

DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

PRICE RANGER DISTRICT
MANTI-LASAL NATIONAL FOREST
EMERY COUNTY, UTAH

On March 19, 1986, the Forest Service received notification from the Bureau of Land Management that Federal Coal Lease U-38727 would be subject to readjustment of terms and conditions on May 1, 1988. This notification required conducting an environmental analysis of the proposed action pursuant to the National Environmental Policy Act of 1969. A Forest Service Interdisciplinary (ID) Team met on September 3, 1986 to evaluate the proposal.

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1977; the National Environmental Policy Act (NEPA) of 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS), 1986.

An Environmental Assessment (EA) was prepared under the direction of the Manti-LaSal National Forest Supervisor. Based on the analysis presented in this EA, it is our decision to consent to approval of the proposed readjustment for that portion of the lease within the Forest, subject to the addition of stipulations in Appendix A of the EA. Alternative "B", as described in the EA, is a viable alternative under existing legislation and Forest Service policy, management decisions, and direction. The No Action Alternative was evaluated and determined not to be viable as it would allow continuation of the lease under terms inconsistent with the Forest Plan and FEIS.

This is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors:

1. No new surface disturbing operations or facilities are proposed at this time. If surface disturbing operations or facilities are proposed in the future, a site-specific environmental assessment will be prepared at that time. Additional stipulations may be specified as needed to protect the environment.
2. The identified impacts, including cumulative effects, can be effectively mitigated to an acceptable level.
3. No known prime or unique farmlands, wetlands, timber lands, or rangelands; floodplains; alluvial valley floors; paleontological or cultural resources; nor threatened, endangered, or sensitive floral or faunal species will be impacted by readjustment of this issue.

4. Readjustment of this lease is consistent with the directions and decisions of the Forest Plan and FEIS, dated November 5, 1986.

Based on this assessment and evaluation, Federal Coal Lease U-38727 should be readjusted by the Bureau of Land Management and shall include the stipulations listed in Appendix A of the EA. The decision is subject to administrative review (appeal) pursuant to 36 CFR 211.18, Secretary of Agriculture Appeal Regulation. A written notice of appeal must be filed with this office within 45 days of the date of this decision.

J. C. Bidner
for Regional Forester

8/31/87
Date

ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

PRICE RANGER DISTRICT
MANTI-LASAL NATIONAL FOREST
EMERY COUNTY, UTAH

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ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

I. INTRODUCTION

A. Purpose and Need for Action

The Bureau of Land Management (BLM) notified the Forest Service on March 19, 1986 that Federal Coal Lease U-38727, currently leased to Nevada Electric Investment Company, would be subject to readjustment of terms on May 1, 1988. As the surface managing agency for most of this lease area, the Manti-LaSal National Forest is responsible for conducting an Environmental Assessment (EA) of the proposed action pursuant to the National Environmental Policy Act (NEPA) of 1969. Also, the 1984 Interagency Agreement between the BLM and the Forest Service for Mineral Leasing provides for joint scoping and preparation of a single EA and two-part decision document, if appropriate. On May 6, 1987, the Manti-LaSal National Forest formally solicited input for the subject lease from the Moab District BLM office. It was agreed that the Forest Service would prepare the EA for National Forest System lands involved in the lease and submit the Forest Service Decision Notice to BLM documenting the Forest Service consent decision. This EA will then address the proposed readjustment and identify management requirements for resource protection only for the 660.39 acres of Federal Coal Lease U-38727 that fall within the boundaries of the Manti-LaSal National Forest.

B. Authorizing Actions

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS), 1986.

