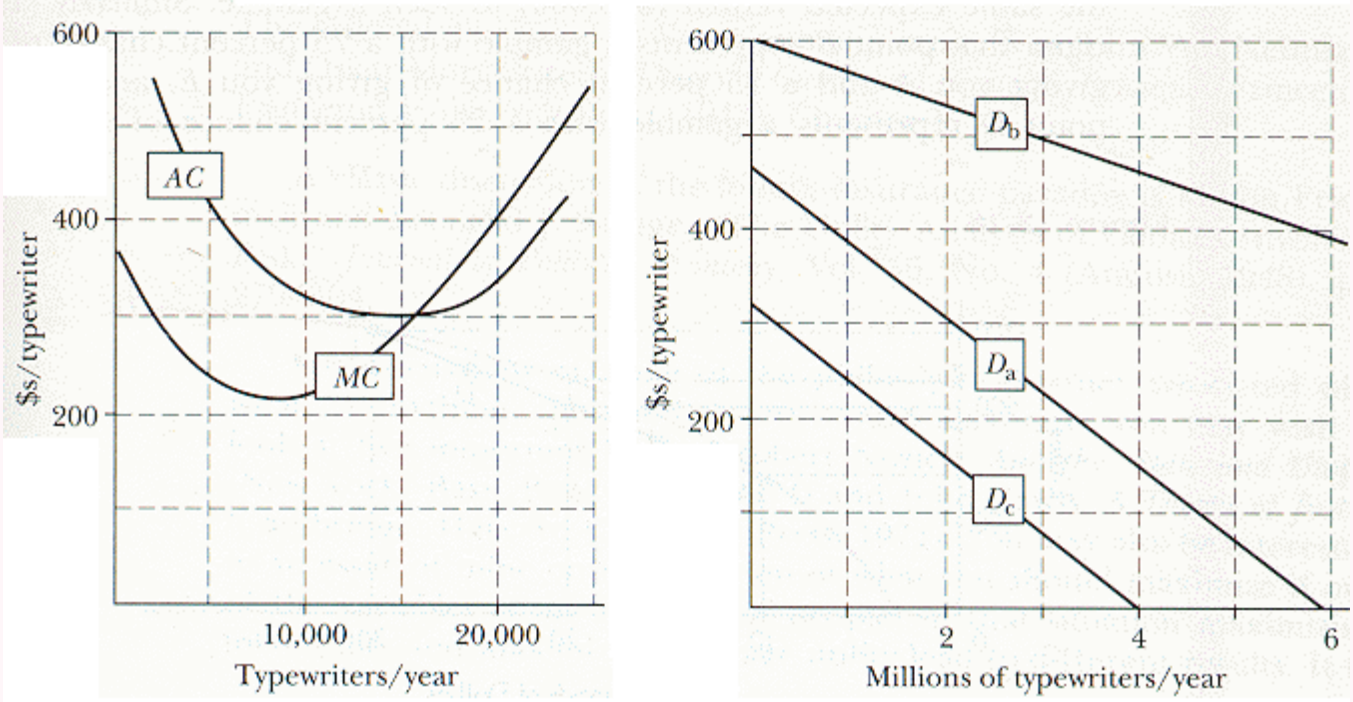
a. Draw the supply curve for one firm; label it S_f. Draw the supply curve for the industry, label it S_i. D_a is the demand curve for typewriters; everyone expects it to stay the same for ever. How many are sold at what price? How many firms are there?

b.The demand curve shifts up to D_b. It takes a year to build a new typewriter factory. Draw the short run supply curve SSR, showing price as a function of quantity over times too short to build more factories. A month after the change, how many typewriters are sold at what price?

c. AC on Figure 13-17a includes the cost of building a typewriter factory, which is three million dollars. Factories last for 10 years; the interest rate is zero and factories have no scrap value. After the firms have adjusted to D_b, the word processor is invented and the demand curve for typewriters suddenly shifts down to D_c. Everyone expects it to remain there forever. Immediately after the change, what is the price of a typewriter?

d. The demand curve remains at D_c. Fifty years later, what is the price of a typewriter? How many are produced each year?

Figure 13-17



Cost curves for a typewriter factory and demand curves for typewriters. For Problem 3.

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4. Long-run total cost includes both short-run and long-run expenses, so for any quantity long-run total cost must be larger than short-run total cost. True or False? Discuss.

