

United States
Department of
Agriculture

Forest
Service

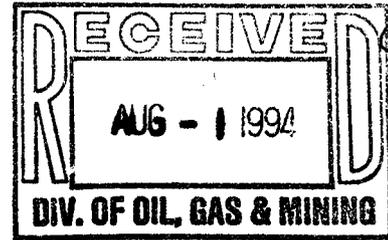
Manti-La Sal
National Forest

599 West Price River Dr.
Price, Utah 84501
(801) 637-2817

Reply to: 2820/1950

Date: July 29, 1994

ATTN: Pamela Grubaugh-Littig
Utah Division of Oil, Gas, and Mining
355 West North Temple
3 Triad Center Suite 350
Salt Lake City, UT 84180-1203



Dear Ms Grubaugh-Littig;

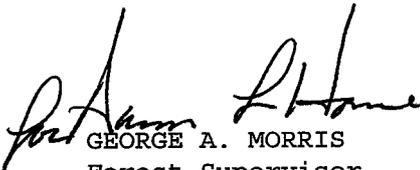
In early June 1994 we completed our environmental analysis process for PacifiCorp, Energy West's 1994-1995 Trail Mountain coal exploration drilling proposal in Emery County, Utah. On June 30, 1994, after careful review of the proposal, public comments, and the analysis disclosed in the environmental assessment, I decided to select Alternative 3.

Implementation of Alternative 3 gives the State of Utah, Division of Oil, Gas, and Mining consent to issue a permit to PacifiCorp, Energy West approving the occupancy and use of Forest Service lands for coal exploration drilling. The permit would be subject to Forest Service conditions of approval found in Appendix A of the environmental assessment. The EA, Appendix A, and Decision Notice are enclosed.

If no appeals are filed, my decision may be implemented by Utah Division of Oil, Gas, and Mining on or after August 20, 1994. If an appeal is filed my decision can not be implemented until the appeal process is concluded. The Forest Service will notify your office after August 20 concerning the decision, appeal status, and implementation.

Any persons with questions related to this decision or project may contact David Hatfield at the Ferron Ranger District, PO Box 310, Ferron, UT 84523 or call (801) 384-2372 or 637-2817.

Sincerely,


GEORGE A. MORRIS
Forest Supervisor

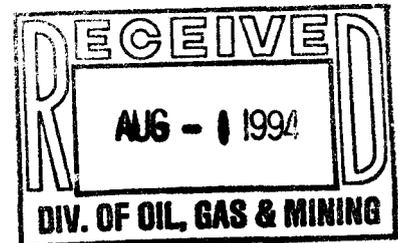
enclosure

cc:
Ferron District Ranger

ENVIRONMENTAL ASSESSMENT
for
PACIFICORP, ENERGY WEST
1994-1995 TRAIL MOUNTAIN
COAL EXPLORATION DRILLING PROPOSAL

May, 1994

USDA, Forest Service, Region 4
Manti-La Sal National Forest
Ferron Ranger District
Emery County, Utah



Responsible Official:

George A. Morris - Forest Supervisor
Manti-La Sal National Forest
599 W. Price River Drive
Price, Utah 84501
(801) 637-2817

For Further Information Contact:

David M. Hatfield - Team Leader
Ferron Ranger District
P.O. Box 310
Ferron, Utah 84523
(801) 384-2372

CHAPTER 1

PURPOSE AND NEED FOR ACTION

A Introduction

On December 18, 1993 PacifiCorp, Energy West submitted a coal mine plan amendment to the Utah Department of Natural Resources, Division of Oil, Gas, and Mining to build new access road, reopen previously used and reclaimed access roads, and drill thirteen (13) exploration holes in the Trail Mountain Mine permit area. The proposed actions are located north of Straight Canyon, between 8,000 and 9,000 feet in elevation within T17S R6E, Section 27 and 34 and T18S R6E, Section 2. Map A shows the location of the permit area, proposed access roads, and drill pads.

The Trail Mountain permit area is completely within the Ferron Ranger District, Manti-La Sal National Forest, Emery County, Utah. Approval authority for this action; on an existing lease UTU-64375, within an existing mine operating permit area, falls under the jurisdiction of the Utah Department of Natural Resources, Division of Oil, Gas, and Mining. Consent and terms of occupancy must be granted by the Forest Service prior to approval by the State.

B Purpose and Need

The purpose and need of the proposed actions are to evaluate coal elevation, thickness, quality, and identify surrounding strata in support of future mining operations at the Trail Mountain Mine, Cottonwood Canyon.

C Proposed Action

Development components of the proposed action include;

- * Implementation to begin on or about July 15, or after elk calving season. Seven of the thirteen holes will be completed in the 1994 drilling season and the remaining six will be completed in 1995. Activities continue through November as weather permits.
- * Construct 2.8 miles of new access road, reopen and construct 0.3 miles of previously used and reclaimed access roads, and construct thirteen (13) exploration drill pads, each 100 by 150 feet.
- * Mud pits will be constructed on each drill pad to hold drilling fluids. Drilling additives may be used to maintain water circulation and hole integrity. Material safety data sheets (MSDS) for all drill additive fluids are in the project file.
- * All topsoil from road and pad construction will be stripped and stockpiled for use in reclamation. Topsoil has been classified, mapped, and volumes estimated for all roads and drill pads.
- * Gross acres of surface disturbance from all proposed construction activities are estimated to be 10.12 acres.
- * Drilling activities will operate 24 hours a day, 7 days a week. The average hole (about 2,000 feet) will take about 4 days to complete and the site reclamation an addition two days following the two week wait for drill fluids in the mud pit to dry up.

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- * About 1.37 acre feet (445,714 gallons) of water will be used in the drilling process and road maintenance (dust suppression). The proposed water sources are a pond located in NE1/4 NE1/4 Section 28, T17S, R6E, identified as 28-1P and a spring located in NE1/4 NW1/4 Section 2, T18S, R6E, identified as 18-2-1.
- * Reclamation efforts will begin about two weeks after the completion of each hole to allow drilling fluids to percolate into the soil or evaporate. Lands will be recontoured to original topography. Topsoil will be spread evenly over recontoured areas and reseeded. Reclamation will be performed, as required, during the spring/summer of 1995 and 1996 to augment previous seeding efforts.

D Scope of the Proposed Action and Decision

The scope of the analysis will be confined to issues associated with the proposed action. This analysis considers potential amendments and their effects.

Leasing and development are under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the National Forest Roads and Trails Act of 1964, as amended; the National Environmental Policy Act (NEPA) of 1969; the Federal Land Policy and Management Act (FLPMA) of 1976; the Federal Coal Leasing Amendments Act of 1976, as amended; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; Federal Regulations 43 CFR 3400 and 30 CFR 700; and the Manti-La Sal National Forest Land and Resource Management Plan (LRMP) 1986, as amended.