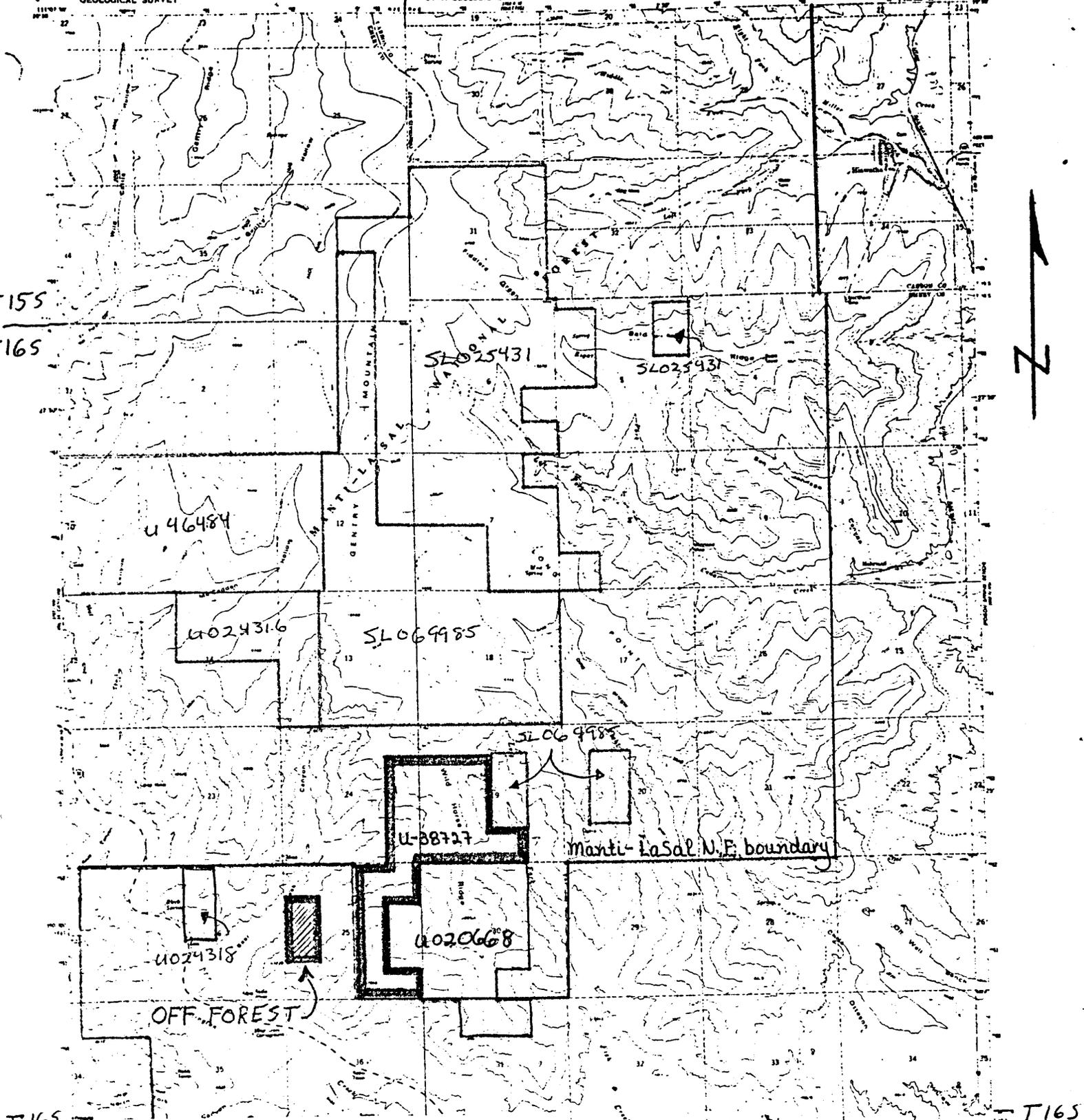
C. Land Description

Federal Coal Lease U-38727 is located in Emery County, Utah, mostly within the Manti-LaSal National Forest, Price Ranger District. It lies near Huntington Canyon on the southern flank of Wild Horse Ridge, along the east-central rim of the Wasatch Plateau coal field (see Map 1). The lease is legally described as follows:

Township 16 South, Range 7 East, SLM, Utah.