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The following problems refer to the optional section:

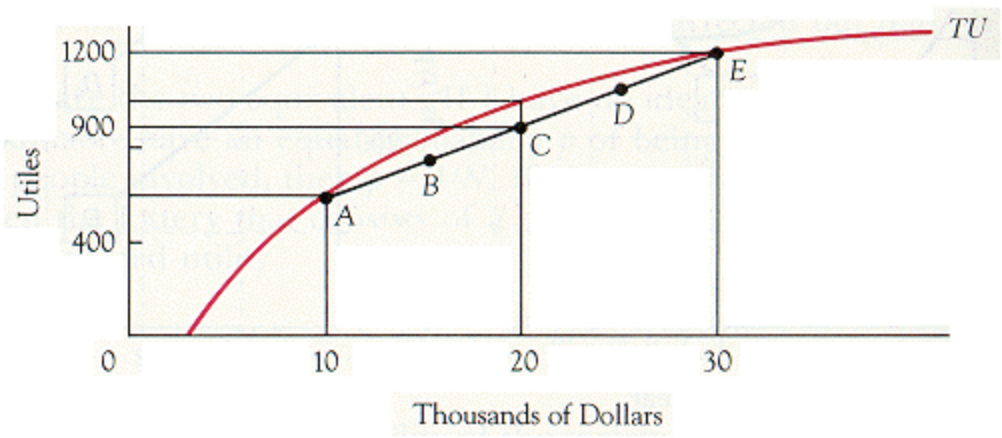
5. You have $30,000; your utility function is shown by Figure 13-12. There is one chance in a hundred that your house will be struck by lightning, in which case it will cost $10,000 to repair it. What is the highest price you would be willing to pay, if necessary, for a lightning rod to protect your house?

6. Answer Problem 6 for the utility function of Figure 13-13a.

7. Figure 13-18 is identical to Figure 13-13a, with the addition of a line connecting two points--A and E--on the utility function. I claim that point C, halfway between points A and E, represents the utility (vertical axis) and expected return (horizontal axis) of a fifty-fifty gamble between A ($10,000) and E ($30,000); the fact that C is below the graph of the utility function indicates that you prefer a certainty with the same expected return ($20,000) to such a gamble. Similarly, I claim that point B represents a gamble with a 75 percent chance of giving you A and a 25 percent chance of giving you E, and that point D represents a gamble with a 25 percent chance of A and a 75 percent chance of E.

Prove that these claims are true--that the vertical position of each point equals the expected utility of the corresponding gamble and that the horizontal position equals the expected return.

Figure 13-18



For Problem 7–total utility of income for a risk-averse individual.

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8. In the text, I asserted that declining marginal utility of income was equivalent to risk aversion and that increasing marginal utility of income was equivalent to risk preference. While I gave examples, I did not prove that the assertion was true in general. Use the result of Problem 10 to do so.

9. In discussing risk aversion, I have only considered alternatives that are measured in money. Suppose you are gambling in apples instead. Is it possible for someone to be a risk preferrer in terms of dollars and a risk averter in terms of apples? Vice versa? Does it depend on whether there is a market on which you can buy and sell apples?

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10. In one episode of Star Trek, Spock is in an orbiting landing craft that is running out of fuel and will shortly crash. Captain Kirk and the Enterprise are about to leave the planet, having somehow misplaced one landing craft and science officer. Spock fires his rockets, burning up all the remaining fuel, in the hope that the Enterprise will notice the flare and come rescue him. Later Kirk twits the supremely logical Spock with irrationality, for having traded his last few hours of fuel for a one in a hundred chance of rescue. Is Kirk correct? Was Spock's behavior irrational?

FOR FURTHER READING

The original discussion of Von Neumann utility is in John Von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton: Princeton University Press, 1944), Chapter 1.

A classic discussion of the lottery-insurance paradox is Milton Friedman and Leonard J. Savage, "The Utility Analysis of Choices Involving Risk," *Journal of Political Economy*, Vol. 56, No. 4 (August, 1948), pp. 279-304.

For discussions of some of the philosophical issues associated with what, if anything, the good society would maximize, you may wish to look at two important books: Robert Nozick, *Anarchy, State and Utopia* (New York: Basic Books, Inc., 1974) and John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971). You may also be interested in an essay of mine on the question of what you should maximize if one of the variables is the number of people; in that situation maximizing total utility and maximizing average utility lead to different results. It is:

"What Does Optimum Population Mean," *Research in Population Economics*, Vol. III (1981), Eds. Simon and Lindert.

