

PacifiCorp

Energy West Mining Company

Deer Creek Mine

**Mill Fork West Extension Federal Coal Lease UTU-84285,
PacifiCorp, Deer Creek Mine, C/015/018**

FILE IN *Expandable 09212006*
Refer to Record No. 0104
in 00150018, 2006, Incoming
for additional information

**Bureau of Land Management
R₂P₂ Approval**



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
<http://www.blm.gov>



IN REPLY REFER TO:

3482
UTU-84285, ML-48258
(UT-923)

SEP 22 2006

Mr. Pete Rutledge
Office of Surface Mining
P. O. Box 46667
Denver, Colorado 80201-6667

Re: Resource Recovery and Protection Plan (R2P2), Federal Coal Lease UTU-84285, Hiawatha and Blind Canyon Seams, Deer Creek Mine

Dear Mr. Rutledge:

On September 8, 2006, the Bureau of Land Management (BLM) received a request from Interwest Mining Company to revise their existing R2P2. A new R2P2 is required for a proposed action involving a new lease. The BLM has reviewed the proposed R2P2 modification from Interwest Mining Company, and has determined the submitted material to be adequate for the new R2P2, and that no further submission is required. This letter summarizes the BLM's findings and decision regarding this new R2P2.

Interwest Mining Company's wholly owned subsidiary, Energy West Mining Company, has submitted a permit application package (PAP), with the R2P2 included, to add the newly acquired Federal coal lease areas to the Deer Creek Mine permit. The lease, called the Mill Fork West Lease, will add approximately 214 acres of Federal coal land to the permit area. This permitting action will allow the company to mine (exclusively by underground methods) approximately 333,000 tons of additional recoverable coal.

The inclusion of this lease in the permit area will allow for maximum coal extraction between the western boundary of the Mill Fork State Lease (ML-48258) and the surface location of the Joes Valley Fault. The BLM has inspected this area a number of times (including on July 21, 2006, May 23, 2006, April 27, 2006, and March 17, 2006), and agrees that the inclusion of this lease in the Mine Permit provides for the extraction of recoverable coal which would otherwise be bypassed. Bypassed coal would also include State Institutional Trust Lands coal located on an adjacent state lease.

The R2P2 addresses all the required items per 43 CFR 3482.1(b), and shows that mining is planned for all areas where potentially-minable coal is currently known to be located. All recoverable coal in the two seams will be accessed from existing mine workings on the adjacent State Lease of the Deer Creek Mine. No surface facilities are planned for this permit addition.

The planned coal extraction areas of the R2P2 were determined by the BLM to comply with the lease terms and conditions, including special lease stipulation 19, which restricts subsidence in the proximity of the surface expression of the Joes Valley Fault. Any additional restrictions placed on

the coal recovery, as depicted in this R2P2, would require consultation with the authorized officer of the BLM in order to properly address Mineral Leasing Act (MLA) requirements.

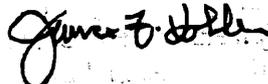
Interwest proposes to mine from the existing western boundary of the State Lease to a buffer zone determined by the surface location of the Joes Valley Fault. The company's existing R2P2 grants mining up to the Mill Fork State Lease (ML-48258) boundary line. Interwest's plans for mining in the new lease include production associated primarily with the development of gateroads, bleeders, and set-up rooms. Limited longwall production (64,000 tons) is also planned. This mining will be conducted from inside the mine, and will have no surface impacts. Coal recovery will be maximized based on geologic, engineering, safety, environmental and economic factors. A change to the mine plan based on any one of these factors will be reviewed and subject to approval by the BLM.

Total development and retreat longwall mining tonnage on this Federal lease are projected to be 268,000 and 64,000 tons, respectively. An added value of these leasing and permitting actions is that they allow an estimated 1,803,000 additional tons to be recovered on the adjoining State Lease through the process of lengthening several projected longwall panels. Until the new lease is incorporated into the existing LMU, tonnages mined on the Mill Fork West Federal lease will not be applied for diligence purposes.

The BLM finds the R2P2, as submitted, to be in compliance with the Mineral Leasing Act of 1920, as amended, the lease terms and conditions, and the regulations at 43 CFR 3480. The BLM has also determined that this R2P2 (as received by BLM on September 8, 2006) will achieve maximum economic recovery (MER) of Federal coal, due in part to the pending reversion. We therefore recommend that the Secretary approve the R2P2 as part of the Federal mine plan.

If you have any questions, please contact Steve Rigby at the Price Field Office (435) 636-3604 or Jeff McKenzie of my staff at (801) 539-4038.

Sincerely,



James F. Kohler
Chief, Solid Minerals Branch

Enclosure

Approved Mine Maps

cc: Division of Oil Gas and Mining, State of Utah
1594 West North Temple Street, Suite 1210
Salt Lake City, Utah 84114-5801

UT-070, Price, Utah

Energy West Mining Company
P. O. Box 310
Huntington, Utah 84528

**DIVISION
COPY**

PacifiCorp
Deer Creek Mine C0150018
Deficiency Response
Mill Fork West Extension LBA, Task No. 2544

The following responses to deficiencies are formatted as found in the technical analysis document. They are broken down into logical section headings similar to the R645 regulations. In each section, the regulation number along with the associated deficiency is followed by the Permittee's italicized response.

R645-301-121.100, The Permittee must either provide updated information concerning raptor surveys or remove the dated statements on pages 3-8 and 3-9. For page 3-8, the Division recommends sending the sentence with "surveys" then providing a reference to direct the reader to the annual reports for updated information. For page 3-9, the Permittee could just summarize the number of golden eagle nests within the Deer Creek Permit area and how many are within the Mill Fork Permit Area then provide a reference to direct the reader to the annual reports for updated information. • The Permittee must verify the statement on page 3-9 that "none of the nests are within the projected subsidence...". This paragraph is dated. It is not clear that golden eagle nest #78 is not within the subsidence zone. [JAE]

- *The text on page 3-9 has been revised to state the following:*

PacifiCorp in cooperation with Division of Wildlife Resources conducts annual raptor Three Golden eagle nest sites were identified during the 2002 Raptor reconnaissance surveys within the Mill Fork area, including the State Lease ML-48258 and Federal Coal Lease UTU-84285 Lease (refer to Map MFS1852B, located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-300 Biology]). All of the nests are located in the northeastern portion of the lease. Number of nest and status of each nest (i.e. active, inactive, tended, dilapidated, not found) is reported in Annual Reports submitted to the Division. This information is also available for review by the regulatory agencies at the Division of Wildlife Resources. Based on the September 2005 mine layout, none of the nests are within the projected subsidence affected area (refer to maps MFS1866D in the Engineering Section and MFS1839D located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-500 Engineering]).

- The Permittee must verify the statement on page 3-9 that "none of the nests are within the projected subsidence...". This paragraph is dated. It is not clear that golden eagle nest #78 is not within the subsidence zone.

The permittee has verified that based upon the projected mine layout, nest #78 is not within the projected zone of subsidence.

R645-301-121.200, The Division believes that the mention (page iii) of a particular lease is referring to the U-78953, which is located to the east of ML-48258. If the number as written in the MRP is incorrect, the Permittee must either correct the referenced number or present the

information more clearly. ● The Permittee must clarify the statement on page 3-9 stating that all nests are located in the northeastern area. This statement is dated and should be removed. ● The Permittee may want to clarify the statement on page 4- 1 that suggests that small game" inhibits" the area. ● The Permittee must either explain or provide a legend that describes the color-coding for maps MFS1856B and MFS1836B (Ch. 4). The Permittee should also provide a more obvious line that shows the fault line as reference in the existing legends on maps MFS18368B, MFS1849 (Ch. 3) and MFS1822 (Ch. 3). ● The Permittee must either clarify the statement or provide an adequate citation for the statement on page 3-14: "Mine related cliff failure do not.". This statement should be cited with a scientific research document. [JAE]

- *The mention of U-78953 was incorrectly written and has now been amended to correctly state this lease.*
- *Text on page 3-9 has been revised, refer to comment above: R645-301-121.100*
- *Page 4-1 has been revised to include the word "inhabit".*
- *Colors on said maps are used only for highlighting individual areas. Legends are provided on each of the maps to identify areas of interest (i.e. DRS indicating Developed Recreation Sites on map MFS1856B, U17024 indicating an oil and gas lease on map MFS1836B, and OG COMP indicating oil and gas competitive lease (Unleased) on map MFS1836B).*

To clarify the color-coding:

- *The legend on map MFS1856B has been revised to separate and distinguish the color-coding system.*
 - *A note was added to map MFS1836B declaring that the different colors are used highlight the individual leases.*
 - *The fault line indicated in the legend on said maps has been removed.*
- *This statement is part of a summary of three (3) Spotted Bat Assessments that were conducted in the Proposed Cottonwood Canyon, North Rilda, and Mill Fork Lease Areas by Rick Sherman, et. al. All three Assessments are included in Appendix A of the Biology Section and contain this statement. The italicized text starting on page 3-12 has been changed to read as follows:*

Assessments of Spotted Bat (*Euderma maculatum*) and Townsend's Big-eared Bat (*Corynorhinus townsendii*) in the Proposed Cottonwood Canyon, North Rilda Area and Mill Fork Lease areas, Manti La Sal National Forest, Emery County, Utah.) are summarized as follows:

Historic and Archeological Resource Information

R645-301-411, The MRP does not meet the R645-301-411 requirements of the regulations pertaining to historic resources because the MRP does not include narrative that 1) reflects that the USFS conducted a survey or 2) summarizes the results for UTU-84285 LBA. The Permittee must update the narrative in Chapter 4 (R645-301- 411.140). The Division understands that the MRP will not include a copy of the survey report, but will include a copy of the Significance Determination document in Chapter 4 as an appendix document. This document provides the SHPO correspondence for this project. [JAE]

- *R645-301-411 has been revised to include the following statement:
Mill Fork West Extension Tract UTU-71307 (Federal Coal Lease UTU-84285)*

An archeological, historical, and cultural resource evaluation for the Mill Fork West Extension Tract UTU-71307 (assign as Federal Coal Lease UTU-84285) was conducted during the last week of April 2006 by the Manti-LaSal National Forest Service cultural resource specialist (William Ellis, Heritage Program Manager Region 4, Professional CRM Specialist). A cultural resource report (ML-1189, U-06-FS-0588f, on file at the State Historic Preservation Office and Manti-LaSal National Forest Price Office) along with a Determination of Significance and Effect form was submitted to the State Historic Preservation Office on May 1, 2006 (refer to R645-301-400 Appendix 1 for a copy of the determination document). As stated in the Effect portion of the determination document, "The following actions are proposed to ensure the protection - No sites in proposed project area". State Historic Preservation Office reviewed and concurred with the Forest Service's determinations (refer to Appendix A).

As referenced above, the Land Use section has been revised to include Appendix A - Mill Fork West Extension Tract UTU-71307 (Federal Coal Lease UTU-84285) Determination of Significance and Effect - May 1, 2006

Biology

R645-301-322.100, The MRP (Confidential Binder) include maps MFS1852B and MFS1839D that illustrate known raptor nest locations. The Division considers that these maps should reflect all known nests including the goshawk cluster and golden eagle nests 1205 and 1475 within the permit area. Also, the Permittee may want to ADD the 3-D buffer zones for the golden eagle nests, at least on map MFS1852B. The Division does not suggest removing the 2-D buffer zone, yet. The USFWS and DWR have not provided official recommendations for reviewers to only

consider the 3-D buffer zone when analyzing projects. The Permittee may still represent yearly nest activity on similar maps (Confidential) for their annual reports. [JAE]

- *Maps MFS1852B and MFS1839D have been revised to include the location of each of the known raptors. Nest #1205 (located in Rilda Canyon) is not included on maps related to the Mill Fork area due to the scale of the maps. The reviewer is recommended to review Volume 11 North Rilda Canyon Portal Facilities for references related to Nest #1205.*

In addition, the text on page 3-9 has been revised to state the following:

PacifiCorp in cooperation with Division of Wildlife Resources conducts annual raptor surveys within the Mill Fork area, including the State Lease ML-48258 and Federal Coal Lease UTU-84285 (refer to Map MFS1852B, located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-300 Biology]). All of the nests are located in the northeastern portion of the lease. Number of nest and status of each nest (i.e. active, inactive, tended, dilapidated, not found) is reported in Annual Reports submitted to the Division. This information is also available for review by the regulatory agencies at the Division of Wildlife Resources. Based on the September 2005 mine layout, none of the nests are within the projected subsidence affected area (refer to maps MFS1866D in the Engineering Section and MFS1839D located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-500 Engineering]).