Section 24, SE 1/4 NE 1/4, E 1/2 SE 1/4
Section 25, N 1/2 NE 1/4, SW 1/4 NE 1/4, SW 1/4 NW 1/4,
NW 1/4 SW 1/4, W 1/2 SE 1/4, SE 1/4 SE 1/4.

K7E R8E



T165
T175

COAL LEASE
U-38727

ROAD CLASSIFICATION	
Primary highway	Light duty road
State highway	Private road
County highway	Unimproved road
Local highway	U.S. Road
Interstate	State Road

MAP 1

X

Township 16 South, Range 8 East, SLM, Utah

Section 19, Lots 2, 3, and 4, SE 1/4 NW 1/4, E 1/2 SW 1/4,
SW 1/4 SE 1/4.

The SW 1/4 NW 1/4 and the NW 1/4 SW 1/4 contain 80 acres off Forest, and are privately owned with the coal being U.S. owned and managed by the BLM. The remainder of the lease lands contain 660.39 acres on Forest. The total lease acreage is 740.39 acres.

D. Background

The coal lands currently within lease U-38727 were originally contained in lease U-024318. Lease U-024318 was issued May 1, 1958 to Huntington Corporation who later assigned it, in its entirety, to Peabody Coal Company on June 3, 1971. On December 1, 1977, the BLM approved a partial assignment of part of the lease lands creating a new lease which the BLM assigned serial number U-38727. Thus, Peabody Coal Company retained 80 acres (off-Forest) with the original lease number and Nevada Electric Investment Company acquired 740.39 acres under the subject lease. On August 1, 1983, the lease was assigned by Nevada Electric to Beaver Creek Coal Company who considered development of the property. Beaver Creek conducted a helicopter assisted drilling program and filed the Wild Horse Ridge Mine Plan in 1983. Beaver Creek later decided not to pursue further development, withdrew their mine permit application, and assigned the lease back to Nevada Electric effective October 16, 1986.

On March 16, 1979, the Forest Service completed an environmental assessment/technical examination for readjustment of the subject lease (under the encompassing original lease U-024318). On May 22, 1980, the BLM attempted to readjust the lease terms, but Nevada Electric filed an objection on July 18, 1980. On June 9, 1983, the BLM formally waived its rights to readjust the lease.

E. Mine Development

Two off Forest mining scenarios have been developed for the lease and they are described below. The coal could also be extracted with on-lease shaft facilities, but this might prove to not be economically feasible.

In 1978, United States Fuel Company and Nevada Electric jointly submitted an "informal mining plan" to the U.S. Geological Survey. The plan called for the lease to be mined through the existing Mohrland Mine facilities in Cedar Creek Canyon. The Mohrland Mine is located on private land within the Manti-LaSal National Forest. This informal plan was never pursued by either U.S. Fuel or Nevada Electric.

On April 1, 1983, Beaver Creek Coal Company filed a permit application package with the Utah Division of Oil, Gas and Mining (DOG M) and the Office of Surface Mining (OSM) for their proposed Wild Horse Ridge Mine. The proposal included the subject lease and called for surface facilities off-lease on private land in Bear Canyon to

the west. An exploration road was constructed to the proposed mine site and the coal was faced up for testing. The only other work conducted to exploit the coal resources on the subject lease was the aforementioned drilling program. To date, no further development or exploration activities have been proposed.

F. Issues and Concerns

General public comments were solicited through local newspapers on October 10, 1986. Specific comments on the proposed action were solicited directly from the Emery County Planning and Zoning Commission, the Utah Division of Wildlife Resources and the Southern Utah Association of Governments. No comments or responses have been received to date; therefore, no public issues have been identified.

The Forest Service Interdisciplinary (ID) Team identified the following management concerns:

1. Surface disturbing activities and facilities could adversely affect area resources.
2. Underground mining and subsidence could adversely affect surface and ground water, soils, vegetation, and wildlife.