E Decision to be Made

The decision to be made is to consent to the approval of the 1994-1995 Trail Mountain exploration drilling program submitted by PacifiCorp, deny consent, or consent subject to conditions of approval.

CHAPTER 2

ALTERNATIVES

A Introduction

This chapter describes the alternatives developed in response to the issues and concerns identified in the scoping process that, wholly or partially, meet the purpose and need identified in Chapter 1. Included is a comparison of the effects of the alternatives summarized from the analysis of alternatives in Chapter 4.

B Project Initiation, Public Participation, and Scoping

November 1993 PacifiCorp invited the Forest Service, along with representatives of the Utah Division of Oil, Gas, and Mining (UDOGM), and the Bureau of Land Management (BLM) to visit the proposed drilling project area. The project initiation letter was signed by the Forest Supervisor February 3, 1994 and scoping initiated February 25, 1994 with the mailing of scoping packages to 28 people, organizations, or agencies on the District mailing list (Project File). A news article requesting public input was printed in the March 1 issue of The Sun Advocate, the paper of record for this decision. The ID Team met on March 17, 1994 and discussed Forest Service management objectives for the area and internal scoping issues.

- 1 Three people interested in or affected by the proposed action responded by contacting the Ranger with issues and concerns.
 - a Mr. Craig Smith of Nielson and Senior representing the Huntington Water Conservation District was concerned about water issues. His issues were: Will the proposed activities affect water quality and quantity of Huntington Canyon water and it's water users? He requested to remain on the mailing list and wanted to receive the analysis and decision.
 - b Mr. Eugene Johansen representing the Emery Water Conservation District was concerned about water issues. His issues were: Will the drilling depth go below the depth of Joes Valley Reservoir water and will it (drilling below current water level) effect the reservoir water (quality and quantity)? The second issue raised by Mr. Johansen dealt with water interception by future mining activities and depletion of currently active water sources used by non-mining downstream users with water rights. He asserts the mining industry refuses to accept any responsibility for the depletion of water and insists the mining industry be held responsible for any disturbance of existing water supplies.
 - c Mr. Horace A. Petty representing the Trail Mountain Cattle Association was concerned about effects to vegetation, water, and cattle operations. He is specifically concerned about; (reclamation) and suggested all drilling sites be returned to their natural (current) condition; interruption of water in the natural spring areas and suggested the areas be monitored and if water is lost, PacifiCorp should replace the water at their expense; water taken from existing ponds and suggested PacifiCorp replace water as it is taken; fences taken down or damaged and suggested PacifiCorp replace fences at their expense; and disturbance of cattle and wildlife and suggested PacifiCorp build two ponds in the area where the dozers are working.
- 2 Two agencies interested in or affected by the proposed action responded by contacting the Ranger with issues and concerns.

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- a The Utah Division of Wildlife Resources is concerned that drilling activities may impact deer and elk winter range, deer and elk fawning and calving, and raptors. Improved access roads might affect hunting success and wildlife viewing opportunities. They also requested that at least 3 browse species be included in the seed mix for revegetation to mitigate the loss of habitat.
 - b The Utah Division of Water Rights is concerned with the necessity of a water right to be used during the drilling process, and that any necessary stream alteration applications be filed.
- 3 In addition to the above issues the following potential issues were identified by the ID Team for evaluation in this environmental assessment. What would the effects of pad and road construction and drilling be on:
- a Threatened, Endangered, or Sensitive wildlife and plant species?
 - b Elk and deer habitat and seasonal use?
 - c Water quality, quantity, and downstream beneficial uses of Cottonwood and Straight Creeks? The contour furrows and revegetation improvements previously completed in the area could be damaged by road and drill site construction. This could initiate erosion of soils, potentially effecting water quality.
 - d Heritage resources?
 - e Roaded recreation and access opportunities on Forest Development Road 50040 (Cottonwood Canyon) and 50034 (Trail Mountain) weekends and opening days of hunting seasons? Sub issue raised were: closure of the reclaimed pads and roads constructed for the proposed project may be difficult because of the flat terrain and extensive traditional use of the area by the public; there is potential for damaging existing range improvements, such as spring improvements and fences; and construction equipment may carry in noxious weed seed from other areas, or spread existing populations. Noxious weeds may become easily established on disturbed sites.

C Issues

- 1 Based on public input and IDT recommendation the following issues were approved by the deciding official. Each issue statement includes an evaluation criteria or method to measure responsiveness (effects) to the issue. The following significant issues (40 CFR 1500.4 (g), FSH 1909.15 12.3) will be used to focus the environmental analysis, develop alternatives to the proposed action, and develop measures to mitigate and monitor anticipated environmental effects.

What will be the effects of exploration drilling and construction of drill pads and roads on:

a Elk and deer habitat and seasonal use?

This issue addresses concerns raised by the Trail Mountain Cattle Association, Utah Division of Wildlife Resources, and the Forest Service. The project area includes key elk and deer winter range and calving/fawning areas. These animals could be disturbed and stressed

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while on key winter range or in calving/fawning areas if drilling activities run concurrently in the key winter range habitat. Key winter range habitat could be modified, reduced, or lost potentially leading to displacement or mortality.

Evaluation Criteria

Occupancy dates for elk and deer winter range, calving, and fawning areas.

Acres of key elk and deer winter range habitat (% available, % disturbed) compared to the total.

Are acres and diversity of habitat available sufficient to support State population objectives?

b Water quality, quantity, and downstream beneficial uses of Cottonwood and Straight Creeks?

This issue addresses concerns raised by the Emery Water Conservancy District, the Trail Mountain Cattle Association, and the Forest Service. Surface or groundwater resources could be depleted, diverted, or contaminated by improper drilling and plugging procedures. This could effect cattle under current permit. Drilling fluids could effect surface or groundwater quality. Will the drilling depth go below the depth of Joes Valley Reservoir water and will it (drilling below current water level) effect the reservoir water (quality and quantity)?

The contour furrows and revegetation improvements previously completed in the area could be damaged by road and drill site construction. This could initiate erosion of soils, potentially effecting water quality.

Evaluation Criteria

Surface water sources and quantity of water use proposed compared to current use of cattle.

Subsurface water sources and quantity of water use proposed.

Subsurface water sources and chemicals used in drilling.

Total drilling depth in relation to Joes Valley reservoir and dependent aquifers.

Subsurface aquifers between Trail Mountain drill area and Joes Valley reservoir compared to possible controlling geologic structures.

c Roaded recreation opportunities on Forest Development Road 50040 (Cottonwood Canyon), 50034 (Trail Mountain), 52175, and 52182 weekends and opening days of hunting seasons and holidays?