To reduce confusion, the half mile buffer delineations have been removed from map MFS1852B. The half mile buffer zone is a guideline established by Fish & Wildlife Service for raptors applicable to potential coal mining and reclamation operations (disturbed area) or other activities (example: surface coal exploration) which could interfere with nesting activities. No coal mining and reclamation activities are currently planned or approved for the Mill Fork area. Maps MFS1852B and MFS1839D serve as baseline conditions and reflect the mine layouts in relation to the known nest. Potential impacts associated with coal mining and reclamation activities, i.e. disturbed areas or surface coal exploration programs are evaluated on a case by case basis. In these situations, PacifiCorp will provide the Division buffers zones in both formats: plan view and 3D.

Engineering

R645-301-522 Coal Recovery, The Permittee must provide the Division a copy of the approved resource recovery and protection plan (R2P2), or a letter from the BLM in which they state that the R2P2 has been approved, or additional information showing the maximum economic

recovery will occur on the lease addition. [WHW]

Maps MFUI840D and MFUI841D in Volume 12, Engineering R465-301-500 were included in the May 30, 2006 amendment to show resource recovery of the LBA. The Bureau of Land Management has also approved the mine layouts and recovery of the coal resource. This letter has been included with this deficiency submittal.

R645-301-512, The Permittee must have all certification of maps done according to the Division of Professional Licensing requirements. Those requirements are that all professional engineers and geologist must place their signature and date across the professional engineer's or geologist's seal. The signature and date must be placed over the seal. The signature and date cannot be electronic but the stamp can be. Maps needing correct certification include but are not limited to: MFUI837D, Coal Ownership, MFUI841D (Blind Canyon Mine Plan), MFUI840D Hiawatha Mine. [The geology maps had dual certifications, so although some certifications were done incorrectly, because each map was properly certified at least once, the Division considers that these maps were properly certified. Other maps that were improperly certified are MFS1821D (Vegetation), MFS1849B (Deer Habitat), MFSI822B (Elk Habitat), MFSI835B (Land Use), MFS1836 (Oil and Gas Leases), MFUI837D, Coal Ownership; however, as those maps are not required to be certified the Division does not consider improper certification to be a deficiency for these maps. [WHW]

The following maps were submitted with the original May 30, 2006 permit change application:

General Section

General Section Map MFUI837D, include Federal Lease UTU-84285

General Section Map MFS1838D, include Federal Lease UTU-84285

Soils Section

Soils Section Map MFS1834B, include Federal Lease UTU-84285

Biology Section

Biology Section Map MFS1821D, include Federal Lease UTU-84285

Biology Section Map MFS1849B, include Federal Lease UTU-84285

Biology Section Map MFS1822B, include Federal Lease UTU-84285

Biology Section Map MFS1852B, include Federal Lease UTU-84285

*** Private and Confidential Volume: DOGM Only ***

Land Use & Air Quality Section

Land Use & Air Quality Section Map MFS1835B, include Federal Lease UTU-84285

Land Use & Air Quality Section Map MFS1836B, include Federal Lease UTU-84285

Land Use & Air Quality Section Map MFS1856B, include Federal Lease UTU-84285

Engineering Section

Engineering Section Map MFU1841D, include Federal Lease UTU-84285

Engineering Section Map MFU1840D, include Federal Lease UTU-84285

Engineering Section Map MFS1839D, include Federal Lease UTU-84285

*** Private and Confidential Volume: DOGM Only **

Engineering Section Map MFS1857D, include Federal Lease UTU-84285

Engineering Section Map MFS1866D, include Federal Lease UTU-84285

Geology Section

Geologic Section Map MFU1823D, include Federal Lease UTU-84285

Geologic Section Map MFU1829D, include Federal Lease UTU-84285

Geologic Section Map MFS1824D, include Federal Lease UTU-84285

Geologic Section Map MFU1827D, include Federal Lease UTU-84285

Geologic Section Map MFU1826D, include Federal Lease UTU-84285

Geologic Section Map MFU1825D, include Federal Lease UTU-84285

Geologic Section Map MFU1828D, include Federal Lease UTU-84285

Hydrology Section

Hydrologic Section Map MFS1830D, include Federal Lease UTU-84285

Hydrologic Section Map MFS1831D, include Federal Lease UTU-84285

Hydrologic Section Map MFS1832D, include Federal Lease UTU-84285

Hydrologic Section Map MFS1851D, include Federal Lease UTU-84285

These maps were submitted as a paper copy and an electronic copy. At conditional approval of this amendment, all applicable maps in Volume 12 will be submitted with the proper certification according to the Division of Occupational and Professional Licensing requirements and certified as required by the R645-301 coal rules.

Geology

R645-301-121.200-, 623.300, Subsidence Control Plan, The Permittee needs to update projections for the mine workings in the Blind Canyon Seam on Drawings MFS1824D (Blind Canyon Overburden), MFS1826D (Blind Canyon - Hiawatha Interburden), and MFS1827D (Blind Canyon Structure) to match those on Drawing MFU1841D. [JDS]

- *Maps MFS1824D, MFS1826D and MFS1827D have been revised to reflect the layout depicted on Map MFU1841D.*

Hydrology

R645-301-731.210 Groundwater Monitoring; The Permittee needs to monitor flow at UJV 213 (water right 93-15 76, change a21560f) for an appropriate period of time before, during, and after mining so that a determination can be made either that the mining caused no diminution or interruption of the water supply or that water replacement it is required. [JDS]

- *PacifiCorp will add UJV-213 to monitoring program starting in the fall of 2006. Baseline sampling will be conducted for a two year period. All hydrologic maps indicating the monitoring status of groundwater sources have been revised (maps: MFS1830D, MFS1831D, MFS1832D, and MFS1851D). In addition, Volume 9 Appendix A will be revised upon approval to reflect the monitoring status of spring UJV-213.*

PacifiCorp

Energy West Mining Company

Deer Creek Mine

**Update Volume 12 Text Section,
PacifiCorp, Deer Creek Mine, C/015/018**

**Volume 12
Introduction Section
Replace Text Section**

INTRODUCTION

The Mill Fork State Lease ML-48258 and adjacent Federal Lease UTU-84285 lie within the Huntington Canyon-Gentry Mountain and the Ferron Canyon, Cottonwood-Trail Mountain Multiple-Use Evaluation Areas as described in the Manti-La Sal National Forest Land and Resource Management Plan (Forest Plan). The Forest Plan Environmental Impact Statement (EIS) and record of Decision makes these areas available for consideration for coal leasing.

COAL LEASING PROCESS

The first step in the leasing evaluation process was to delineate a tract. Tract delineation was completed by the BLM on October 2, 1996. Named the Mill Fork Tract, the area encompassed approximately six thousand four hundred forty (6,440) acres.

A no action alternative and three action alternatives were developed during the Environmental Assessment process to provide a full range of reasonable alternatives that sharply define the significant issues.

A. Alternative 1 - No Action

Forest Service would not consent to, and the BLM would not approve leasing.

- B. Alternative 2 - Offer for lease with standard BLM Lease Terms, Conditions and Stipulations**
Forest Service would consent to, and the BLM would approve, offering six thousand four hundred forty (6,440) acres, as delineated for competitive leasing. The lease would only have the standard BLM terms, conditions and stipulations that are included on the BLM coal form.
- C. Alternative 3 - Offer for lease with application of Special Coal Leasing Stipulations for Protection of Non-Coal Resources**
Forest Service would consent to, and the BLM would approve, offering six thousand four hundred forty (6,440) acres, as delineated for competitive leasing. The lease would have the standard BLM terms, conditions and stipulations that are included on the BLM coal form along with eighteen (18) Special Coal Lease Stipulations from Appendix B of the Forest Plan and two (2) additional tract specific stipulations.
- D. Alternative 4 - Offer a modified tract for lease with application of Special Coal Lease Stipulations for Protection of Non-Coal Resources**
In addition to those activities addressed in Alternative 3, Alternative 4 specifically focuses on concerns identified as water issues. The portion of the lease tract east of the northeast quarter of Section 7 is removed from the leasing offering, to protect the water quality and quantity of Little Bear watershed and spring, reducing the overall tract by eight hundred eighty (880) acres.

Based on the USFS Record of Decision, the BLM offered for lease the Mill Fork Tract excluding the eight hundred eighty (880) acres (total tract approximately five thousand six hundred sixty three [5,663] acres, refer to Figure 1). The modified lease excluded the northeastern portion of the lease tract which encompasses the Little Bear Canyon watershed (designated as a Municipal Water Supply [MWS]). Exclusion of the eight hundred eighty (880) acres was intended to protect the Little Bear MWS and minimize potential disruptions or degradation to surface and groundwater resources.

On June 6, 2000, Genwal Resources Inc. re-applied for the eight hundred eighty (880) acres which were excluded during the 1997 Environmental Assessment for the Mill Fork Tract. Bureau of Land Management (BLM) and United States Forest Service (USFS) evaluated the Lease-By-Application (~~LBA U-78593~~ BLM assigned Federal Coal Lease serial number ~~UTU-78953~~) referred to as the South Crandall Canyon Tract and issued the FONSI on February 18, 2003. Genwal Resources acquired the South Crandall coal lease on June 12, 2003.

MILL FORK STATE LEASE ML-48258 ACQUISITION

PacifiCorp successfully acquired the Mill Fork Lease and entered COAL MINING LEASE AND AGREEMENT with the State of Utah on April 1, 1999. The coal tract as described in the lease contains approximately 5,562.82 acres, more or less. With the leasing of the Mill Fork Tract in 1999, PacifiCorp controls through ownership and leasing certain fee coal lands together with assigned federal coal leases nearly 30,000 acres of contiguous minable property located in Emery County, Utah.

MILL FORK WEST EXTENSION TRACT LBA/UTU-84285

On January 25 (revised March 20), 2006, PacifiCorp filed an application for a federal coal lease by application (LBA) for access to unleased federal coal adjacent to the Mill Fork State Lease. The serial number assigned to this LBA is UTU-84285.

Leasing of the Mill Fork West Extension Tract would encourage and enable the greatest ultimate recovery and conservation of this natural resource, while promoting full development of the economically recoverable coal located between the western lease line of the Mill Fork State Lease ML-84258 and the Joes Valley Fault zone which would otherwise become subject to bypass. This would be accomplished by allowing westward mine development and extraction beyond the existing Mill Fork western lease boundary until mining advancement is terminated due to the actual location of the Joes Valley Fault. Mine development and extraction would include extending the current proposed gateroads, bleeders and setup entries, and longwall panels into the proposed lease tract in an attempt to maximize coal recovery where possible; provided geologic, engineering, safety, environmental and economic conditions are conducive and in the best interest of all entities considered.

DEER CREEK MINE AND RECLAMATION PLAN

On March 5, 2003 the Division of Oil, Gas & Mining approved the inclusion of the Mill Fork State Lease ML-48258 (5,562.8 acres) to the Deer Creek Mine permit.. As stated above, on January 25 (revised March 20), 2006, PacifiCorp filed an application for a federal coal lease by application, serial number UTU-84285 (213.57 acres), for access to unleased federal coal adjacent to the Mill Fork State Lease. Together, the Mill Fork State Lease (5,562.8 acres) and the Federal lease UTU-84285 (213.57 acres) increased the Deer Creek permit area by 5,776.37 acres. Because of the geographic location, the Mill Fork State Lease and adjacent Federal Lease

UTU-84285 is referred to as the "Mill Fork Permit Area". This application addresses only proposed Mill Fork permit area, refer to the highlighted area shown on Figure 1.