G. Negative Declaration

The ID Team determined that this action, after mitigation, would cause no impacts on the following: prime or unique rangelands, wetlands, timberlands, or farmlands; floodplains; known cultural or paleontological resources; alluvial valley floors; known Threatened, Endangered, or Sensitive plant or animal species.

II. DESCRIPTION OF ALTERNATIVES

A. No Action Alternative

Consideration of the "No Action" alternative is required by Section 1502.14 (d) of the NEPA, and by the Council of Environmental Quality guidelines as specified in the Federal Register on November 29, 1979. Under this alternative, the terms of the lease would not be changed.

Department of Interior Regulation 43 CFR 3451.1 (a) (1) Federal Coal Management Regulations require that all leases issued prior to August 4, 1976, be subject to readjustment at the end of the current 20-year period and at the end of each 10-year period (under which this lease qualifies), thereafter. The present lease terms do not minimize the impacts to the surface resources to an acceptable level pursuant to the Forest Plan, and new management requirements are needed.

B. Readjustment of Terms Alternative

Department of Interior Regulations 43 CFR 3400.3-1 pertaining to Coal Management make provision for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to

prescribe conditions to insure the use and protection of the lands. This lease contains lands the surface of which are managed by the United States Department of Agriculture, Forest Service, Manti-LaSal National Forest.

The stipulations contained in Appendix A pertain to the Lessee responsibility for mining operations on the lease area on adjacent areas as may be specifically designated on National Forest System (NFS) lands.

III. AFFECTED ENVIRONMENT

The affected environment of the subject areas has been generally described in numerous environmental documents and resource reports prepared for coal leasing and development in this and surrounding areas. Two of these documents are listed for reference in Section VI, Selected Tiering and Reference Documents. There are several resources on the lease for which concern was identified. These resources are essentially unique to the proposal and are under consideration in this document.

A. Topography

The lease area is located on the southern end of Gentry Mountain and situated on the southern end of Wild Horse Ridge overlooking Huntington Canyon. This narrow ridge is carved by Bear Creek, Fish Creek, and two smaller canyons. This area characteristically has steep cliffs and deeply incised drainages. Slopes on canyon walls range from 60 percent to vertical. A "stair-step" appearance is given by the resistant sandstone outcrops mantled by sandstone talus.

B. Geology

The lease area is located on the Wasatch Plateau, a transitional zone between the Basin and Range physiographic province to the west and the Colorado Plateau physiographic province to the east. The Wasatch Plateau has geological characteristics of both provinces.

The rock strata found on the lease are (in order from older to younger): the Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, and North Horn Formation. These are essentially flat lying sedimentary rocks; sandstone, limestone, and shale which display interbedding and crossbedding structures, and contain lenticular sandstone bodies. The strata dip about five to eight degrees to the southwest.

Mass movement (rock falls, slumps, soil creep, etc.) is a major consideration on the lease. Along Wild Horse Ridge (especially on the eastern face), slumps are as large as one acre. Further south along the ridge they are small to unnoticeable. All of the slumps and slides occur within the North Horn and Price River Formations. In many cases, springs and seeps are found in close proximity to these movements.

The commercial coal beds on the lease are in the Blackhawk Formation. They occur in the canyon walls between 7,500 and 8,000 feet above sea level. The Blackhawk has an average thickness of about 900 feet on the lease. Its composition varies from sandstones to shales. It contains sandstone lenses, with common fluctuation in bed thicknesses.

Two coal seams of economic importance occur on the lease. The lower seam is the Hiawatha, lying directly above the contact of the Blackhawk and the Star Point sandstone. According to Doelling (1967), it ranges in thickness from six to eight feet. The upper seam is the Blind Canyon which lies about 90 to 100 feet above the Hiawatha. This seam varies in thickness from six to ten feet.