This issue addresses concerns raised by the Emery Water Conservancy District, the Trail Mountain Cattle Association, Utah Division of Wildlife Resources, and the Forest Service. Traffic related to the drilling activity could conflict with recreational traffic during hunting seasons and holidays. If project roads are not adequately closed they could continue to be used by the public in conflict with the Forest travel plan. Construction equipment may carry in noxious weed seed from other areas, or spread existing populations. Noxious weeds may become easily established on disturbed sites. There is potential for damaging existing range improvements, such as spring improvements, cattle guards, and fences, and potential for drilling activities to interfere with ongoing allotment operations.

Evaluation Criteria

Dates of road use proposed compared to opening season dates for elk and deer and holidays.

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Trucks and construction equipment traversing or occupying areas of known noxious weed infestation prior to entering Trail Mountain area.

Number of existing range improvements (structural and nonstructural) for wildlife and livestock intersecting proposed roads and drill pad locations.

- 2 The following issues will be brought forward into the analysis process but will not drive alternative development because law and/or USDA policy requires resource protection such that the resulting potential effects would be similar across all action alternatives. Thus, they do not serve to highlight differences in effects and would not provide a full range of alternatives for the decision maker. Each issue statement includes an evaluation criteria or method to measure responsiveness (effects) to the issue. Measures to mitigate and monitor anticipated environmental effects will be developed and incorporated into all action alternatives.

a Threatened, Endangered, or Sensitive wildlife and plant species (FSM 2670)

Drilling would require approximately (445,714 gallons) 1.37 acre feet of water which would be diverted from the Colorado River System and may affect endangered fish species.

Evaluation Criteria

Water use and fee assessed by USFWS.

b Heritage resources (FSM 2360)

The proposed action may impacts existing or eligible National Historic Register sites.

Evaluation Criteria

Eligible or existing national Register sites impacted by the proposal.

D Issues raised but not analyzed in detail

- 1 Mr. Craig Smith of Nielson and Senior representing the Huntington Water Conservation District was concerned about effects to Huntington Canyon water quality and quantity and it's water users.

The Trail Mountain project will have no effect to the Huntington Canyon watershed and it's water users because the proposed action and water use falls within the Straight Canyon/ Cottonwood Canyon watersheds.

- 2 Mr. Eugene Johansen and Mr. Horace A. Petty were concerned reasonably foreseeable mining activities would intercept surface or subsurface water resulting in water depletion or a reduction in flow from existing water sources used by non-mining downstream users with water rights.

Water interception and depletion effects related to ground subsidence resulting from reasonably foreseeable coal mining activities were analyzed, disclosed, and a decision issued to consent to leasing subject to stipulation (Project File). This analysis and decision will not reconsider the leasing decision but will focus on the effects anticipated by the proposed drilling operations and potential cumulative impacts.

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- 3 Utah Division of Wildlife Resources was concerned goshawks and golden eagles may avoid hunting in the area during drilling operations and their foraging habitat may be impacted.

The golden eagles (*Aquila chrysaetos*) nest along the escarpment south of the proposed project area and use Trail Mountain to forage. A nesting pair of eagles use about 30 square miles of suitable habitat to forage (Project File). No known goshawk nesting sites have been identified within the project area. Goshawk (*Accipiter gentilis*) also use the area for foraging and require about 6 square miles of suitable habitat (Project File).

Ten acres of foraging habitat will be effected in the short term and displacement of birds to adjacent suitable habitat is anticipated during drilling operations. Within three years the habitat will be reclaimed to comparable utility and productivity. Lands surrounding the project area provide sufficient acres of equally suitable habitat to support known dependent populations of goshawk and golden eagle therefor the goshawks and eagles will not be negatively effected.

- 4 The Utah Division of Water Rights is concerned with the necessity of obtaining a water right prior to drilling and that any necessary stream alteration applications be filed.

This is a question of process and not an environmental issue requiring disclosure of impacts. All applicable State and Federal law and regulation must be met prior to implementation. The operator will be required to obtain all necessary water permits.

- 5 Consumers, civil rights, minority groups, and women (FSM 1730)

In this decision the Forests Service will give or not give consent to occupy Federal lands to the State of Utah. Issues of consumers, civil rights, minority groups, and women are not within the scope of the consent decision.

- 6 Prime farmland, rangeland, and timberland (USDA land use policy DR 9500-3, section 65.2) could be impacted.

The project area does not contain prime farmland, rangeland, or timberland as defined by Section 65.2 (personal communication 1994, Dennis Kelly, Bob Thompson, John Vasten).

- 7 Flood plains (section 66.3) and wetlands (section 66.4) could be impacted.

The project area does not contain flood plains and/or wetlands as defined by Section 66.3 and 66.4 (personal communication 1994, Dale Harber, John Healy).

E Alternatives Considered in Detail

Based on public input and IDT recommendation the following alternatives were approved by the deciding official. Each alternative sharply defines the issues and potential effects and provides a full range of alternatives. Alternatives include mitigation and monitoring to address the issues and anticipated environmental effects.

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Alternative 1

Forest Service deny consent. Utah Department of Oil, Gas, and Mining would not approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period. Site-specific project development would not be approved at this time. The operator would have to propose alternate coal exploration plans to meet their needs to determine coal quantity and quality for this area. Alternative 1 addresses the need to provide a "No Action" alternative (40 CFR 1502.14).

No mitigation measures or monitoring would be required as part of this alternative.

Alternative 2

Forest Service consent as proposed by PacifiCorp. Utah Department of Oil, Gas, and Mining would approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period. All proposed site-specific project development would be approved.

No requirements, constraints, or mitigations would be added to those already committed to in the drilling proposal other than the standard provisions for hole plugging operations required under the Utah Coal Rules. No monitoring would be required as part of this alternative.

Alternative 3

Forest Service consent subject to conditions of approval that modify the types, locations, or scheduling of development components (Preferred Alternative). Utah Department of Oil, Gas, and Mining would approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period as modified by Forest Service consent decision. Site-specific project development would be approved and implementation would proceed subject to meeting conditions.

The issues and potential effects to elk and deer, water quality and quantity, recreation, noxious weeds, and cattle improvements are highlighted in Alternative 3. Mitigation measures designed to address the issues and lessen potential adverse environmental effects were included in Alternative 3. Alternative 2 does not provide the additional measures.

Measures included in Alternative 3 to address the issues and mitigate anticipated environmental effects are found in Appendix A. Many of these mitigation measures are standard coal drilling stipulations listed in the Manti-La Sal National Forest Land and Resources Management Plan (Appendix B), except for those stipulations which are already covered by commitments in PacifiCorp's exploration proposal.

Implementation effectiveness monitoring would be performed to determine if the mitigation measures are effective and assure the desired results are achieved.