All mining activities associated with the Mill Fork permit area will be through underground mining operations. Mine plan layouts (Hiawatha Seam) depicted in R645-301-500 Engineering Section, indicate potential portal breakouts located in Crandall Canyon, (Section 5, Township 16 South Range 7th East SLB&M), within a 2.41 acre right-of-way easement acquired from Andalex Resources/Intermountain Power Agency. The location of the portal breakouts are considered preliminary at this point and will be evaluated and designed based upon future surface coal exploration programs and mine plan considerations. Prior to any surface disturbance, Energy West will secure all necessary permits.

It is proposed to transport coal mined in the Hiawatha (lower) and Blind Canyon (upper) seams through the existing Deer Creek mine workings to the portal in Deer Creek Canyon. From this point, the coal will be transported to the Huntington Power Plant coal storage area via the existing overland beltline. All coal mined from the Mill Fork area will be utilized as fuel for the applicant's owned power plants.

PERMIT ORGANIZATION

The following sections of this mining application pertain to all applicable coal mine permit application requirements of the Utah R645-Coal Mining Rules (revised March 25, 2002).

Applicable sections herein include:

Introduction

R645-301-100. General Information

R645-301-200. Soils

R645-301-300. Biology

R645-301-400. Land Use and Air Quality

R645-301-500. Engineering

R645-301-600. Geology

R645-301-700. Hydrology

R645-301-800. Bonding

PacifiCorp

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**Update Volume 12 Text Section,
PacifiCorp, Deer Creek Mine, C/015/018**

**Volume 12
Biology Section
Replace Text Section**

R645-301-300 BIOLOGY SECTION

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APPENDICES

Appendix A

Assessment of Spotted Bat (Euderma maculatum) and Townsend’s Big-eared Bat (Corynorhinus townsendii) in the Proposed Cottonwood Canyon Lease Area. Manti-La Sal National Forest, Emery County, Utah.

Assessment of Spotted Bat (Euderma maculatum) and Townsend’s Big-eared Bat (Corynorhinus townsendii) in the Proposed North Rilda Area. Manti-La Sal National Forest, Emery County, Utah.

Assessment of Spotted Bat (Euderma maculatum) and Townsend’s Big-eared Bat (Corynorhinus townsendii) in the Proposed Mill Fork Lease Area. Manti-La Sal National Forest, Emery County, Utah.

MAPS

- MFS1821D** **Deer Creek Mine: Mill Fork Area State Lease ML-48258/UTU-84285 Vegetation Map**
- MFS1849B** **Deer Creek Mine: Mill Fork Area State Lease ML-48258/UTU-84285 Deer Habitat Map**
- MFS1822B** **Deer Creek Mine: Mill Fork Area State Lease ML-48258/UTU-84285 Elk Habitat Map**
- MFS1852B** **Deer Creek Mine: Mill Fork Area State Lease ML-48258/UTU-84285 Raptor Location Map (Refer to Confidential and Private Volume Deer Creek tab, Volume 11 R645-301-300 Biology)**

R645-301-300 BIOLOGY

R645-301-310. BIOLOGY INTRODUCTION

The following vegetative, fish, and wildlife resource information has been taken from the Data Adequacy document (Data Adequacy L.B.A No. 11, December 1996) and the Environmental Assessment (Mill Fork Federal Coal Lease Tract UTU-71307, Environmental Assesement document, Lease By Application, No. 11) reported by the Manti LaSal National Forest in June, 1997.

R645-301-320. ENVIRONMENTAL DESCRIPTIONS

R645-301-321. VEGETATION INFORMATION

The Mill Fork area contains very steep and narrow east-west trending canyons with rounded narrow ridge tops. Contour elevations range from approximately 8100 feet to over 10,700 feet. Vegetative cover and species composition within this elevation range are very diversified. Ecosystems within this portion of East Mountain contain various habitats that are mostly influenced by the steep and broken slopes and their orientations. Distinguishable ecosystems within the area are grasslands, perennial forb lands, sagebrush lands, mountain brush lands, coniferous forest lands, aspen forest lands, and pinyon/juniper woodlands. Refer to Map MFS1821D in the Maps Section for the diverse vegetative communities.

Grasslands - These lands make up only a small portion of the Mill Fork Lease Area. Grasslands include both perennial and desert grasses at high and low elevations. Salina wild rye grass is the dominant grass at the lower elevations and Letterman needle grass

dominates the high elevation ridge top sites. They are predominately found on slopes with a south to southwestern exposure.

Perennial Forb Lands - Perennial forbs exist mainly on or near ridge tops. Common species found include sages, vetches, and clovers. These forbs are important food source for deer and elk populations as well as cattle and sheep.

Sagebrush Lands - This vegetative type is found on most of the steep south slopes and high elevation ridge tops. Less than 10% of the Mill Fork area occur in this type. Grasses are interspersed within this community. Salina wild rye grass is the dominant grass at the lower elevations and Letterman needle grass dominates the high elevation ridge top sites. Few forbs are present in this type. The sagebrush species common in this vegetative type are black sagebrush and big mountain.

Mountain Brush Lands - Mountain brush vegetative types occur mostly on the mid-elevation south slopes, high elevation ridges and in the upper basins within the Mill Fork area. This type is present on about 15% of the area. The lower elevation sites are heavily used by wintering elk and deer and the higher elevation ridges and basins are used by sheep during the summer. Most of the vegetative types is classed as unsuitable for use by livestock, because of steep inaccessible slopes.

Coniferous Forest Lands - It is estimated that about half the Mill Fork area is covered with conifer timber vegetative type. These types are mostly found on the northerly exposed slopes of the canyon. Douglas fir make up about 85% of the conifer cover with alpine fir and spruce trees present only at the higher elevation ridge and in the upper basin. The dense forest growth on the steep canyon slopes provide a good scenic view, a

good watershed cover and wildlife habitat. Understory vegetation in this ecosystem is generally poorly developed due to shading.

Aspen Forest Lands - Aspen type occur on an estimated 20-25% of the Mill Fork area. They occur mostly on mid and higher elevation sites and on the lower canyon slopes. Most of the aspen types with the area are in either early or mid-seral condition. Only a few stands at high elevation and some isolated sites are in late seral condition. Stands of aspen mostly at higher elevations are being invaded by Douglas fir trees. The aspen ecosystem provide a very important habitat component for many wildlife species, both animal and birds. It also has a high value for livestock grazing and watershed values.

Pinyon-juniper ecosystems - These areas are dominated by pinyon pine and juniper. This ecosystem occurs only in the submontane ecological association. A diverse vegetative understory community is often lacking over wide expanses of the ecosystem. Thus, irregular shaped, but sometimes extensively sized openings have been created in the pinyon-juniper ecosystem for conversion to more productive sagebrush-grass, mountain brush or grassland settings.

Threatened, Endangered and Sensitive Plant Species

Threatened, endangered, and sensitive plant species of interest include *Astragalus monti*, *Hedysarum occidentale* var. *canone*, *Silene petersonii*, and *Aquilegia flavescens*. Populations of these species have been found to inhabit areas near the Mill Fork Lease area. The information discussed on the above listed species was provided by the Manti-LaSal National Forest and gained through personal interviews with Mr. Bob Thompson, Botanist, Manti-LaSal National Forest. The species are discussed below.

Astragalus montii - Monti's milkvetch

This plant is found at high elevations (10,000 to 11,000 feet) on the Flagstaff limestone outcrops. Populations are located on top of Heliotrope, Ferron and White mountains (Ferron Ranger District). This plant is associated with low growing sub-alpine vegetation.

Hedysarum occidentale - Canyon Sweetvetch

Scattered populations of this plant occur in Lower Huntington Canyon, Straight Canyon, and near Joes Valley, Ferron District (5,500 to 7,000 feet). Plants are usually found on sites with a high water table, near springs or along stream beds, and along riparian sites within the Pinyon Juniper ecosystems. River birch and Squawbush are plants most commonly associated with this species.

Silene petersonii- Peterson catchfly

Scattered populations have been found mostly on Flagstaff limestone outcrops on higher elevation ridges and snowdrifts. Occurrences have been found from the Wagon Road Ridge, south to the top of White Mountain. This plant is part of the sub-alpine low forb plant community.

Aquilegia flavescens - Link trail columbine

This plant occurs in springs, seeps and perennial wet sites. Populations have been found in Link Canyon, Box Canyon, Muddy Creek drainage, Straight Canyon and Joes Valley.

Erigeron carringtoniae - Carrington daisy

"...Endemic at high elevations on the Wasatch Plateau (Emery, Sampete, and Sevier cos.), *E. carringtoniae* grows on flat to gently sloping plateau margins and

adjoining steep, eroding slopes, predominantly on the white Flagstaff Limestone (Stone, 1993a). Soils are generally quite shallow with little or no profile development, and consist of gravelly calcareous clays or clay loams overlain by a thin layer of loose, angular limestone fragments or gravel. Ten occurrences of *E. carringtoniae* are currently known (including two with > 1000 plants as recorded by B. Thompson in 1991)..." (Inventory of Sensitive Species and Ecosystems in Utah, Utah Division of Wildlife Resources, 1998). Occurrence has been confirmed by Mr. Bob Thompson (personal interview) in the southern end of the lease, however, in his opinion, there should be no impacts to this species due to subsidence.

Listed rare and other high interest plant species have been found to occur near the Mill Fork Lease area. The species are *Chrysothamnus nauseocus* var. *psilocarpus*, *Gentiana prostrata*, *Gentianopsis barbellata*, *Ligusticum porteri*. Mr. Bob Thompson indicated during a personal interview that no threatened, endangered or sensitive plant species have been found to occur within the Mill Fork Lease area. He believes that the four high interest species do not occur within the lease, however, no surveys have been conducted to verify their existence or absence. It was also Mr. Thompson's opinion that impacts to vegetation due to mining induced subsidence will be negligible to vegetation within the Mill Fork Lease.

R645-301-322. FISH AND WILDLIFE INFORMATION

The Mill Fork area consists of portions of Crandall Creek, Mill Fork and Rilda canyons to the east and unnamed canyons to the west. Runoff from the area contributes to Crandall Creek, Little Bear Creek, Mill Fork, and the Right Fork of Rilda Creek ; all are tributaries to Huntington Creek. The western side of the Mill Fork area consists of tributaries to Indian Creek. The

southern portion contributes runoff to a small portion of the Cottonwood Creek. Crandall Creek and Indian Creek are the only tributaries considered perennial, all other tributaries are intermittent/ephemeral. Continuous flows usually occur in spring and early summer as snowmelt. During late summer and fall, isolated thunderstorms are typical in the region.

Surface and ground water sources is provided for an abundance of fish and wildlife species in the Mill Fork area. Perennial streams support naturally-reproducing trout fisheries and aquatic communities typical to mountain environments. Water resources provides habitat for a variety of big and small game animals, non-game animals and birds. A complete listing of all threatened and endangered fish and wildlife species that have the potential to be present near and/or within the Mill Fork lease can be found in the County lists of Utah's Federally Listed Species (UDWR, 8/14/02, at <http://www.utahcdc.usu.edu/ucdc/>.) A complete listing of all sensitive fish and wildlife species that have the potential to be present near and/or within the Mill Fork lease can be found at this same internet address. Some important species are discussed below.

I. Aquatic Species - The Utah Division of Wildlife Resources (UT DWR) has conducted game fish surveys of the perennial and intermittent streams in the Mill Fork area. Their reports show a variety of salmonid species in each of the streams; Crandall Creek, Little Bear Creek, Mill Fork Creek, Right Fork Rilda Creek, and Indian Creek. The following summarizes each stream with each representative game species.