The lease is found to be in a high seismic risk zone. This increases the possibility of mine damage and safety hazards through roof falls, landslides, and rockfalls.

C. Ground water

Ground water surfaces as springs and seeps at elevations ranging from 7,300 to 9,200 feet. The majority of the springs and seeps occur within the Blackhawk Formation between 7,600 and 8,400 feet. Many of the springs are closely associated with lithologic contacts, where there is a change in permeability.

The Price River Formation is found between the Castlegate Sandstone and North Horn Formation. While some of the contact areas do not display any flow of water, there is a notable change in soil moisture content along the upper and lower contacts of the formation which is observed by the growth of riparian vegetation.

Within the North Horn Formation there are four sizeable springs. These occur in intermittent streambeds and may be related to the flow of ground water intersecting the profile of the flow of surface water.

Ground water storage and flow is the direct result of the interrelated geologic and topographic features. The faults and associated sympathetic joints may play a part in the channelization of ground water flow. Canyons and ridges follow the trend of these faults and a few springs are found along them. More frequently, seep areas that are intermittent occur along these faults.

D. Soils

Soils on the lease area have developed from colluvial and residual parent material. Slopes have a general southerly aspect.

Soils are generally less than 20 inches deep. Textures for surface and subsurface soils are very gravelly and cobbly loams and clay loams. Coarse fragments range from 35 to 60 percent. The color of the surface soil is dark brown.

With existing use, the erosion from these soils is estimated to be four tons per acre per year (Land Type 107). Using sediment yield and loss of soil productivity as criteria, this rate is considered low. Disturbance of the soils by activities that completely remove the natural protective surface cover and disrupt the natural physical condition of the soil, is estimated to increase the erosion to between four to seven tons per acre. This rate is considered high. Accelerated erosion will continue at a decreasing rate over time as a protective soil cover becomes established. Since these soils have a low fertility level (due to high coarse fragments, low available water, shallow soils and low organic matter), naturally revegetating to the present vegetative state will take many years. Special revegetative measures (topsoiling, mulching, seeding, fertilizing, etc.) will decrease the time for establishment. Revegetation under these practices will be expensive and still take many years. Rock fall occurs in this unit in areas where the slope is greater than 80 percent; the source being the natural disintegration of the sandstone cliffs. Soil creep occurs mainly on slopes greater than 55 percent. These are generally fine textured soils underlain by decomposed shales. Slump failures were observed near the upper slopes of the area.

E. Climate

The climate of the lease area is generally cool and dry. Precipitation and temperature vary with elevation. Storage rain gages at similar elevations in nearby Joe's Valley average 14.6 inches at valley stations to 19 inches on ridges. Most of the precipitation, approximately two-thirds, comes in the form of snow during the months of October through April. The maximum snow accumulation occurs about the first of March each year. Snow depths average about 27 inches. Snow accumulation varies considerably with local topography. The eastern sides of ridges and the north-facing slopes accumulate the most snow. South-facing slopes are snow-free for much of the winter.

The thermal characteristics vary with elevation. Mean annual temperatures vary from 43.5 degrees Fahrenheit in the bottom of Bear Canyon to 32 degrees Fahrenheit on Wild Horse Ridge. The annual frost-free periods for these same sites are 100 days and 40 days respectively. Mean maximum and minimum temperatures for January are 28 degrees Fahrenheit and 18 degrees Fahrenheit respectively. July mean maximum and minimum temperatures are 84 degrees Fahrenheit and 52 degrees Fahrenheit respectively.