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F Alternatives Considered But Not Given Detailed Study

None

G Comparison of Alternatives

The following Table has been generated to summarize and compare alternatives relative to the issues and other analysis/decision factors. Comparisons are based on the net effects to each resource issue if the entire alternative were selected and implemented. Refer to Chapter 4 for a detailed discussion of environmental effects for each alternative.

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TABLE
Comparison Summary of Issues ^{by} Alternative

Direct Injunct + Cumulative Effects

ISSUES	ANALYSIS CRITERIA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
DEER AND ELK				
Occupancy	Occupancy dates	No effects.	No effects because occupancy dates do not overlap.	No effects because occupancy dates do not overlap.
Key Winter Range Habitat	Acres/percent of Habitat Effected out of 3,200 acres.	No effects from drilling operations. Cumulative effects 150 acres (5%) of habitat not available.	15 acres (<1%) of habitat not available from drilling operations. Cumulative effects 185 acres (5%) of habitat not available.	15 acres (<1%) of habitat not available from drilling operations. Cumulative effects 185 acres (5%) of habitat not available.
WATER QUALITY AND QUANTITY				
Joes Valley Reservoir and Blackhawk Aquifer.	Quality and Quantity Effected	No effects.	Drilling additives biodegradable and not toxic. No water withdrawn from these sources. Quality and quantity not effected by drilling operations.	Drilling additives biodegradable and not toxic. No water withdrawn from these sources. Quality and quantity not effected by drilling operations.
Cattle and Downstream users.	Quality and Quantity Effected at 2 water sources.	No effect.	Drilling operations over 500 feet from water sources. More water is produced from water sources than needed to support cattle and drilling operations. Remainder is available for downstream users.	Drilling operations over 500 feet from water sources. More water is produced from water sources than needed to support cattle and drilling operations. Remainder is available for downstream users.
ROADED RECREATION/ WEEDS/ALLOTMENTS				
Recreation/Safety/ Maintenance	Occupancy dates.	No effect.	Potential for drilling and hunter recreationist contacts on roads. Potential safety risk for drillers and other Forest users. Potential damage to Forest roads and structures.	Improved safety because drillers do not move equipment during opening season and holidays. Company repairs or maintains any damage to roads and structures.
Noxious Weeds	Potential for weed introduction.	Treatment of current infestations.	Risk of new infestations increased because drilling vehicles may bring weeds from previous site locations.	Risk of new infestations reduced because all vehicles washed prior to Forest entry.
Allotment Improvements	Improvements	No effect.	Risk of drilling operations not repairing damaged cattle allotment improvements.	Drilling operations would repair or replace any damaged allotment improvements resulting from drilling activities.
ENDANGERED FISH SPECIES	Water diverted.	No Effects.	445,714 gallons of water projected to be diverted and "may effect" endangered fish. PacifiCorp would pay US Fish and Wildlife Service fee for water diversion to mitigate anticipated effects.	445,714 gallons of water projected to be diverted and "may effect" endangered fish. PacifiCorp would pay US Fish and Wildlife Service fee for water diversion to mitigate anticipated effects. Company would provide USFS receipt of payment as condition of occupancy.
HERITAGE RESOURCES	Sites disturbed.	No effects.	No effects because proposal avoids known surveyed sites.	No effects because proposal avoids known surveyed sites.



CHAPTER 3

THE AFFECTED ENVIRONMENT

A Introduction

This chapter describes the existing environmental conditions which may or may not be changed or affected by the alternatives described in Chapter 2. Forest-wide and management area goals, direction, and standards from the Manti-La Sal National Forest Land and Resources Management Plan relevant to this analysis and decision are discussed. For each resource issue, the geographic scope of anticipated effects is described followed by a brief description of the existing conditions.

B Forest Plan Management Direction

This analysis tiers to the forest-wide direction and management area goals and standards of the Manti-La Sal National Forest Land and Resources Management Plan and incorporates by reference the analysis disclosed in the EIS and Record of Decision (1986), as amended. This analysis also incorporates by reference the analysis disclosed in the Trail Mountain Mine Mining and Reclamation Plan, the Environmental Assessment for Beaver Creek Coal Company, Coal Lease Application UTU-64375, Trail Mountain Tract, and the Cumulative Hydrologic Impact Assessment (CHIA) for the Trail Mountain Mine.

Twelve of the thirteen drill pads and associated roads fall within Management Area KWR, Key Winter Range and drill pad TMTN-27 falls within WPE, Watershed Protection/Improvement. The KWR management prescription (pages III 58-60) emphasizes providing winter forage and cover for big-game species and management prescription WPE (pages III 77-79) emphasizes the protection and improvement of areas that have been treated with contour trenching and furrowing to increase vegetation cover and control surface runoff.

C Description of the Affected Environment

1 General Setting

The proposed project area is located in central Utah in the central portion of the Wasatch Plateau within the Wasatch Plateau Coal Field. The Wasatch Plateau is a north-south trending high plateau bounded by Castle Valley to the east and the Sanpete Valley to the west. The proposed project is within the permit area for PacifiCorp's Trail Mountain Mine, located on the south end of Trail Mountain in Emery County, Utah, approximately 12 miles northwest of the town of Castle Dale, and 28 miles southwest of Price. The area is accessed by Utah State Highway 29, which connects with Utah State Highway 10 in Castle Dale.

The topography of the proposed project area varies from rolling plateaus to the steeper, incised drainages just above the cliffs along Straight Canyon. The elevation ranges from approximately 8,300 to 9,200 feet above sea level. Trail Mountain contains sagebrush-grass, mountain brush, pinyon-juniper, ponderosa pine, aspen, and spruce-fir habitat communities. Riparian areas are limited to natural springs and ponds and water developments for livestock.

Rock units exposed in the general area range from mid-Cretaceous to Paleocene in age. The units, from oldest to youngest, are the Masuk Member of the Mancos Shale Formation, Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, and North Horn Formation. The geologic structure is fairly simple, with the strata dipping 3 to 5 degrees to the

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southwest. The Joes Valley Fault, a major north-south trending fault is located just west of the proposed project area. The significant coal seams in the area occur in the lower 250 feet of the Blackhawk Formation. Coal thickness within the area varies from approximately 5 to 15 feet.

2 Elk and deer habitat and seasonal use.

The project area includes key elk and deer winter range and calving/fawning areas. Elk (*Cervus elaphus*) migrate onto the winter range on or about December 1 and leave on or about April 15 and mule deer (*Odocoileus hemionus*) are found throughout the year. Calving/fawning begins on or about May 15 and ends on or about July 5.

Key winter range on Trail Mountain totals about 3,200 acres. About 1,000 acres (33 percent) of the total available winter range has been previously disturbed from past habitat improvement projects such as service berry crushing. Elk populations have been increasing in the area and measures are being taken by Utah Division of Wildlife Resources to halt the growth of the herd. Habitat improvements were made in 1987 and 1990. There are no migration routes off Trail Mountain that big game can use during heavy snow years.