- ◆ Crandall Creek Colorado Cutthroat (*Oncorhynchus clarki pleuriticus*)
 Rainbow Trout (*Salmo gairdneri*)
 Yellowstone Cutthroat (*Oncorhynchus clarki*)

- ◆ Little Bear Creek Yellowstone Cutthroat (*Oncorhynchus clarki*)
 Rainbow Trout (*Salmo gairdneri*)

- ◆ Mill Fork Creek Yellowstone Cutthroat (*Oncorhynchus clarki*)
 Rainbow Trout (*Salmo gairdneri*)

- ◆ Right Fork Rilda Ck. Yellowstone Cutthroat (*Oncorhynchus clarki*)
 Rainbow Trout (*Salmo gairdneri*)

- ◆ Indian Creek Brook Trout

In addition to the species listed above, the drainages are also likely to support populations of the following non-game species; speckled dace (*Rhinichthys osculus*), mottles sculpin (*Cottus bairdi*), bluehead suckers (*Pantostius delphinus*), and mountain suckers (*Catostomus platyrhynchus*) (Chistopherson, UT DWR).

Benthic Invertebrates - The USGS in cooperation with the Utah DNR and Utah DOGM conducted a comprehensive hydrologic study (from July 1977 through September 1980) of the upper drainages of the Huntington and Cottonwood creeks. Data on benthic invertebrates were collected from 16 sites in October 1977, July and October 1978, and October 1979. This data will be cited and used as a baseline evaluation for the Mill Fork Tract. Refer to United States Geological Survey, Water-Resource Investigations, Open-File Report 81-539, Salt Lake City, Utah, 1981.

As written from the report, "...data indicate that there were significant seasonal differences in the benthic invertebrate population at a given site in addition to areal differences...These organisms appeared in their maximum numbers in the July samples collected at sites in the higher altitudes of the study area, but they were not present in any of the October samples. The large numbers found in July, reflected a seasonal cycle rather than an unnatural condition that allowed one species to dominate." The average diversity (Shannon-Weiner diversity index) found between 1977 and 1979 in Crandall and Mill

Fork canyons was 2.38 and 2.09, respectively. During hydrologic baseline data collection (2000-2002), the '77 through '79 study area in Mill Fork Canyon was dry.

II. Terrestrial Species - The Mill Fork and surrounding area contains habitat for a variety of wildlife including a potential of 84 mammals, 140 birds, and 25 reptiles and amphibians (Mill Fork Federal Coal Lease Tract UTU-71307, Environmental Assessment, LBA Application #11. June, 1997).

Mule deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*) are common in the area. These species typically occupy the higher elevations for summer ranges from May through late October. These areas are important for grazing/browsing before the onsets of winter. Lower elevations are occupied for winter range habitat. Deer and elk summer and high value winter range areas are outlined on maps MFS1849B and MFS1822B in the Maps Section. Population trends of both deer and elk can be found on the DWR website (<http://www.wildlife.utah.gov/hunting/biggame.html>). This information can be reviewed for the Manti region by opening the appropriate .pdf file under Big Game Reports.

A number of raptors occupy the Mill Fork area. These species include the Golden eagle (*Aquila chrysaetos*), Goshawk (*Accipiter gentillis*), Red-tailed Hawk (*Buteo jamaicensis*), Sharp-shinned Hawk (*A. striatus*), American kestrel (*Falco sparverius*), and Great Horned Owl (*Bubo virginiana*) (Mill Fork Federal Coal Lease Tract UTU-71307, Environmental Assessment, LBA Application #11. June, 1997). These species have been seen in the area in the spring and summer months. Nesting areas have been located along the high cliff areas and the aspen-conifer habitats during the Raptor reconnaissance survey conducted in May, 2001. These surveys are conducted annually using helicopter transport and with Division of Wildlife Resources personnel as well as company representatives. Map MFS1852B located in the Confidential and Private Volume (Deer

Creek tab: Deer Creek Mine :Volume 12 R645-301-300 Biology) illustrates each located nest in and near the Mill Fork permit area.

PacifiCorp in cooperation with Division of Wildlife Resources conducts annual raptor surveys within the Mill Fork area, including the State Lease ML-48258 and Federal Coal Lease UTU-84285Lease (refer to Map MFS1852B, located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-300 Biology]).- All of the nests are located in the northeastern portion of the lease. Number of nest and status of each nest (i.e. active, inactive, tended, dilapidated, not found) is reported in Annual Reports submitted to the Division. This information is also available for review by the regulatory agencies at the Division of Wildlife Resources. Based on the September 2005 mine layout, none of the nests are within the projected subsidence affected area (refer to maps MFS1866D in the Engineering Section and MFS1839D located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-500 Engineering]).

R645-301-322.210. Threatened and Endangered Species

The referenced Environmental Assessment reports “No threatened or endangered wildlife species are known to inhabit the proposed lease area. A Bald Eagle (*Haliaeetus leucocephalus*) nest near the Hunter Power Plant is approximately 26 miles southeast of the coal lease. The coal lease area is outside of the foraging area for the Bald Eagles. Two peregrine falcons (*Falco peregrinus*) were observed approximately 13 miles north in 1996. The falcons were observed during nesting season but no nest site was ever confirmed. It is generally accepted that peregrine falcons will forage up to 15 miles from their eyrie, however given the prey base available it is doubtful that the falcons would forage over the coal lease area. No roost sites have been found in the lease area ...”

Mexican Spotted Owls (MSO) have recently become a species of interest since the U.S. Fish and Wildlife Service (USFWS) designated (in January, 2001) 4.6 million acres on federal lands in Arizona, Colorado, New Mexico, and Utah as critical habitat. The designation includes 3.2 million acres in Utah. More specifically, the designation includes areas west of the Colorado River within the West Tavaputs Plateau in Carbon County and the northeast corner of Emery County east of US Highway 6. Other areas in Utah have been designated as critical habitat, however, these areas exist in the southern portion of the state. Typical MSO, habitat according to the 2001 Environment Assessment, consists of “a diverse array of biotic communities. Nesting habitat is typically in areas with a complex forest structure or rocky canyons, and contains uneven-aged, multi-storied mature or old growth stands that have high canopy closure (Ganey and Balda 1989, USDI 1991). In the northern portion of the range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons....typically characterized by the cooler conditions...frequently contain small clumps or stringers of ponderosa pine, Douglas fir, white fir, and/or pinion-juniper”.

Dr. Dave Willey from Montana State University, known MSO expert, modeled representative habitat using the 2000 Willey-Spotskey Mexican Spotted Owl Habitat Model. The model included all areas of the Mill Fork Lease Tract. Figure 1 shows the lease boundary and surrounding area. Areas identified in black, are areas of potential nesting habitat. The greens are identified as potential foraging areas of steep sloped mixed conifers. However, it is reported in the DWR's *Inventory of Sensitive Species and Ecosystems in Utah, 1997* that foraging, nesting and roosting habitats are “dominated by Douglas-fir and/or white fir...In the northern portion of the range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons.” Potential steep sloped, mixed conifer foraging habitats of this type are found on the extreme northeastern border, extreme western border, and a small area in the southwest corner of the lease area as illustrated in Figure 1. Large ponderosa pines are typically found in lower elevations in the rocky canyons to the east of the lease tract. The west side of the tract supports

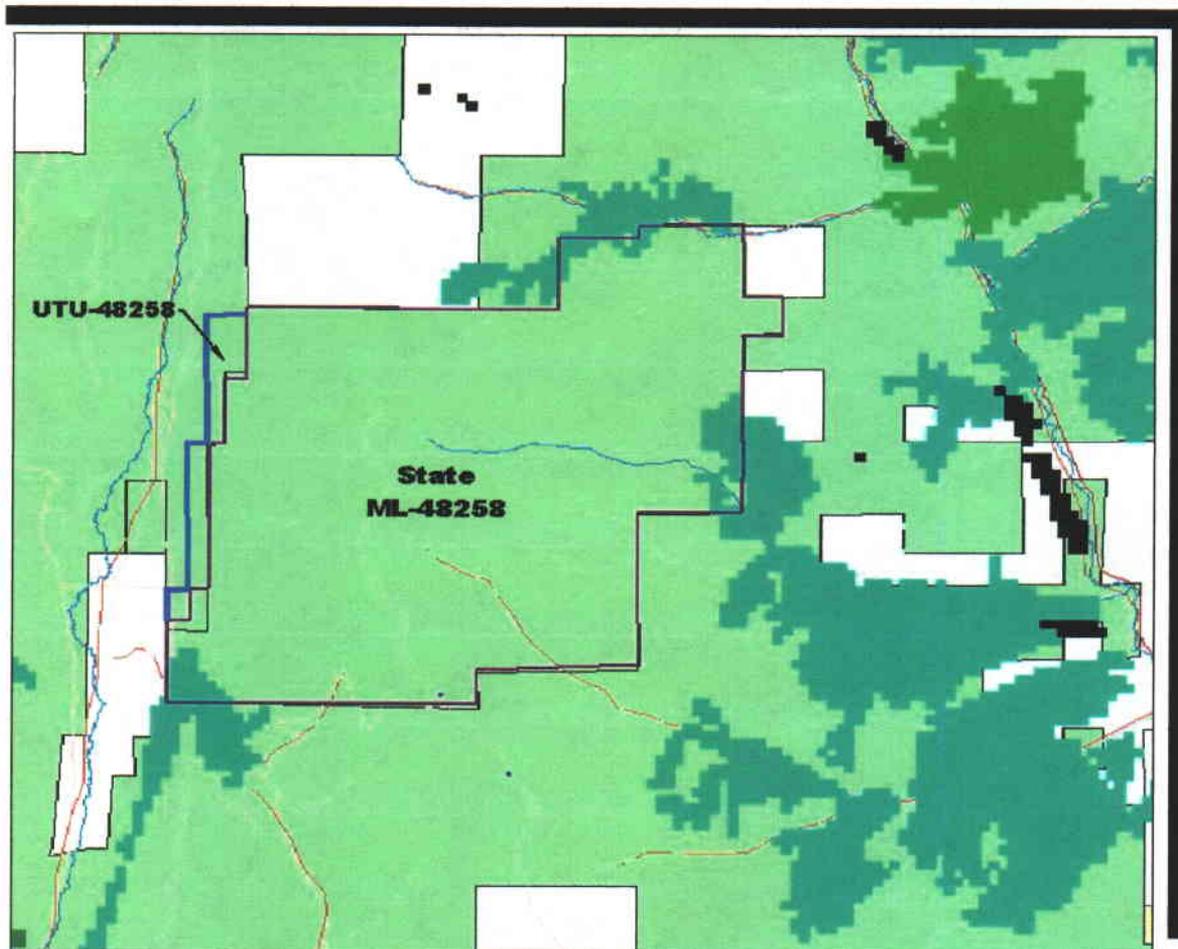


Figure 1: Mexican Spotted Owl nesting and foraging areas (Dr. Dave Willey, Montana State University, 2000)

both aspen and Douglas fir stands, however, this area lacks cliff ledges or steep walled canyons recognized as typical nesting habitats. Figure 2 shows the only area on the lease that supports potential MSO habitat subsidence. There are no potential MSO habitat within the lease that could be impacted by subsidence.