F. Hydrology

The hydrologic properties of the lease area are highly variable. The source and magnitude of surface runoff vary with land condition, elevation, geology and soils. Using aerial photography to denote this variation, two areas were delineated by hydrologic responses and grouped. The Incipient Runoff Area comprises the more gently sloping top of the elongate Wild Horse Ridge. The High Runoff-Flood Source Area comprises the remainder of the lease area. The hydrologic response groups are summarized as follows:

Incipient Runoff Group - This group produces small amounts of surface runoff nearly every year. High intensity storms produce overland flow. Snowmelt also produces runoff. Drainage patterns are weakly incised on side slopes, but may have deep cross sections where rills empty into stream channels. Valley bottoms have good potential for mitigating short-term impacts, but can produce very large amounts of sediment if disturbed for a sustained period of several seasons. Sediment delivery from this group is generally high if not buffered.

High Runoff-Flood Source Group - This group has a high runoff potential and presents the greatest problems due to steep slopes and sparse vegetation. Soil cover is minimal. Summer runoff may generate high flow rates. In 1976, the left fork of Bear Canyon was the source area for a mud rock flow which caused considerable damage to a bridge down canyon. Much of the area covered by this group has the potential to create this type of flow, and severely increase sediment production and transport with high intensity runoff.

The lease area is within the drainages of Fish Creek and Bear Creek both of which are tributary to Huntington Creek. Huntington Creek is part of the municipal water supply for the community of Huntington. Huntington Creek is the industrial water supply for the Huntington Power Plant. Increased sediment in the water of Huntington Creek will increase the operating costs for both water supplies. There is no available water quality data for Fish Creek. Samples of Bear Creek from 1982 to 1984 show suspended solids range from 342 to 20,000 parts per million. The sediment source is the unstable slopes of the canyon.

Any development that would aggravate the instability and/or increase the sediment loads should be avoided.

G. Wildlife and Fish

The lease falls within the Utah Division of Wildlife Resources deer herd unit #34 and elk herd unit #12. Most of the big game use was found to be in the mahogany, aspen, and sagebrush cover types. The use in these cover types averaged 10, 12, and 17 deer days per acre, respectively. The elk use was concentrated primarily in the mahogany type, amounting to an average 18 elk days per acre. Deer use this area for summer and some winter range, pulling back into the timber for cover.

The diversity of vegetative types on the leases supports a diverse wildlife population. Besides deer and elk, other game and fur-bearing species may include: black bear, cougar, bobcat, red fox, grey fox, badger, coyote, snowshoe hare, and mink. Avifauna of the area may include several species of hawks, owls, Golden Eagle, jays, and sparrows. Because of the diversity of habitat components, there are probably many small mammals and songbirds found on the lease sites which are too numerous to list in detail in this report.

There are no fisheries within the lease but Bear Creek flows into Huntington Creek, which is an important fishery. Most of the more valuable fishery sections of Huntington Creek are upstream from the lease areas.

The lease area was investigated for Threatened or Endangered animal species. There are no Threatened or Endangered wildlife species known to inhabit the lease area.

The Endangered American Bald Eagle is known to winter throughout this region.

H. Vegetation

Coniferous tree species such as the Douglas fir, Englemann spruce, and both alpine and white fir occur on the north and east slopes in the canyons. Some Quaking aspen is found growing on the wetter benches and in the canyon bottoms. Bristlecone pine and some limber pine can be found growing on the higher elevation, open rocky, windy, exposed ridgetops.

Utah juniper and pinyon pine dominate the vegetation on the south and west slopes. Within the area, sagebrush, rabbit brush, mountain mahogany, serviceberry, snowberry, and wood rose are the shrubby plant species that are found within the area. Grass that is found on the steep south slopes is mostly hard grass and red fescue. Wheat grass, bromes, and needle grass are common on the slope and in the canyon bottoms.

There are many species of forbs common to this lease area. The canyon sweetvetch (*Hedysarum occidentale* var. *cannone*), a sensitive plant species, is also known to occur in the canyon bottoms just outside the lease area in lower Bear Creek. This plant could be within the lease area.

IV. ENVIRONMENTAL CONSEQUENCES

A. Effects of Implementation

There would be no effects to the environment unless coal is produced from the lease and/or surface disturbing operations are conducted.