3 Water quality, quantity, and downstream beneficial uses of Cottonwood and Straight Creeks.

a Surface Water

The surface water in the proposed project area is used primarily for wildlife and livestock. The water quality in Cottonwood Creek and Straight Canyon meets the beneficial use standards as defined by Utah State Division of Health. Joes Valley Reservoir was constructed at the upper end of Straight Canyon for the purpose of collecting water for irrigation, municipal, and recreational uses. Downstream Cottonwood Creek water is used for municipal water, irrigation, power generation, and fisheries.

Approximately 1,265 acres of watershed improvement work has been completed (1970's and mid 1980's) on the south end of Trail Mountain, much of it in the area of the proposed project area. The improvements consist of contour furrows and reseeded to reduce soil erosion and sediment yield. Reclamation and revegetation is complete.

About 1.37 acre feet (445,714 gallons) of water are required for drilling and road maintenance (dust suppression). The proposed water sources are a pond located in NE1/4, NE1/4 Section 28, T17S, R6E, identified as 28-1P and a spring located in NE1/4 NW1/4 Section 2, T18S, R6E, identified as 18-2-1. No drilling pads are within 500 feet of water sources. Existing roads lead to the two water sources currently used by recreationists, ranchers, cattle, and wildlife.

b Groundwater

The regional aquifer under the project area is called the Star Point/Blackhawk Regional Aquifer. The regional aquifer is saturated except near the plateau escarpment, in deeply incised canyons where ground water can drain naturally, and in the Trail Mountain Mine where the lower Blackhawk Formation is dewatered. Ground water is also known to be contained locally within perched aquifers of the overlying Castlegate Sandstone and Price River Formations.

The Blackhawk-Star Point aquifer and Joes Valley Reservoir probably exchange water and perhaps recharge each other, though these interactions are not well understood. There is also

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some downward percolation of water from overlying aquifers. A minor amount of water may also flow through the aquifer from East Mountain. Some water may also enter or leave the ground water system by subsurface flow in the area of the Flat Canyon anticline near the north end of Trail Mountain.

All of the springs identified in the proposed lease tract are located in the North Horn Formation where perched aquifers intersect the surface. These springs indicate an irregular contact between beds of differing permeability which acts as a barrier to downward percolating water and causes horizontal movement to the surface or to a site where downward movement is again possible.

4 Roaded recreation opportunities on Forest Development Road 50040 (Cottonwood Canyon), 50034 (Trail Mountain), 52175, and 52182 weekends and opening days of hunting seasons.

a Roaded Recreation

The Cottonwood Canyon Road is paved from State Highway 29 to the Trail Mountain Mine portal, providing easy year-round access. From the mine to the proposed project area, access would be via Forest Development Road (FDR) 50040 (Cottonwood Canyon Road) and FDR 50034 (Trail Mountain Road). Cottonwood Canyon Road is a one-lane road with turnouts and has a gravel surface from the Trail Mountain Mine to its intersection with FDR 50034. The Trail Mountain Road is a single-lane road with a native surface.

Cottonwood Canyon Road is used by PacifiCorp, Meridian Oil Co., other Forest users, and the Forest Service. The Trail Mountain Road is used by the Forest Service, cattle allotment permittees, PacifiCorp, and recreational users. Recreational use is highest during the deer and elk hunting seasons from August through October. The traffic on these roads is expected to remain near the average for past years. Trail Mountain has many un-needed, user developed roads that are difficult to close and reclaim because Forest users begin to use the road before it is fully revegetated. This also occurs to temporary roads such as drill access roads.

Several road use permits are in effect for the above listed commercial uses of Cottonwood Canyon and Trail Mountain roads. A special use permit is also in effect for the gas pipeline right-of-way which generally parallels the Cottonwood Canyon Road from the Meridian Oil Co. well just above the Trail Mountain Mine to Flat Canyon.

b Noxious Weeds

Noxious weeds currently exist in the proposed project area. Musk thistle (*Carduus nutans*) is well-established at several sites on Trail Mountain, as well as much of the surrounding area. Whitetop (*Cardaria spp.*) and Canada thistle (*Cirsium arvense*) are not present on Trail Mountain, but are found within 5 miles. Previous coal drilling on Trail Mountain has spread musk thistle.

c Cattle Allotments

The proposed project area lies within the South Trail Unit of the Trail Mountain Cattle and Horse Allotment. Due to watershed and wildlife habitat improvement work, the southern part of this unit has been closed to grazing while new plants are becoming established. This summer livestock will be in the area part of the time.

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5 Endangered Colorado River System Fish Species

No threatened or endangered wildlife species are known to inhabit the proposed project area (Project File). Surface water from the northern and eastern portion of the proposed project area is drained by Cottonwood Creek. The southern and western portions drain into Straight Canyon. Cottonwood Creek flows into the San Rafael River, a tributary to the Green River, which is a tributary to the Colorado River.

6 Heritage resources (FSM 2360)

An archaeological survey of the proposed project area was conducted in 1993. Approximately 60 acres were inventoried. Two prehistoric archaeological sites were identified and recorded. One (site # 42EM2349) was an Archaic Period (ca. 3000-1500 years ago) lithic scatter recommended as eligible for the National Register of Historic Places. The second site (site # 42EM2350) consisted of a lithic scatter site which was previously disturbed by road construction. This site was not judged to be eligible for listing in the National Register.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

A Introduction

Chapter 4 discloses the potential environmental effects and consequences that could result from implementation of the alternatives considered. The environmental effects focus on the lands in the decision area and in some cases on the surrounding lands.

This Chapter is organized in the same order as issues are addressed in Chapter 2 and Chapter 3. Effects and consequences were described or grouped as follows.

Direct and Indirect Effects: Direct effects are caused by the action occurring at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.

Cumulative Effects: Cumulative effects result from the incremental change over time where the action is added to other past, present, and reasonably foreseeable future actions (regardless of what agency or person undertakes such actions).

Consistency with Forest Plan: This refers to the degree to which the implementation of an alternative conforms or conflicts with Forest Plan goals, direction, and standards.

B Elk and Deer Habitat and Seasonal Use

Alternative 1

Direct and Indirect Effects: None anticipated.

Cumulative Effects: Over the past 5 years coal exploration operations have disturbed about 5 acres per year. This trend is reasonably foreseeable on Trail Mountain in key winter and general ranges. Assuming successful revegetation takes 3 years then about 15 acres of key habitat would not be available in any given year for elk and deer use. Disturbing 15 acres (less than 1 percent) out of about 3,200 acres (total winter range) is not meaningful in terms of available habitat and ability of habitat to support current populations. By 1996 all lands previously disturbed by PacifiCorp activities would be revegetated and available as usable winter range habitat.