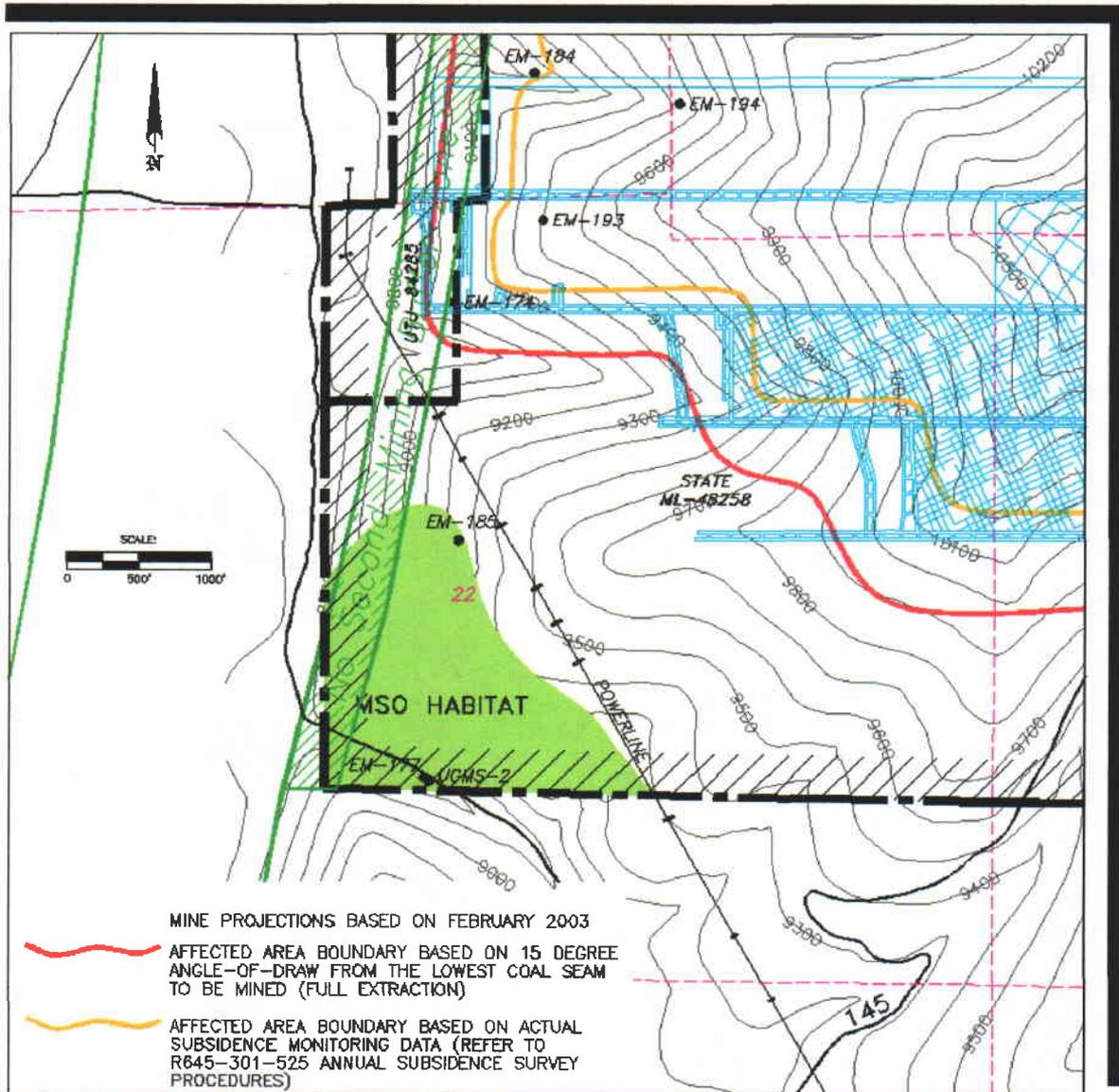


Figure 2: Southwest corner of Mill Fork State Lease. The green shading is steep slope mixed conifer habitat (Douglas fir/white fir). Light blue lines indicate location of proposed mining.

No sightings of the Mexican Spotted Owl have been made on the Mill Fork Lease Area (personal communication with Rod Player, USFS - Price District). Areas west of the San Rafael have been surveyed two years in a row and no owls were found (Mexican Spotted Owl Training Class, Lora Romin, Frank Howell - DWR Instructor, March 21, 2002, Moab, Utah). It is PacifiCorp's opinion

opinion that with the facts given, mining will have no effect on the Mexican Spotted Owl if they occur in the lease area.

R645-301-322.230. Sensitive Species

The Colorado river cutthroat is thought to be present in the Crandall Creek drainage. Genetic testing is on-going to confirm if these fish are pure-strain Colorado cutthroats, however, no definitive data is currently available.

The Spotted Bat (*Euderma maculatum*) depends on cliffs for roost/hibernation areas. These areas exist in isolated locations in the eastern portion of the Mill Fork permit area. Energy West Mining Company and Genwal Resources in 1997, contracted Richard Sherwin, Dr. Duke Rogers, and Carl Johansson to conduct a bat survey in the areas of Huntington Canyon, Straight Canyon, and Cottonwood Canyon. The purpose of this survey was to assess the distribution, abundance, and habitat requirements of the Townsend big-eared and Spotted Bats. These parameters were investigated for the following: 1) areas under consideration as potential lease sites for mining (North Rilda Area, Cottonwood Canyon LBA and the Mill Fork lease); 2) sites where subsurface coal mining is ongoing, and 3) sites (both on and off the Manti-La Sal National Forest) that serve as controls (no mining activities). The results of this survey (Refer to the Appendix A: *Assessments of Spotted Bat (Euderma maculatum) and Townsend's Big-eared Bat (Corynorhinus townsendii) in the Proposed Cottonwood Canyon, North Rilda Area and Mill Fork Lease areas, Manti La Sal National Forest, Emery County, Utah.*) are summarized as follows:

Use assessment for Townsend's big-eared bats in specified areas

No Townsend's Big Bats were located within the survey areas during the project.

Use assessment for Spotted bats in specified areas

No Spotted Bats were mist netted during these studies, refer to Appendix A Table 1 for a summary of results. There is some indication that water source(s) may not be as critical for the Spotted bat as for other species of bats with which it co-occurs. In a study of urine concentrating ability among selected species of bats, the Spotted Bat could concentrate its urine more effectively than any species of bats evaluated, with the exception of two typically "desert species", the Pallid Bat (*Antrozous pallidus*) and the Western pipistrelle (*Pipistrellus hesperus* - Geluso, 1978). It is likely that the Spotted bats were using water sites specifically to forage rather than drink, making netting extremely difficult.

Spotted Bats were observed throughout the eastern (lower elevation) portions of the study areas. The highest concentration of calls were recorded in Rilda and Huntington Canyons. These canyons seem to best represent "classic" Spotted Bat habitat with an abundance of fractured sandstone cliffs, and large areas of suitable foraging habitat.

From three studies, it appears that Spotted Bats are using the cliffs as roosting areas and the canyons as flyways to reach the lower elevation foraging areas. The principal Spotted bat foraging areas are located over the lower elevation riparian habitat located near the mouth of Huntington Canyon. Spotted bats concentrated foraging efforts above the upper canopy of intact riparian vegetation, particularly cottonwood trees (*Populus ssp.*).

Spotted Bats were not restricted to the study areas, but rather are widely distributed in low densities throughout the entire area. In fact, Spotted Bats were detected in suitable habitat throughout the area (including utilizing the parking lots of the Village Inn Motels in Huntington and Castle Dale).

There also is evidence that the Spotted Bats tolerate at least moderate human disturbance while foraging. Surveys were conducted at several sites near roads with light to moderate vehicular traffic (Crandall Canyon, Huntington Canyon), including tandem trucks used for hauling coal from the Genwal Mine portal located in Crandall Canyon. Spotted Bats were observed foraging at low elevations sites off the lease areas, sometimes within 30 meters of the right of way.

Spotted Bats are common throughout the Huntington Canyon area. They were identified utilizing the lease areas (North Rilda and Mill Fork), the active mine permit areas and the control sites (refer to Appendix A, Table 2). Based on the number of individuals observed and their habitat use patterns, it does not appear that current mining practices represent a long term threat to the viability of this population. The bat communities in all areas sampled consist of the same suit of species among all areas of similar habitat and complexity (this includes sites in actively mined areas, control sites, and proposed lease areas (North Rilda and Mill Fork).

The fact that Spotted Bats are relatively common in active and previously mined areas implies that past cliff failures have not dramatically impacted resident populations. As a cliff roosting species, it is likely that they have adapted to tolerate natural rock falls and subsidence. Mine related cliff failures do not generally result in a net loss of habitat (ie. cliffs), but rather provide replacement habitat which may later be colonized by members of the local population. The results of the study indicate that Spotted Bats are "common" enough throughout the area that the localized failure of cliffs (as a result of coal mining within the proposed lease areas [North Rilda Area and Mill Fork]) does not pose a serious threat to the population as a whole.

R645-301-323. MAPS AND AERIAL PHOTOGRAPHS

Maps for vegetation diversity, deer and elk habitat, and raptor nest locations are included in the Maps Section of R645-301-300. Biology. The reader should review these maps to locate these environmental resource items of interest. In addition to biologic base maps provided in this

section, PacifiCorp conducts annual reconnaissance surveys, including subsidence monitoring (annual aerial photogrammetric surveys), infra-red photography (5 year intervals), and hydrologic monitoring.

R645-301-330. OPERATION PLAN

All mining activities associated with the Mill Fork permit area will be through underground mining operations. Mine plan layouts (Hiawatha Seam) depicted in R645-301-500 Engineering Section, indicate potential portal breakouts located in Crandall Canyon, (Section 5, Township 16 South Range 7th East SLB&M), within a 2.41 acre right-of-way easement acquired from Andalex Resources/Intermountain Power Agency . The location of the portal breakouts are considered preliminary at this point and will be evaluated and designed based upon future surface coal exploration programs and mine plan considerations. Prior to any surface disturbance, Energy West will secure all necessary permits.

R645-301-332. ANTICIPATED IMPACTS DUE TO SUBSIDENCE

Multiple surveys have been conducted on the portion of the surface of East Mountain that could possibly be affected by the full extraction or second mining of coal from the Mill Fork Permit area. It has already been determined that there are renewable resources present in the area in the forms of springs, water seeps, grazing land, timber, and wildlife. Also present in the permit area are unimproved roads, trails, a gas well and pipelines, power transmission lines, and some portions of the Castlegate Sandstone escarpment (see Pre-Subsidence Survey Map MFS1839D located in the Confidential and Private Volume [Deer Creek tab: Deer Creek Mine :Volume 12 R645-301-500 Engineering]).

Known springs and seeps that are located within the Mill Fork Lease second mining areas are shown on the Pre-Subsidence Survey Map. The Hydrologic Section of the Mill Fork MRP, Appendix A, contain a listing of sampling sites and a monitoring schedule. Most of the streams within the permit area are ephemeral and/or intermittent. The Crandall Canyon Creek and the lower portion of Rilda Canyon Creek is considered perennial. The streams that flow into Mill Fork Canyon are fed by springs that emanate primarily from the North Horn Formation within the permit boundary. Portions of the headwaters of the drainage basins that feed Crandall and Rilda canyons are within the Mill Fork Lease. Second mining, i.e. longwall extraction or room & pillar mining, of the Mill Fork area will not occur beneath the main stream channels of these canyons. First mining development of access mains from Deer Creek Mine to the Mill Fork Lease will occur to the north of the Right Fork of Rilda Canyon.

The entire permit surface area is utilized for grazing of sheep and cattle during the summer season. Experience from the existing PacifiCorp permit areas has shown that the effects of subsidence on grazing and grazing lands are minimal.

All existing timber resources on the Mill Fork permit area are administered by the U.S.D.A. Forest Service. Experience on the existing PacifiCorp permit areas over the last 25 years has shown that subsidence does not affect timber resources or access to timber resources.

Experience on the existing PacifiCorp permit areas over the last 25 years has shown that the effects of subsidence on vegetation and wildlife resources are minimal (Rod Player, Bob Thompson, USFS, personal communication). As mentioned above, PacifiCorp conducts annual aerial surveys for monitoring subsidence. On 5 year intervals, infra-red photography technology is used. This photo documentation will be used as a monitoring tool to record any changes in vegetation. Monitoring will be conducted as stated until the Division approves a permit area reduction of the affected area.