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United States Court of Appeals for the Ninth Circuit

Office of the Clerk
95 Seventh Street
San Francisco, CA 94103

Information Regarding Judgment and Post-Judgment Proceedings

Judgment

- This Court has filed and entered the attached judgment in your case. Fed. R. App. P. 36. Please note the filed date on the attached decision because all of the dates described below run from that date, not from the date you receive this notice.

Mandate (Fed. R. App. P. 41; 9th Cir. R. 41-1 & -2)

- The mandate will issue 7 days after the expiration of the time for filing a petition for rehearing or 7 days from the denial of a petition for rehearing, unless the Court directs otherwise. To file a motion to stay the mandate, file it electronically via the appellate ECF system or, if you are a pro se litigant or an attorney with an exemption from using appellate ECF, file one original motion on paper.

Petition for Panel Rehearing (Fed. R. App. P. 40; 9th Cir. R. 40-1)
Petition for Rehearing En Banc (Fed. R. App. P. 35; 9th Cir. R. 35-1 to -3)

(1) A. Purpose (Panel Rehearing):

- A party should seek panel rehearing only if one or more of the following grounds exist:
  - A material point of fact or law was overlooked in the decision;
  - A change in the law occurred after the case was submitted which appears to have been overlooked by the panel; or
  - An apparent conflict with another decision of the Court was not addressed in the opinion.
- Do not file a petition for panel rehearing merely to reargue the case.

B. Purpose (Rehearing En Banc)

- A party should seek en banc rehearing only if one or more of the following grounds exist:

- ► Consideration by the full Court is necessary to secure or maintain uniformity of the Court's decisions; or
- ► The proceeding involves a question of exceptional importance; or
- ► The opinion directly conflicts with an existing opinion by another court of appeals or the Supreme Court and substantially affects a rule of national application in which there is an overriding need for national uniformity.

(2) Deadlines for Filing:

- A petition for rehearing may be filed within 14 days after entry of judgment. Fed. R. App. P. 40(a)(1).
- If the United States or an agency or officer thereof is a party in a civil case, the time for filing a petition for rehearing is 45 days after entry of judgment. Fed. R. App. P. 40(a)(1).
- If the mandate has issued, the petition for rehearing should be accompanied by a motion to recall the mandate.
- *See* Advisory Note to 9th Cir. R. 40-1 (petitions must be received on the due date).
- An order to publish a previously unpublished memorandum disposition extends the time to file a petition for rehearing to 14 days after the date of the order of publication or, in all civil cases in which the United States or an agency or officer thereof is a party, 45 days after the date of the order of publication. 9th Cir. R. 40-2.

(3) Statement of Counsel

- A petition should contain an introduction stating that, in counsel's judgment, one or more of the situations described in the "purpose" section above exist. The points to be raised must be stated clearly.

(4) Form & Number of Copies (9th Cir. R. 40-1; Fed. R. App. P. 32(c)(2))

- The petition shall not exceed 15 pages unless it complies with the alternative length limitations of 4,200 words or 390 lines of text.
- The petition must be accompanied by a copy of the panel's decision being challenged.
- A response, when ordered by the Court, shall comply with the same length limitations as the petition.
- If a pro se litigant elects to file a form brief pursuant to Circuit Rule 28-1, a petition for panel rehearing or for rehearing en banc need not comply with Fed. R. App. P. 32.

- The petition or response must be accompanied by a Certificate of Compliance found at Form 11, available on our website at www.ca9.uscourts.gov under *Forms.*
- You may file a petition electronically via the appellate ECF system. No paper copies are required unless the Court orders otherwise. If you are a pro se litigant or an attorney exempted from using the appellate ECF system, file one original petition on paper. No additional paper copies are required unless the Court orders otherwise.

Bill of Costs (Fed. R. App. P. 39, 9th Cir. R. 39-1)

- The Bill of Costs must be filed within 14 days after entry of judgment.
- See Form 10 for additional information, available on our website at www.ca9.uscourts.gov under *Forms.*

Attorneys Fees

- Ninth Circuit Rule 39-1 describes the content and due dates for attorneys fees applications.
- All relevant forms are available on our website at www.ca9.uscourts.gov under *Forms* or by telephoning (415) 355-7806.

Petition for a Writ of Certiorari

- Please refer to the Rules of the United States Supreme Court at www.supremecourt.gov

Counsel Listing in Published Opinions

- Please check counsel listing on the attached decision.
- If there are any errors in a published opinion, please send an email or letter **in writing within 10 days** to:
  - ► Thomson Reuters; 610 Opperman Drive; PO Box 64526; Eagan, MN 55123 (Attn: Maria Evangelista (maria.b.evangelista@tr.com));
  - ► and electronically file a copy of the letter via the appellate ECF system by using "File Correspondence to Court," or if you are an attorney exempted from using the appellate ECF system, mail the Court one copy of the letter.