Treating of 600 acres with furrowing to reduce soil erosion, curtail water runoff, and maintain key winter range is reasonably foreseeable. Short term furrowing impacts will disturb about 25 percent of the proposed 600 acres or 150 acres. Added to the 15 reasonably foreseeable minerals acres equals 165 acres directly disturbed over a three year period. Assuming all watershed treatment effects occur concurrently and within key winter range then about 5 percent of the range would not be available for a three year period. Disturbing 5 percent of 3,200 acres (total winter range) is not meaningful in terms of available habitat and ability of habitat to support current populations. Acres of previously disturbed habitat would become revegetated. Past and future watershed improvements would curtail erosion of key habitat.

CHAPTER 4

Over the past ten years several winter range vegetation manipulation projects have been completed in the project area in an effort to improve the foraging habitat for deer and elk. About 1,000 acres (33 percent of entire winter range) of pinion, juniper, mahogany, and service berry habitats were manipulated to improve species components favoring elk and deer forage species. During the 1994 season about 50 acres of smooth brome will be ripped to improve plant vigor.

Consistency with Forest Plan: Implementation of Alternative 1 would be consistent with all wildlife goals, direction, and standards.

Alternative 2

Direct and Indirect Effects: The drill pads and access roads would disturb 10 acres (5 acres per year) of key elk and deer winter range. The forage production will be lost for an estimated 3 years until the area is successfully revegetated. Short term loss of 10 acres (less than 1 percent) out of the 3,200 available acres to the elk is not meaningful. Energy West proposes to occupy the area on or about July 15 through November 30, 1994 and 1995. Elk occupy the area for calving May 15 through July 5 and again December 1 through April 15 for winter range. Direct effects to elk and deer from trucks and drilling equipment are not anticipated because occupancy dates do not overlap. About 2 acres of previously reclaimed and revegetated winter range habitat will be reopened. Soil horizons have been mixed and soil productivity in those areas is less than surrounding undisturbed soils. Reopening, mixing, and compacting soils again would further reduce soil productivity, indirectly reducing the productivity of the key winter range. The time needed to meet final revegetation cover standards would be greater than the typical 3 years.

Cumulative Effects: No change from Alternative 1.

Consistency with Forest Plan: Implementation of Alternative 2 would be consistent with all wildlife goals, direction, and standards.

Alternative 3

Direct and Indirect Effects: No change from Alternative 2 except closing, ripping, and reseeding about 2 acres of un-needed, user developed roads will improve winter range habitat offsetting the potential loss to reopening, using, and reclaiming a previously used road.

Cumulative Effects: No change from Alternative 2 in the short term but long term there will be a 2 acre increase of suitable key winter range habitat because the un-needed user developed roads were closed and revegetated with plant species used by the elk and deer.

Consistency with Forest Plan: No change from Alternative 2.

C Water Quality, Quantity, and Downstream Beneficial Uses of Cottonwood and Straight Creeks

CHAPTER 4

Alternative 1

Direct and Indirect Effects: None anticipated.

Cumulative Effects: Water use will continue. About 150 acres of furrows is reasonably foreseeable. Short term soil erosion and a local reduction in water quality is anticipated. Long term soil stabilization, productivity, and improved water quality is anticipated.

The Cumulative Hydrologic Impact Assessment (Project File) disclosed mining operations conducted within the terms of the Mining and Reclamation Plan will produce only a low risk to ground water resources within the permit area and minimal risk to the hydrologic balance outside the permit area.

Consistency with Forest Plan: Implementation of Alternative 1 would be consistent with all watershed goals, direction, and standards.

Alternative 2

Direct and Indirect Effects: The Federal Government has water rights to all proposed water sources and PacifiCorp's proposed water use is consistent with those rights under an approved permit. About 906 cattle will be on Trail Mountain about 25 days during the 1994 season. Assuming half (453) of the 906 permitted cattle use the same spring and pond proposed to be used by PacifiCorp each day, and each cow drinks about 25 gallons per day, then about 11,300 gallons of water will be used by the cattle per day. Monitoring of the water output of the spring and pond indicates an average of 38,600 gallons is produced from the two sources per day (Project File). Energy West proposes to use about 8,600 gallons of water per day. Total livestock and mineral related use per day equals 19,900 gallons. Water shortages to cattle and wildlife are not anticipated because water discharge is greater than estimated use.

Short term (less than one year) soil erosion and sedimentation is anticipated. A portion of the sediment produced from disturbed areas may eventually reach Straight and Cottonwood Canyons potentially effecting short term surface water quality. Long term soil stability, productivity, and surface water quality meeting State standards would be anticipated because success in reclaiming past projects has been high. Accidental spills of fuels and drilling hydraulic fluids could also locally decrease surface water quality at the drill pad. Changes in water quality of the water sources (springs and ponds) would not be anticipated because the drill pads are not within 500 feet of these sources should a spill occur.

Joes Valley reservoir may be fed, in part, by the Blackhawk aquifer and the aquifer may, in part, be fed by Joes Valley reservoir. Drilling operations will not be withdrawing water from this aquifer, rather waters from surface sources may be pumped into the Blackhawk aquifer during drilling operations so those waters could conceivably reach the reservoir or they may conceivably reach the mine or cliff faces. Ground water in separate aquifers could temporarily be diverted down hole or could mix, altering water quality and quantity while each drill hole is open to its total depth (about 1 day). Drilling fluids (muds and foam) are biodegradable, not toxic, (project file) and would not impact water quality of known aquifers or Joes Valley reservoir. Cementing the drill holes will prevent long term aquifer mixing. The risk to Joes Valley reservoir and Blackhawk aquifer water quality or quantity is very low.

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Cumulative Effects: No change from Alternative 1.

Consistency with Forest Plan: Implementation of Alternative 2 would be consistent with all watershed goals, direction, and standards.

Alternative 3

Direct and Indirect Effects: No change from Alternative 2.

Cumulative Effects: No change from Alternative 2.

Consistency with Forest Plan: Implementation of Alternative 3 would be consistent with all watershed goals, direction, and standards.

D Roaded Recreation Opportunities on FDR 50040 (Cottonwood Canyon), 50034 (Trail Mountain), 50175, and 50182 weekends and opening days of hunting.

Alternative 1

Direct and Indirect Effects: None anticipated.

Cumulative Effects: None anticipated.

Consistency with Forest Plan: Implementation of Alternative 1 would be consistent with all facilities and road direction and standards.

Alternative 2

Direct and Indirect Effects: Trail Mountain Road (FDR 50034) could be rutted and damaged if used during wet conditions. If damages are not repaired promptly sediment runoff and accelerated erosion across the running surface could occur. During dry conditions project traffic would accelerate pulverization of the road surface, loss of roadbed material, and intrenchment.