Should significant subsidence impacts occur, the applicant will restore, to the extent technologically and economically feasible, those surface lands that were reduced in reasonably foreseeable use as a result of such subsidence to a condition capable of supporting presubsidence reasonably foreseeable uses.

R645-301-333. MINIMIZATION OF DISTURBANCES AND ADVERSE IMPACTS TO FISH AND WILDLIFE

In review of this mining permit application, the USFWS have identified that water consumption by underground coal mining operations could jeopardize the continued existence of or adversely modify the critical habitat of the Colorado River endangered fish species: Colorado pikeminnow, humpback chub, bonytailed chub, and razorback sucker. The USFWS has determined that water consumption by underground operations could potentially have adverse effects on the Colorado River basin. The USFWS considers consumption to include; evaporation from ventilation, coal preparation, sediment pond evaporation, subsidence on springs, alluvial aquifer abstractions into mines, postmining inflow to workings, coal moisture loss, and direct diversions. These consumption processes are discussed below.

Evaporation from ventilation - In mine water loss due to evaporation is a fairly easy calculation when the barometric pressure and vapor pressures are known. For example, on a 570,000 CFM mine fan, typical volumes of evaporation are approximately 18,000,000 gallons/year. However, this result is dependent on temperature and relative humidity. The evaporation evolves primarily from the inactive hydrologic systems mentioned above.

Coal Preparation - PacifiCorp owns water rights for use in their coal preparation plants.

Sediment pond evaporation - The sediment pond is used to hold rain and snow runoff that flows over disturbed areas of the coal mining and reclamation operations until accumulated

sediment has dropped out. At that point the water is discharged into a receiving stream. This would not be considered a consumption mechanism.

Subsidence effect on springs - In twenty-five years of mining, there have been no reported effects on springs due to subsidence. Refer to the Hydrology Section R645-301-728 and Appendix B, Section 11, Probable Hydrologic Consequences (reported by Mayo and Associates, 2001).

Alluvial abstractions into mines - There will be no water infiltrations from alluvial systems into the mine.

Postmining inflow into workings - There currently no proposed mine openings for the Mill Fork Lease. Currently, there is a planned postmining water discharge associated with the Deer Creek portals (refer to the Deer Creek reclamation plan).

Coal moisture loss - Typically the inherent moisture in coal mined at Deer Creek is approximately 5%. Run-of-mine moisture averages approximately 8.5 %. Deer Creek is scheduled to mine 4.2 million tons in 2002. Using these values the consumption is approximately 161 acre feet of water.

Direct diversion - no consumption.

Adding the two losses due to mining operations (Evaporation + Coal Moisture) equals 161 plus 55 acre feet of water consumed. The resultant is approximately 216 acre feet of water per year. If mine discharge is added to the equation, an enhancement to the hydrologic resource would be achieved. In 2001, the Deer Creek mine discharged nearly 2,670 acre feet into the Huntington Canyon drainage system. Theoretically, this would be a net gain of 2,453 (2,670-216) acre feet of water into the Colorado River Basin. Therefore, it is the opinion of PacifiCorp and Energy West

that water consumption by underground coal mining operation will not jeopardize the existence of or adversely modify the critical habitat of the Colorado River endangered fish species.

R645-301-340. RECLAMATION PLAN

All mining activities associated with the Mill Fork permit area will be through underground mining operations. Mine plan layouts (Hiawatha Seam) depicted in R645-301-500 Engineering Section, indicate potential portal breakouts located in Crandall Canyon, (Section 5, Township 16 South Range 7th East SLB&M), within a 2.41 acre right-of-way easement acquired from Andalex Resources/Intermountain Power Agency . The location of the portal breakouts are considered preliminary at this point and will be evaluated and designed based upon future surface coal exploration programs and mine plan considerations. Prior to any surface disturbance, Energy West will secure all necessary permits.

PacifiCorp

Energy West Mining Company

Deer Creek Mine

**Update Volume 12 Text Section,
PacifiCorp, Deer Creek Mine, C/015/018**

**Volume 12
Land Use & Air Quality Section
Replace Text Section**

R645-301-400 LAND USE & AIR QUALITY

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APPENDICIES

Appendix A **Mill Fork West Extension Tract UTU-71307 (Federal Coal Lease UTU-84285)**
Determination of Significance and Effect - May 1, 2006

MAPS

MFS1835B **Deer Creek Mine: Mill Fork State Lease ML-48258/UTU-84285 Land Use Map**

MFS1836B **Deer Creek Mine: Mill Fork State Lease ML-48258/UTU-84285 Oil and Gas Leases**

MFS1856B **Deer Creek Mine: Mill Fork State Lease ML-48258/UTU-84285 Management Units**
Manti-La Sal National Forest

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R645-301-400 LAND USE AND AIR QUALITY

R645-301-410. LAND USE INTRODUCTION

Historical use of the Mill Fork portion (including the Mill Fork State Lease and Federal Lease UTU-84285) of the Deer Creek permit area has been grazing, wildlife, and recreation. Cattle are moved through the area to graze at the higher elevations. Native big game (deer, elk, bear, etc.), as well as, small game and non-game animals inhabit the area as described in R645-301-300: Biology. Recreation consists of hunting, sightseeing, and other miscellaneous outdoor activities.

The existing land use classification for the Deer Creek permit area is grazing and wildlife. This classification has been extended to the Mill Fork area for any areas that could potentially be affected by coal mining and reclamation activities. No areas are presently planned for surface disturbances.

A land use map has been constructed that documents the locations of all items discussed in the following sections. The reader should refer to map MFS1835B in Appendix A to review each items' location.

R645-301-411. ENVIRONMENTAL DESCRIPTIONS

There have been numerous coal exploration drilling projects conducted within the Mill Fork area. These areas were occupied by both industry and government. All drill sites and access roads have been reclaimed to Forest Service requirements and stipulations.

One producing gas well (EM32-23) is located near the southern border of the Mill Fork area. Merit Energy Company owns and operates the well, which has disturbed approximately two (2) acres of surface land. A buried 4-inch diameter steel gas pipeline runs from the well south along

FR 245 and down Flat Canyon. Merit Energy intends to expand the field by drilling additional holes within the Mill Fork area, but plans are currently on hold.

The land surface in the Mill Fork area has, however, been previously used for other non-mining activities. The southwestern portion of the area has a special use permit issued to Utah Power and Light Company. The company uses this 120 x 3,150 foot corridor for a 345 KV power transmission line.

Another power transmission line (69 KV) travels across the NW¹/₄NW¹/₄ of Section 8, T17S, R6E, SLB&M. The transmission line supplies power to the Genwal Resources, Crandall Canyon Mine.

An old limestone quarry is located east below Bald point and west of FR 245. The quarry was developed to gravel the Flat Canyon road for access to the top of East Mountain for gas well development. The associated access road, as well as the quarry, is no longer in use and has been fully reclaimed

The Flat Canyon road, which provides access to the East Mountain top, enters and leaves the southern boundary of the Mill Fork area. The road was upgraded to a single lane graveled surface road with drainage structures. The road provides access for mineral resource development, recreation, cattle range management, and firewood gathering. Traffic is approximately 5 to 10 vehicles per day (Mill Fork Federal Coal Lease Tract UTU-71307, E.A., L.B.A. #11).

Two grazing allotments are present within the Mill Fork area. Sheep graze on the northern end of the area, whereas, cattle graze on the southern end. Grazing is conducted throughout the summer and into the fall months of the year.

Numerous prescribed controlled burns have been conducted by the Forest Service in the past to encourage aspen and shrub growth, however, in 1995, a prescribed burn near the North Rilda Ridge area became uncontrolled and left approximately 135.0 acres affected.

Drawing MFS1856B shows the forest management plan for land use within the Mill Fork permit area. Out of the 5562.82 acres, 97.8% is dedicated as Range Forage Production, 2% is for Wood Fiber Production and Utilization, and 0.02% is utilized for Municipal Water Supply. It is not expected that any of the above stated land uses will be affected/impacted by underground mining related activities.

Any areas affected/disturbed by coal mining and reclamation activities will be restored to its approximate original condition pursuant to the land owners requests and wishes, as well as, State and Federal regulations.

R645-301-411.141. Cultural and Historic Resources

Mill Fork Tract (Mill Fork State Lease ML-48258)

An archeological, historical, and cultural resource evaluation was conducted in 1995 for the Mill Fork area. The evaluation included the majority of the Mill Fork Tract and the South Crandall Tract. As reported in the Data Adequacy Report (Hauck 1995), the evaluation consisted of surveying 15% of the total 4710 acre study zone to assess its potential for containing significant resources that could be adversely affected by future subsidence activities related to mining. The evaluation consisted of both a file search, and a Class II, or stratified sample survey, of the 4710 acre study zone.

The file search was conducted of the study area at the State Historic Preservation Office (SHPO) in Salt Lake City, Utah , within the AERC database, and the US Forest Service in

Price. The National Register of Historic Places has been consulted and no registered historic or prehistoric properties will be affected by the proposed mining. Numerous surveys have been conducted within and adjacent to the Mill Fork Tract and have been cited in the Data Adequacy, December, 1996.

The areas under study contained all or part of State Sections 11, 12, 13, and 14 of Township 16 South, Range 6 East SLBM, and Sections 5, 6, 7, 8, and 18 of Township 16 South, Range 7 East SLBM. The majority of the study occurred on accessible highlands in the western and central portion of the study area. Of these 4710 total acres, AERC archaeologists, Glade Hadden, Doug Edwards, and Liz Mcomer intensively examined 405 acres or 8.6% of the total study area between July 25 and 27, 1995. Records in the Utah State Antiquities Section and AERC archives indicate that an additional 302 acres in the study area have been previously inventoried (Hauck 1979b, 1994).

The Class II sample survey was conducted by the archaeologists walking a series of 5 to 25 meter wide transects across the surface within the survey area. The width of the survey area depended on the slope, aspect, and ground cover. Localities having a moderate potential for containing cultural resource presence were subjected to transects of less than 12 meters in width.

The Class II sample survey of the 4710 acres was non-randomly developed due to the limited amount of acreage that was accessible for an archeological evaluation; a large percentage of the surfaces within the study area consist of narrow valleys, escarpments and densely forested steep slopes associated with the East Mountain locality. Thus, AERC's intensive evaluations were confined to the upper ridges and lower valleys, those accessible localities where prehistoric activities were most likely to have occurred.

Because of the surface alterations of excess ground cover, road blading, cattle and wildlife activities, much of the survey area was not easily evaluated for general archeological presence. However, cultural resources were easily obtained.

Observations of cultural materials resulted in examinations to determine the nature of the resource. The area was sketched, photographed, and recorded on the Intermountain Antiquities Computer System (IMACS) forms. These sites were then evaluated for their cultural significance which included a mitigation recommendation for preserving the significant resource.

A summary of historic resources is in the Confidential and Private Volume in the tab entitled "Deer Creek Volume 12 R645-301-400 Land Use & Air Quality".

No historic or prehistoric cultural resource activity loci were discovered and recorded during the examination.

Although no "paleontological survey" was conducted during the 1995 Class II survey, observations were made for paleontological artifacts. No paleontological loci were identified during the evaluation.

No impacts to potential cultural/paleo resources are expected since there is no planned surface disturbance. If surface disturbance is planned within the Mill Fork Tract, a paleontological survey will be conducted in this area.

The above sections and citations are taken from the Data Adequacy L.B.A No. 11, December 1996, as reported by A.E.R.C. This report was submitted by Genwal

Resources Inc. to the United States Forest Service, Manti-LaSal National Forest, Price, Utah.