If the lease is mined, effects would result from deformation of the overburden and subsidence of the land surface. Additional effects would result from any surface disturbing activities such as coal exploration, construction of surface facilities for mining and the other activity associated with surface operations.

The environmental consequences for both alternatives will be essentially the same but may differ in magnitude. Under the terms and conditions contained in the existing lease (No Action Alternative), the environmental consequences may not be as thoroughly mitigated and potential operators may not receive advance notice of requirements for developments of the lease.

If the lease is readjusted, the stipulations contained in Appendix A would be included in the lease and the anticipated effects would be mitigated to the maximum degree practical.

B. Short-Term and Residual Impacts

Surface disturbing operations would result in degradation of surface water quality, increased soil erosion, removal of vegetation and the associated disturbance to wildlife from human activities and presence.

If the lease is mined, subsidence would occur at the surface. The amount and extent of subsidence would depend on the mining method, configuration of the workings, number of seams mined and the geologic factors which control the strength of the overburden. Stresses and deformations produced in mine workings, other coal seams and the overburden may effect mine safety, extraction efficiency, ground water flow and the surface environment.

Subsidence begins almost immediately upon mining and may continue for many years after the working area is abandoned. The rate, extent and amount of subsidence will vary with the geologic conditions and mining operations.

It is expected that mining and subsidence will have an effect upon the natural ground water flow which may, in turn, result in effects to surface water, soils, vegetation, wildlife habitat and land uses.

C. Short-Term Use Vs. Long-Term Productivity

Construction of facilities and operations would involve long-term uses and disturbance. The duration would be dependent on the life of the mining operation and the additional time required for revegetation of the disturbed areas following reclamation.

Underground mining and subsidence could involve long-term alteration of the ground water flow and associated effects to surface resources. The long-term productivity could be altered as drainages, soils and vegetation gradually adjust to any modified ground water conditions. The productivity could decrease or increase depending on the amount of available water.

D. Irreversible and Irretrievable Commitment of Resources

The resources that would be consumed in coal extraction would not be retrievable, and not available to be used elsewhere once expended. After the coal is mined, its' use by future generations would be irreversibly lost, and the coal left in the ground would not be retrieved.

Subsidence may result in the irretrievable commitment of some of the discussed resources.

E. Cumulative Effects

There are no cumulative effects associated with the readjustment of this lease. Cumulative effects resulting from mining coal could include the effects from subsidence, the effects associated with surface disturbing operations such as coal exploration and construction of mining facilities, and the human activity from continued operations as exists on mines in adjacent areas.

V. PERSONNEL AND PUBLIC DEVELOPMENT

A. Forest Service Interdisciplinary Team

Brent Barney, Civil Engineer
Bill Boley, Forest Engineer
Jo Ellis, Geologist
Lee Foster, Forest Planner
Ira Hatch, District Ranger
Jim Jensen, Landscape Architect
Dennis Kelly, Hydrologist
Dan Larsen, Soil Scientist
Leland Matheson, Range Conservationist
Walter Nowak, Geologist - Team Leader
Carter Reed, Geologist
Gary Say, Forester
Bob Thompson, T&E Specialist

B. Other Organizational and Public Involvement

See section I. F. of this EA.

VI. SELECTED TIERING AND REFERENCE DOCUMENTS

- A. Environmental Assessment/Technical Examination for the Readjustment of Federal Coal Lease U-024318, 3/16/79.
- B. Manti-LaSal National Forest Environmental Impact Statement and Land and Resource Management Plan, 11/86.

APPENDIX A

SPECIAL STIPULATIONS

Federal Regulations 43 CFR 3400 pertaining to Coal Management make provisions for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. All or part of this lease contain lands the surface of which are managed by the United States Department of Agriculture, Forest Service - Manti-LaSal National Forest.

The following stipulations pertain to the Lessee responsibility for mining operations on the lease area and on adjacent areas as may be specifically designated on National Forest System lands.