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Form 10. Bill of Costs

Instructions for this form: http://www.ca9.uscourts.gov/forms/form10instructions.pdf

9th Cir. Case Number(s)

Case Name

The Clerk is requested to award costs to *(party name(s))*:

I swear under penalty of perjury that the copies for which costs are requested were actually and necessarily produced, and that the requested costs were actually expended.

Signature **Date**

*(use "*s/[typed name]*" to sign electronically-filed documents)*

COST TAXABLE	**REQUESTED** *(each column must be completed)*			
DOCUMENTS / FEE PAID	No. of Copies	Pages per Copy	Cost per Page	TOTAL COST
Excerpts of Record*			$	$
Principal Brief(s) *(Opening Brief; Answering Brief; 1st, 2nd , and/or 3rd Brief on Cross-Appeal; Intervenor Brief)*			$	$
Reply Brief / Cross-Appeal Reply Brief			$	$
Supplemental Brief(s)			$	$
Petition for Review Docket Fee / Petition for Writ of Mandamus Docket Fee / Appeal from Bankruptcy Appellate Panel Docket Fee				$
			TOTAL:	$

***Example:** Calculate 4 copies of 3 volumes of excerpts of record that total 500 pages [Vol. 1 (10 pgs.) + Vol. 2 (250 pgs.) + Vol. 3 (240 pgs.)] as:*
No. of Copies: 4; Pages per Copy: 500; Cost per Page: $.10 (or actual cost IF less than $.10);
TOTAL: 4 x 500 x $.10 = $200.

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

GRAND CANYON TRUST
2601 N Fort Valley Road Flagstaff, AZ 86001 928-774-7488 P 928-774-7570 F grandcanyontrust.org

April 7, 2022

Via CM/ECF

Molly C. Dwyer, Clerk of Court
Office of the Clerk
U.S. Court of Appeals for the Ninth Circuit
P.O. Box 193939
San Francisco, CA 94119-3939
(415) 355-8000

Re: ***Grand Canyon Trust, et al., v. Provencio, et al.*, Appeal No. 20-16401**

Dear Ms. Dwyer:

The panel in the above-captioned appeal issued a published opinion on February 22, 2022. In accordance with the Circuit Advisory Committee Note to Ninth Circuit Rules 36-1 to 36-5, there are three apparent errors of a typographical nature in the opinion to call to your attention:

- On pages 5 and 10, the opinion describes the Havasupai Tribe as having appealed the district court's ruling on the claim that was the subject of the opinion. The Havasupai Tribe, however, did not appeal that ruling of the district court. *See* Notice of Appeal, 3:13-cv-8045, ECF 255 (July 20, 2020) (enclosed).
- On page 24, in the second sentence of footnote 5, the opinion uses the word "existence" when "non-existence" was intended. *See United States v. Collord*, 128 IBLA 266, 304 (1994) (Burski, J., concurring) ("While not clearly explained, the non-existence of a withdrawal was critical to the Board's ruling in the Mannix case.").
- In that same footnote, the opinion twice uses the short form citation of "Collard" instead of "Collord" when referring to *United States v. Collord*, 128 IBLA 266 (1994).

Very truly yours,

Aaron M. Paul
Staff Attorney
Grand Canyon Trust
(303) 477-1486

Enclosures: Notice of Appeal, Grand Canyon Trust v. Provencio, 3:13-cv-8045 (D. Ariz. July 20, 2020), ECF No. 255.

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT
Form 1. Notice of Appeal from a Judgment or Order of a United States District Court

Name of U.S. District Court: U.S. District Court for the District of Arizona

U.S. District Court case number: 3:13-cv-08045

Date case was first filed in U.S. District Court: 03/07/2013

Date of judgment or order you are appealing: 05/22/2020

Fee paid for appeal? *(appeal fees are paid at the U.S. District Court)*

◉ Yes ○ No ○ IFP was granted by U.S. District Court

List all Appellants *(List **each** party filing the appeal. Do not use "et al." or other abbreviations.)*

Grand Canyon Trust;
Center for Biological Diversity;
Sierra Club

Is this a cross-appeal? ○ Yes ◉ No

If Yes, what is the first appeal case number?