Mill Fork West Extension Tract UTU-71307 (Federal Coal Lease UTU-84285)

An archeological, historical, and cultural resource evaluation for the Mill Fork West Extension Tract UTU-71307 (assign as Federal Coal Lease UTU-84285) was conducted during the last week of April 2006 by the Manti-LaSal National Forest Service cultural resource specialist (William Ellis, Heritage Program Manager Region 4, Professional CRM Specialist). A cultural resource report (ML-1189, U-06-FS-0588f, on file at the State Historic Preservation Office and Manti-LaSal National Forest Price Office) along with a Determination of Significance and Effect form was submitted to the State Historic Preservation Office on May 1, 2006 (refer to R645-301-400 Appendix 1 for a copy of the determination document). As stated in the Effect portion of the determination document, "The following actions are proposed to ensure the protection - No sites in proposed project area". State Historic Preservation Office reviewed and concurred with the Forest Service's determinations (refer to Appendix A).

411.142. Protection of Public Parks and Historic Places

No public parks are located in or adjacent to the Mill Fork permit area. Abandoned Mined Lands (AML) areas may lay outside the proposed boundaries. These areas, if applicable, will be reclaimed in cooperation with the Abandoned Mine Reclamation.

R645-301-412. RECLAMATION PLAN

In areas where surface disturbances result from coal mining and reclamation operations, regrading and revegetation will be conducted to restore the areas to their premining conditions

which they were capable of supporting prior to mining. The operations, if developed, will be managed according to State and Federal regulations and applicable lease stipulations.

All mining activities associated with the Mill Fork permit area will be through underground mining operations. Mine plan layouts (Hiawatha Seam) depicted in R645-301-500 Engineering Section, indicate potential portal breakouts located in Crandall Canyon, (Section 5, Township 16 South Range 7th East SLB&M), within a 2.41 acre right-of-way easement acquired from Andalex Resources/Intermountain Power Agency . The location of the portal breakouts are considered preliminary at this point and will be evaluated and designed based upon future surface coal exploration programs and mine plan considerations. Prior to any surface disturbance, Energy West will secure all necessary permits.

R645-301-413. PERFORMANCES STANDARDS

All disturbed areas will be restored in a timely manner to conditions they were capable of supporting before mining. Liability will be for the duration of the coal mining and reclamation operations and for the period of extended responsibility for achieving successful revegetation. All post mining land use criteria will be satisfied before the bond is fully released.

R645-301-420. AIR QUALITY

Reclamation operations on all areas that have been affected by coal mining and reclamation operations will be conducted in compliance with the requirements of the Clean Air Act (42 U.S.C. Section 7401 et. seq.).

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Appendix A

**Mill Fork West Extension Tract UTU-71307 (Federal Coal Lease UTU-84285)
Determination of Significance and Effect - May 1, 2006**

DETERMINATION OF SIGNIFICANCE AND EFFECT
USDA-Forest Service - Intermountain Region
(Ref FSM 2360)

R4-2300-4 (6/04)

To be completed by a cultural resource specialist and attached to the CR report and project EA. Type all entries.

Pacific Corp Mill Fork Federal Coal Lease Tract UTU-71307
 Extension, Emery County, Utah

ML-1189, U-06-FS-0588f

Project Title

Cultural Resource Report No.

A cultural resource investigation has been conducted for this project and cultural values have been identified. Based on the attached report, the Forest Service has made the following determinations:

CULTURAL SIGNIFICANCE

Class	No. of Sites	USFS Site Numbers
I - Eligible	0	
II - Unevaluated	0	
III - Not Eligible	0	

EFFECT - There will be no historic properties affected because:

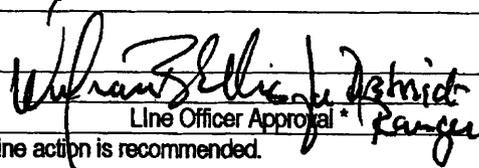
- They are outside the project area.
- They are outside impact zones.
- Final project plans will avoid them.
- National Register characteristics will not be changed.
- Other (explain below).

Check here if sites will be affected, and attach a detailed explanation.

COMMENTS AND COORDINATING REQUIREMENTS

The following actions are proposed to ensure the protection of known or suspected sites. None
 No sites in proposed project area.

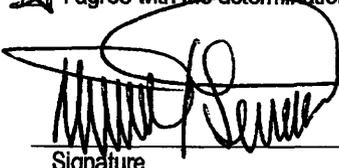
FOREST SERVICE CERTIFICATION

	05-01-06 Date		05-01-06 Date
Professional CRM Specialist		Line Officer Approval	

* Required when significant sites may be affected and/or when non-routine action is recommended.

S.H.P.O. COMMENTS

I have reviewed the documented provided by the Forest Service.
 I agree with the determinations. I disagree, as explained below or in the attached letter.

 **Matthew T. Seddon, RPA**
 Deputy State Historic
 Preservation Officer

5/8/06
Date

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MAPS

General Section

Refer to Compact Disk

DEER CREEK MINE

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Volume 12

MAPS

Soils Section

Refer to Compact Disk

**ENERGY WEST
MINING COMPANY**
HUNTINGTON, UTAH 84528

**DEER CREEK MINE - MILL FORK AREA
STATE LEASE ML-48258/UTU-84285**

SOILS MAP

DRAWN BY: **K. LARSEN**

SCALE: **1" = 2000'**

DATE: **SEPTEMBER 1, 2006**

DRAWING #: **MFS1834B**

SHEET **1** OF **1**

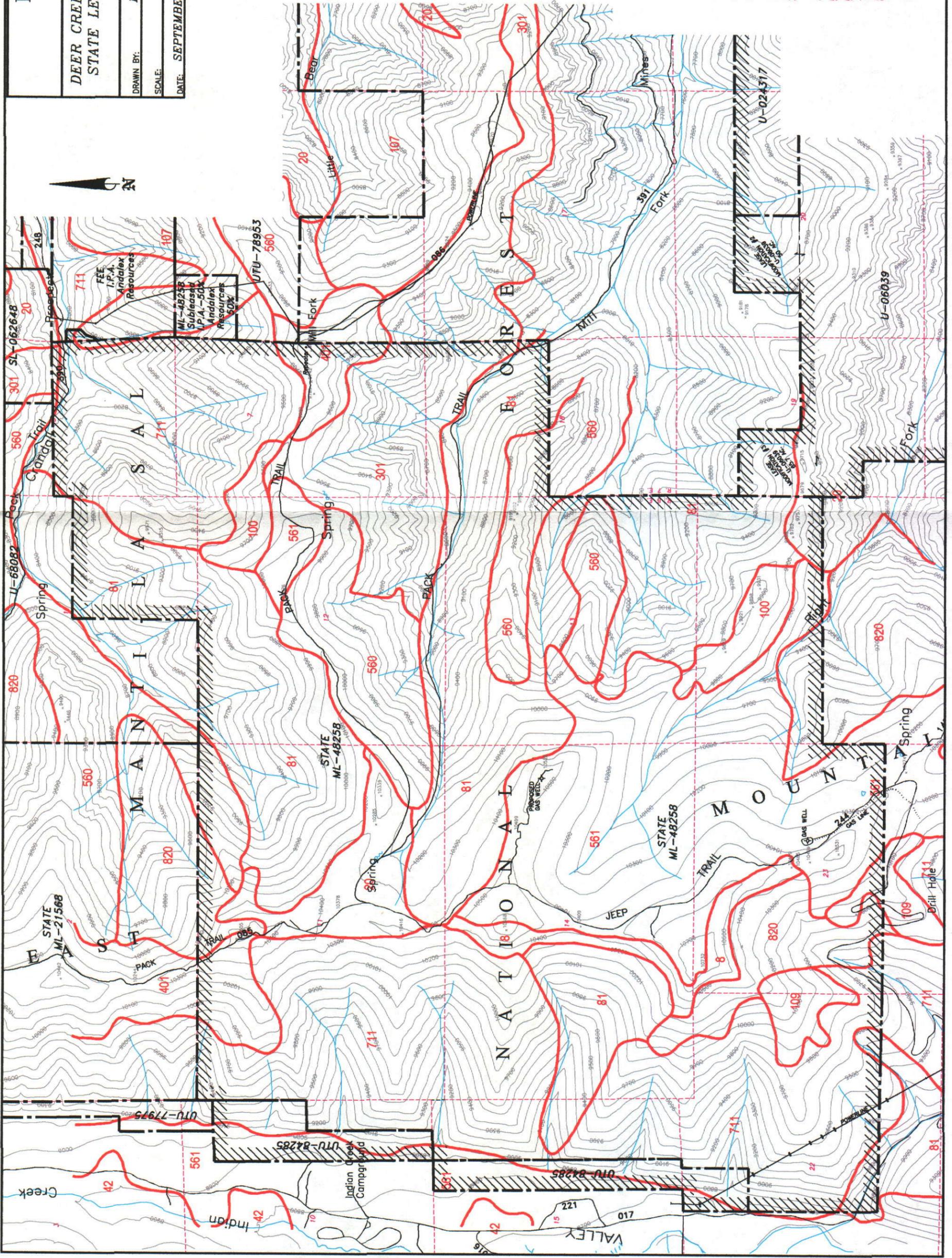
REV. **6**

- LEGEND**
- COAL LEASE BOUNDARY
 - ||||| DEER CREEK MINE PERMIT BOUNDARY

SOILS LEGEND

- 8 GREYBACK FAMILY-CRYORHENTS COMPLEX
- 20 STRYCH-PATHHEAD-PODO FAMILIES-RUBBLELAND COMPLEX
- 42 AQUIC CRYOBOROLLS
- 81 BUNDO-LUCKY STAR-SCOUT FAMILIES COMPLEX
- 100 GRALIC-BEHANIN-ELWOOD FAMILIES COMPLEX
- 107 CURECANTI-ELWOOD-DUSCHENE FAMILIES COMPLEX
- 109 ELWOOD FAMILIES COMPLEX
- 301 GREYBACK-LOAMY MIXED (NONACIDIC)LITHIC CRYORHENTS-BACHELOR FAMILIES COMPLEX
- 401 ADEL-MERINO BROAD CANYON FAMILIES COMPLEX
- 560 CLAYBURN-BROAD CANYON FAMILIES COMPLEX
- 561 CLAYBURN-FAM-BEHANIN FAMILIES COMPLEX
- 711 BUNDO-LUCKY STAR-ADEL FAMILIES COMPLEX
- 820 LUCKY STAR-BUNDO-ADEL FAMILIES COMPLEX

(Soils Data provided by U.S.F.S.)