Forest Service Stipulation #1.

Before undertaking activities that may disturb the surface of previously undisturbed leased lands, the Lessee may be required to conduct a cultural resource inventory and a paleontological appraisal of the areas to be disturbed. These studies shall be conducted by qualified professional cultural resource specialists or qualified paleontologists, as appropriate, and a report prepared itemizing the findings. A plan will then be submitted making recommendations for the protection of, or measures to be taken to mitigate impacts for identified cultural or paleontological resources.

If cultural resources or paleontological remains (fossils) of significant scientific interest are discovered during operations under this lease, the Lessee prior to disturbance shall immediately bring them to the attention of the appropriate authority. Paleontological remains of significant scientific interest do not include leaves, ferns or dinosaur tracks commonly encountered during underground mining operations.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation #2.

If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory bird species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.

The cost of conducting the inventory, preparing reports and carrying out mitigating measures shall be borne by the Lessee.

✓ Forest Service Stipulation #3.

The Lessee shall be required to perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. Existing data may be used if such data is adequate for the intended purposes. The study shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

Forest Service Stipulation #4.

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to provide adequate protection for raptors and other large birds. When feasible, powerlines will be located at least 100 yards from public roads.

✓ Forest Service Stipulation #5.

The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate size of the surface area utilized for the mine. A site specific environmental analysis will be prepared for each new mine site development and for major improvements to existing developments to examine alternatives and mitigate conflicts.

Forest Service Stipulation #6.

The Lessee shall be required to establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.

✓ Forest Service Stipulation #7.

The Lessee shall provide for the suppression and control of fugitive dust on haul roads and at coal handling and storage facilities. On Forest Development Roads (FDR), Lessees may perform their share of road maintenance by a commensurate share agreement if a significant degree of traffic is generated that is not related to their activities.

Forest Service Stipulation #8.

Except at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to existing surface structures, and (3) damage or alter the flow of perennial streams. The Lessee shall provide specific measures for the protection of escarpments, and determine corrective measures to assure that hazardous conditions are not created.

Forest Service Stipulation #9.

In order to avoid surface disturbance on steep canyon slopes and to preclude the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific approved locations.

Forest Service Stipulation #10.

If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with the regulations of the surface management agency.

Forest Service Stipulation #11.

The coal contained within, and authorized for mining under this lease shall be extracted only by underground mining methods.

Forest Service Stipulation #12.

Existing Forest Service owned or permitted surface improvements will need to be protected, restored, or replaced to provide for the continuance of current land uses.

Forest Service Stipulation #13.

In order to protect big game wintering areas, elk calving and deer fawning areas, sagegrouse strutting areas, and other critical wildlife habitat and/or activities, specific surface uses outside the mine development area may be curtailed during specified periods of the year.

Forest Service Stipulation #14.

The Lessee, at the conclusion of the mining operation, or at other times as surface disturbance related to mining may occur, will replace all damaged, disturbed or displaced corner monuments (section corners, 1/4 corners, etc.) their accessories and appendages (witness trees, bearing trees, etc.) or restore them to their original condition and location, or at other locations that meet the requirements of the rectangular surveying system. This work shall be conducted at the expense of the Lessee, by a professional land surveyor registered in the State of Utah, and to the standards and guidelines found in the Manual of Surveying Instructions, United States Department of the Interior.

Forest Service Stipulation #15.

The Lessees, at their expense, will be responsible to replace any surface water identified for protection, that may be lost or adversely affected by mining operations, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses.

STIPULATION FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
THE DEPARTMENT OF AGRICULTURE

The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license/prospecting permit/lease. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of Interior, (2) uses of all existing improvements, such as Forest development roads, within and outside the area licensed, permitted or leased by the Secretary of Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed

to Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Telephone No.: 801-637-2817

who is the authorized representative of the Secretary of Agriculture.

Signature of Licensee/Permittee/Lessee