Was there a previous appeal in this case? ◉ Yes ○ No

If Yes, what is the prior appeal case number? 15-15857 (consol. with 15-15754)

Your mailing address:

4404 Alcott St.

City: Denver State: CO Zip Code: 80211

Prisoner Inmate or A Number (if applicable):

Signature s/ Aaron M. Paul **Date** July 20, 2020

Complete and file with the attached representation statement in the U.S. District Court

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Form 6. Representation Statement

Instructions for this form: http://www.ca9.uscourts.gov/forms/form06instructions.pdf

Appellant(s) *(List **each** party filing the appeal, do not use "et al." or other abbreviations.)*

Name(s) of party/parties:

Grand Canyon Trust;
Center for Biological Diversity;
Sierra Club

Name(s) of counsel (if any):

Aaron M. Paul, Neil Levine (see additional counsel on the following pages)

Address: 4404 Alcott St., Denver, Colorado 80211

Telephone number(s): 303-477-1486 (Paul); 303-455-0604 (Levine)

Email(s): apaul@grandcanyontrust.org; nlevine@publicjustice.net

Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

---

Appellee(s) *(List only the names of parties and counsel who will oppose you on appeal. List separately represented parties separately.)*

Name(s) of party/parties:

Heather Provencio, Forest Supervisor, Kaibab National Forest;
U.S. Forest Service, an agency in the U.S. Department of Agriculture

Name(s) of counsel (if any):

Sean C. Duffy, U.S. Department of Justice

Address: 150 M Street NE, Washington, DC 20002

Telephone number(s): 202-305-0445

Email(s): sean.c.duffy@usdoj.gov

To list additional parties and/or counsel, use next page.

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

Continued list of parties and counsel: *(attach additional pages as necessary)*

Appellants

Name(s) of party/parties:

Grand Canyon Trust; Center for Biological Diversity; Sierra Club

Name(s) of counsel (if any):

Marc Fink (see additional counsel on the following page)

Address: 209 East 7th Street, Duluth, Minnesota 55805

Telephone number(s): 218-464-0539

Email(s): mfink@biologicaldiversity.org

Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

Appellees

Name(s) of party/parties:

Energy Fuels Resources (USA), Inc.;
EFR Arizona Strip LLC

Name(s) of counsel (if any):

Bradley J. Glass, Michael K. Kennedy

Address: 2575 East Camelback Road, Phoenix, Arizona 85016

Telephone number(s): 602-530-8000

Email(s): brad.glass@gknet.com; mkk@gknet.com

Name(s) of party/parties:

Name(s) of counsel (if any):

Address:

Telephone number(s):

Email(s):

Continued list of parties and counsel: *(attach additional pages as necessary)*

Appellants

Name(s) of party/parties:

Grand Canyon Trust; Center for Biological Diversity; Sierra Club

Name(s) of counsel (if any):

Roger Flynn

Address: P.O. Box 349; 440 Main St., #2, Lyons, Colorado 80540

Telephone number(s): 303-823-5738

Email(s): wmap@igc.org

Is counsel registered for Electronic Filing in the 9th Circuit? ◉ Yes ○ No

Appellees

Name(s) of party/parties:

Name(s) of counsel (if any):

Address:

Telephone number(s):

Email(s):

Name(s) of party/parties:

Name(s) of counsel (if any):

Address:

Telephone number(s):

Email(s):

Feedback or questions about this form? Email us at forms@ca9.uscourts.gov

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

FILED

APR 18 2022

MOLLY C. DWYER, CLERK
U.S. COURT OF APPEALS

GRAND CANYON TRUST; et al.,

Plaintiffs - Appellants,

and

HAVASUPAI TRIBE,

Plaintiff,

v.

HEATHER PROVENCIO, Forest Supervisor, Kaibab National Forest; UNITED STATES FOREST SERVICE, an agency in the U.S. Department of Agriculture,

Defendants - Appellees,

and

ENERGY FUELS RESOURCES (USA), INC.; EFR ARIZONA STRIP LLC,

Intervenor-Defendants - Appellees.

No. 20-16401

D.C. No. 3:13-cv-08045-DGC
U.S. District Court for Arizona, Prescott

MANDATE

The judgment of this Court, entered February 22, 2022, takes effect this date.

This constitutes the formal mandate of this Court issued pursuant to Rule 41(a) of the Federal Rules of Appellate Procedure.

FOR THE COURT:

MOLLY C. DWYER
CLERK OF COURT

By: David J. Vignol
Deputy Clerk
Ninth Circuit Rule 27-7