It would be difficult to prevent continued use of the reclaimed roads due to flat terrain and continued use by the public. This could delay or prevent re-establishment of forage. The area is closed to vehicle traffic in the Forest Travel Plan.

There is potential for the introduction of noxious weeds to the area by contaminated vehicles and equipment. Noxious weeds commonly invade disturbed sites.

The range improvements in the proposed project area are a developed spring with a trough, a pond, cattle guards, and several fences. Most of the area has been contour furrowed and revegetated to improve watershed conditions. There is no commitment in the proposal to repair or replace any of these improvements which may be damaged during drilling.

Cumulative Effects: Moving of drills during high recreation use days could increase the risk of an accident. Continued use of closed partially reclaimed roads could cause localized soil compaction, loss of soil, and decreases in water quality. Noxious weeds could spread over time into new areas.

CHAPTER 4

Consistency with Forest Plan: Implementation of Alternative 2 would be consistent with all facilities and road direction and standards.

Alternative 3

Direct and Indirect Effects: No change from Alternative 2 except the risk of road accidents would be lower because the placement of warning signs (Appendix A) would reduce unexpected interactions between drilling vehicles and other forest users. A road use permit and bond would be issued to address road access, use, maintenance, and safety issues. Risk of spreading noxious weeds would be reduced because operators would not be bringing drilling vehicles on Forest with noxious weeds and would have to remove any infestations on disturbed lands. Potential damages to range improvements would be repaired or replaced by the operator and drilling operations would be coordinated with the allotment permittees.

Cumulative Effects: No change from Alternative 2.

Consistency with Forest Plan: Implementation of Alternative 3 would be consistent with all facilities and road direction and standards.

E Endangered Fish Species

Alternative 1

Direct and Indirect Effects: None.

Cumulative Effects: Other projects diverting water may effect the listed species.

Consistency with Forest Plan: Implementation of Alternative 1 would be consistent with all wildlife resource goals, direction, and standards.

Alternative 2

Direct and Indirect Effects: A maximum of 445,714 gallons of water would be used for drilling over a two year period, which would be taken from a pond located in Section 28, T17S, R6E and a spring located in Section 2, T18S, R6E. This is considered a diversion of waters of the Colorado River System and "may affect" the endangered fish species of the river. The U.S. Fish and Wildlife Service would assess a fee for this water depletion to be used for mitigating impacts to these fish species.

Cumulative Effects: None, assuming water depletion effects are mitigated by paying diversion and use fee to USFWS.

Consistency with Forest Plan: Implementation of Alternative 2 would be consistent with all wildlife resource goals, direction, and standards.

CHAPTER 4

Alternative 3

Direct and Indirect Effects: Same as Alternative 2.

Cumulative Effects: Same as Alternative 2.

Consistency with Forest Plan: Implementation of Alternative 3 would be consistent with all wildlife resource goals, direction, and standards.

F Heritage Resources

Alternative 1

Direct and Indirect Effects: None.

Cumulative Effects: None.

Consistency with Forest Plan: Implementation of Alternative 1 would be consistent with all cultural resource goals, direction, and standards.

Alternative 2

Direct and Indirect Effects: None anticipated because proposed roads and drill pads avoid identified resources.

Cumulative Effects: None anticipated.

Consistency with Forest Plan: Implementation of Alternative 2 would be consistent with all Cultural Resource goals, direction, and standards.

Alternative 3

Direct and Indirect Effects: Same as Alternative 2.

Cumulative Effects: Same as Alternative 2.

Consistency with Forest Plan: Same as Alternative 2.

APPENDIX A

CONDITIONS OF CONCENT AND IMPLEMENTATION

The following mitigation measures will be required and incorporated into the permit approval process by UDOGM as conditions of approval to mitigate potential adverse impacts associated with implementation of the selected alternative. The mitigation measures address the issues (A-E) and implementation standards in Appendix B of the Forest Plan.

A Elk and deer habitat and their seasonal use.

- 1 Operator will reclaim and revegetate two acres (three miles) of not needed, user developed roads on Trail Mountain to compensate for the potential loss of soil and winter range productivity stemming from reopening and reusing one mile of previously reclaimed road. User developed roads disturb about 0.66 acres per mile so about three miles of treatment would be needed to compensate for the one mile (two acres) of projected disturbance. Specific user developed roads to receive reclamation treatment will be given to the operator at the pre-work meeting.

B Water quality, quantity, and downstream beneficial uses of Straight and Cottonwood Creeks.

Water Quality

- 1 All vehicle traffic will stay on existing roads and new access routes. Unauthorized off-road vehicular travel is prohibited.
- 2 Roads and access routes must not be used when they are wet, muddy, and susceptible to damage. Vegetation shall not be cleared for more than the width necessary to serve traffic needs (generally not to exceed 16 feet). The permittee is responsible for repair of any damages which are caused by his/her operations.
- 3 Water must be applied to roadways to control dust if excessive loss of road surface material occurs or visibility creates unsafe driving conditions. Other methods of dust control require specific approval by the Forest Service.
- 4 Drill pads will be designed to prevent or diminish overland flow from entering the site during precipitation events. Pad sites will be sloped to drain all spills and on-site precipitation into the mud pits. If necessary, pits will be pumped out to reduce their content and insure that overflow does not occur. Fluids will be disposed off Forest at a Utah State approved disposal site.
- 5 Establishment of campsites and staging areas on National Forest System lands in support of this project is subject to Forest Service approval.
- 6 Contaminated soil and gravel must be stripped and hauled to a site approved by the Forest Service prior to site reclamation. All garbage and other refuse must be properly contained on the project site prior to disposal off Forest. All trash, garbage, flagging, vehicles, and other such materials must be removed from National Forest System lands immediately following drilling operations.

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- 7 Mud pits must be enclosed by a 4-strand barbed wire fence while they are left to dry to keep out humans, livestock, and wildlife.
- 8 The project, including initial reclamation is to be completed by November 30, 1995. Reclamation recontouring and reseeding of vacated drill pads and temporary roads will be performed as soon as practicable (within the same drilling season). Roads to be used in both field seasons will need to be winterized to minimize soil erosion.
- 9 All surface disturbing activities including reclamation must be supervised by a responsible representative of the permittee/licensee who is aware of the terms and conditions of the projects permits/licenses.
- 10 The seed mix on page 14 of PacifiCorp's proposal is approved except the following species will be deleted from the proposed seed mix. The approved mix contains 3 browse species (Mountain Mahogany, Utah Serviceberry, and Mountain Big Sagebrush).