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MAPS

Biology Section

Refer to Compact Disk

**ENERGY WEST
MINING COMPANY**

HUNTINGTON, UTAH 84202

**DEER CREEK MINE - MILL FORK AREA
STATE LEASE ML-48258/UTU-84285
ELK HABITAT MAP**

DRAWN BY: **K. LARSEN**

MFS1822B

SCALE: **1" = 2000'**

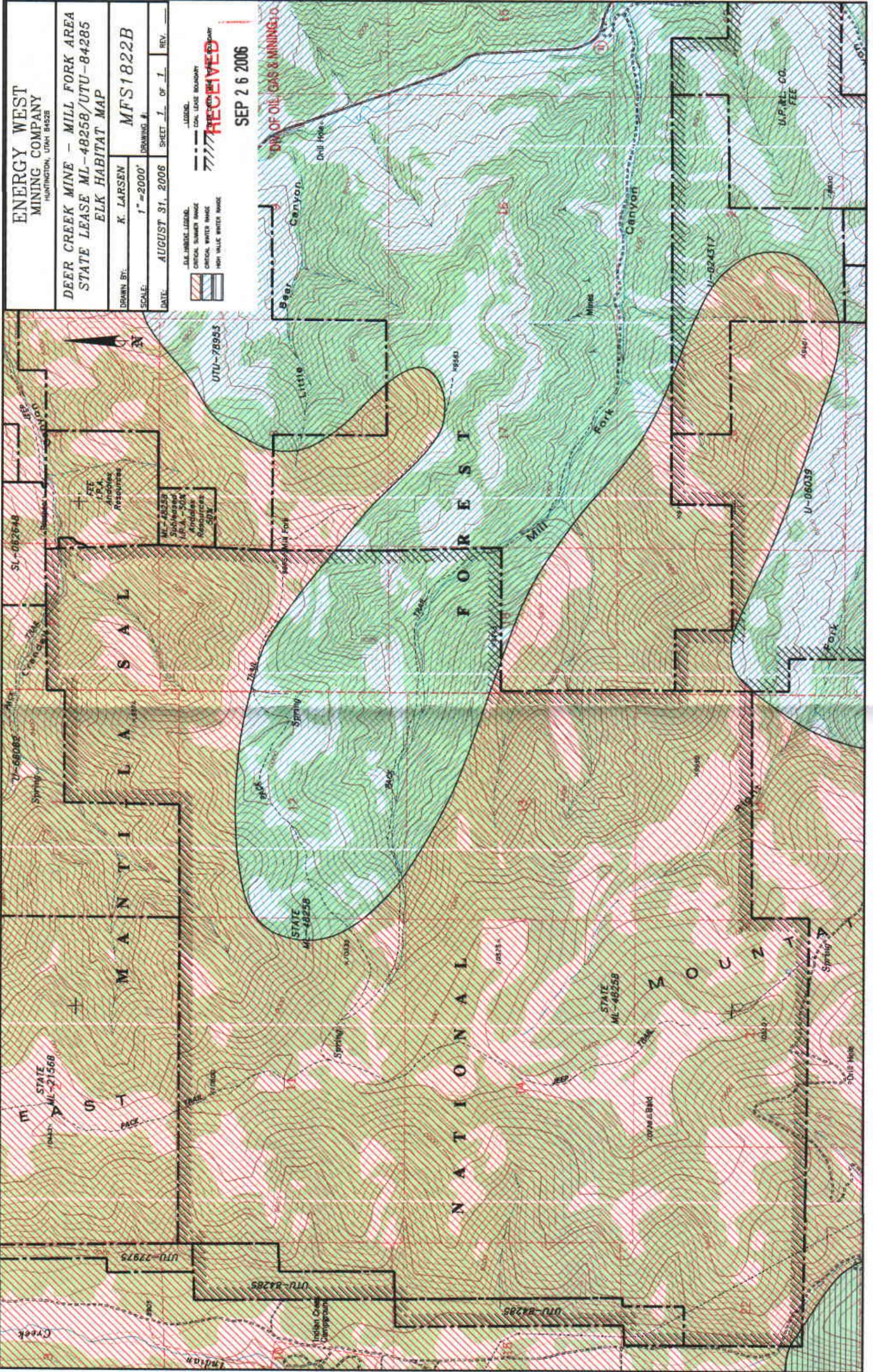
DATE: **AUGUST 31, 2006**

SHEET **1** OF **1**

REV. _____



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MAPS

Land Use & Air Quality Section

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HUNTINGTON, UTAH 84528

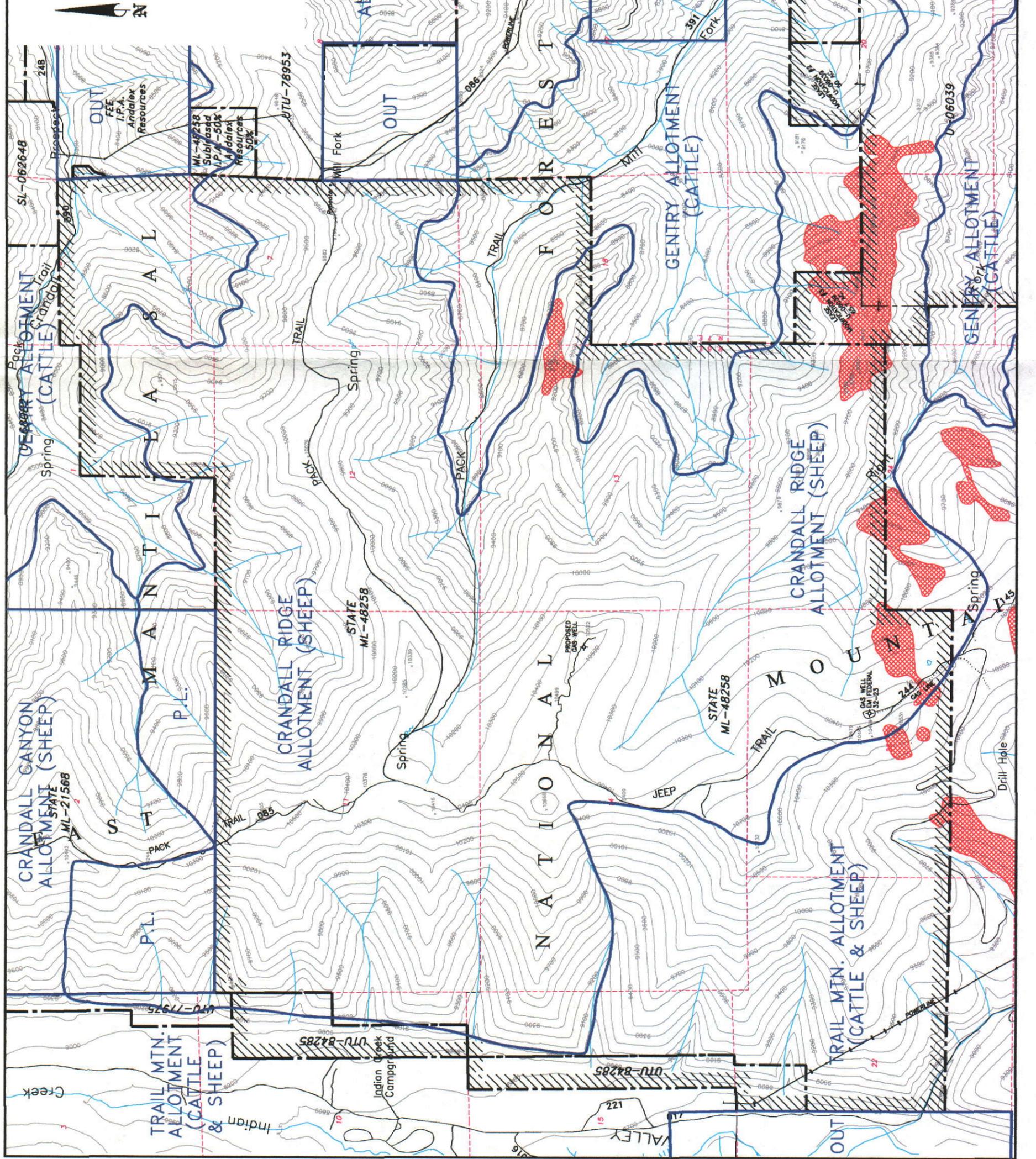
**DEER CREEK MINE - MILL FORK AREA
STATE LEASE ML-48258/UTU-84285
LAND USE MAP**

DRAWN BY: **K. LARSEN** MFS1835B

SCALE: **1" = 2000'** DRAWING #:

DATE: **AUGUST 31, 2006** SHEET **1** OF **1** REV. **7**

- LEGEND**
- COAL LEASE BOUNDARY
 - ////// DEER CREEK MINE PERMIT BOUNDARY
 - THE ENTIRE ML-48258 LEASE IS NATIONAL FOREST SERVICE
 - 1994 FIRE AREAS



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HUNTINGTON, UTAH 84528

**DEER CREEK MINE - MILL FORK AREA
STATE LEASE ML-48258/UTU-85285
OIL AND GAS LEASES**

DRAWN BY: **K. LARSEN**
SCALE: **1" = 2000'**
DATE: **AUGUST 31, 2006**

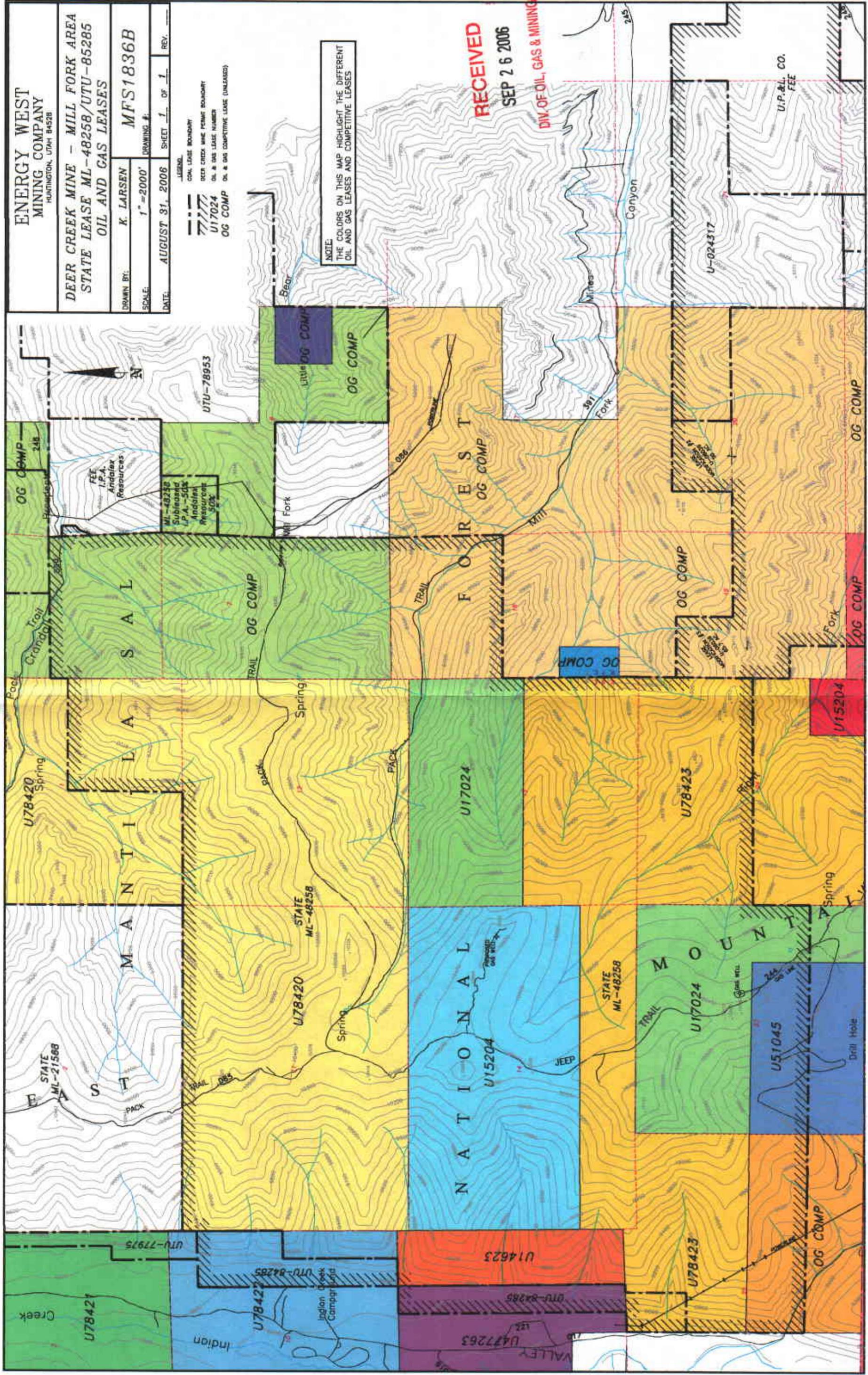
DRAWING #: **MFS1836B**
SHEET **1** OF **1**
REV. _____

- LEGEND**
- COAL LEASE BOUNDARY
 - ||||| DEER CREEK MINE PERMIT BOUNDARY
 - U17024 OIL & GAS LEASE NUMBER
 - OG COMP OIL & GAS COMPETITIVE LEASE (UNLEASED)

NOTE:
THE COLORS ON THIS MAP HIGHLIGHT THE DIFFERENT OIL AND GAS LEASES AND COMPETITIVE LEASES

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U.P. & L. CO.
FEE

U15204

OG COMP

**DEER CREEK MINE
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MAPS

Engineering Section

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Geology Section

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Hydrology Section

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