Species	Pounds/Acre
Smooth Brome - Bromus inermis	3

- 11 Revegetation will be considered successful when 90% of the pre-disturbance ground cover is re-established over the entire disturbed area. Adjacent undisturbed areas will be used as a base for comparison. Of the vegetative ground cover, at least 90% must consist of seeded or other desirable species. 90% ground cover must be maintained for three years.
- 12 Operator will assure sufficient portable, self contained toilets are available for crew use.

Water Quantity

- 1 Water needed in support of operations must be properly and legally obtained according to Utah State water laws.
- 2 All significant water encountered during drilling must be reported to the Forest Service, including the depth and formation at which it was encountered, and an estimate of the flow.
- 3 If any of the drill holes encounter artesian groundwater flow, the District Ranger must be notified prior to plugging the hole to determine whether or not the Forest Service would elect to establish a permanent water development at the site.

C Roaded recreation opportunities and access to Forest Development Road 50034, 50040, 52175, and 52182 during hunting season and summer weekends

Recreationists

- 1 Warning signs must be placed on the roads at both ends of the project area to alert hunters and other Forest users to the presence of working crews.

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- 2 Drill rigs and heavy equipment shall not be transported in or out of Trail Mountain on FDR 50040 during the opening 5 days of the general elk hunt, opening weekend of the general deer hunt, or during Federal and State holiday weekends.

Cattle Permittees

- 3 Drilling operations shall be coordinated with grazing permittees.
- 4 Gates must be closed after entry unless otherwise specified.
- 5 The permittee/licensee will be held responsible for all damage to fences, cattleguards, resource improvements, roads, and other structures on National Forest System lands which result from their operations. The Forest Service must be notified of damages as soon as possible.

Noxious Weeds

- 6 The operator will assure (certify) all drilling equipment and vehicles are free of noxious weeds and seeds prior to entering upon Forest Service lands. The operator will be held responsible for control of noxious weed infestations within areas disturbed by drilling activities.

D US Fish and Wildlife Service listed Threatened and Endangered fish species

- 1 PacifiCorp, Energy West will pay US Fish and Wildlife Service for water depletion to the Colorado Basin System as per USFWS calculations.

E Heritage resources

- 1 If cultural or paleontological resources are found during implementation of the project, operations will immediately cease at that location and the District Ranger will be notified. Unauthorized excavation, removal, or damage of archaeological resources is subject fines and other penalties under authority of the Archaeological Resources Protection Act (AR-PA) of 1979 (as amended).

OPERATING STIPULATIONS

General

- 1 A pre-work meeting including the responsible company representative(s), contractors, and the Forest Service must be conducted at the project location prior to commencement of operations. Site-specific Forest Service requirements will be discussed at this time.
- 2 The Forest must be notified 48 hours in advance that heavy equipment will be moved onto National Forest System lands and that surface disturbing activities will commence.

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- 3 The Forest Service must be notified of any proposed alterations to the plan of operations. Any changes to the existing plan are subject to Forest Service review and approval.
- 4 Section corners or other survey markers, including claim corners, in the project area must be located and flagged for preservation prior to commencement of surface disturbing activities. The removal, displacement, or disturbance of markers must be approved by the proper authority. Replacement will be done by the proper authority at the expense of the permittee/licensee.
- 5 Timber removed during the project that meets sawlog utilization standards (minimum 8 inch diameter, 8 feet long, and 33 1/3 % sound) will be removed from the area by the permittee. Timber not meeting sawlog utilization standards but which is suitable for fuelwood will be cut into four foot lengths and decked at a location that is accessible to the public.
- 6 A road use permit must be obtained from the Forest Service before equipment is transported onto National Forest System lands. The location of new roads is subject to Forest Service review and approval. No construction may begin prior to approval. Any modifications or changes to approved locations are also subject to review and approval.
- 7 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 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 the 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 the Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

Fire

- 1 Fire suppression equipment must be available to all personnel working at the project site. Equipment must include at least one hand tool per crew member consisting of shovels and pulaskis and one properly rated fire extinguisher per vehicle and/or internal combustion engine.
- 2 All gasoline, diesel, and steam-powered equipment must be equipped with effective spark arrestors or mufflers. Spark arrestors must meet Forest Service specifications discussed in the "General Purpose and Locomotive (GP/L) Spark Arrester Guide, Volume 1, April, 1988"; and "Multi-position Small Engine (MSE) Spark Arrester Guide, April, 1989". In addition, all electrical equipment must be properly insulated to prevent sparks.
- 3 The permittee/licensee will be held responsible for damage and suppression costs for fires started as a result of operations. Fires must be reported to the Forest Service as soon as possible.
- 4 The Forest Service reserves the right to suspend operations during periods of high fire potential.

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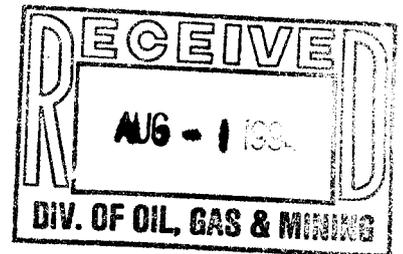
Road Use Permit

- 1 All vehicle traffic will stay on existing roads and new access routes. Unauthorized off-road vehicular travel is prohibited.
- 2 Roads and access routes must not be used when they are wet, muddy, and susceptible to damage. Vegetation shall not be cleared for more than the width necessary to serve traffic needs (generally not to exceed 16 feet). The permittee is responsible for repair of any damages which are caused by his/her operations.
- 3 All traffic must maintain safe speeds commensurate with existing conditions.
- 4 Water must be applied to roadways to control dust if excessive loss of road surface material occurs or visibility creates unsafe driving conditions. Other methods of dust control require specific approval by the Forest Service.

DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT
for an
ENVIRONMENTAL ASSESSMENT
PACIFICORP, ENERGY WEST
1994-1995 TRAIL MOUNTAIN
COAL EXPLORATION DRILLING PROPOSAL

June, 1994

USDA, Forest Service, Region 4
Manti-La Sal National Forest
Ferron Ranger District
Emery County, Utah



Responsible Official:

George A. Morris - Forest Supervisor
Manti-La Sal National Forest
599 W. Price River Drive
Price, Utah 84501
(801) 637-2817

For Further Information Contact:

David M. Hatfield - Team Leader
Ferron Ranger District
P.O. Box 310
Ferron, Utah 84523
(801) 384-2372

DECISION NOTICE and FONSI

Introduction

On December 18, 1993 PacifiCorp, Energy West submitted a coal mine plan amendment to the Utah Department of Natural Resources, Division of Oil, Gas, and Mining to build new access road, reopen previously used and reclaimed access roads, and drill thirteen (13) exploration holes in the Trail Mountain Mine permit area. The purpose and need of the proposed actions are to evaluate coal elevation, thickness, quality, and identify surrounding strata in support of future mining operations at the Trail Mountain Mine, Cottonwood Canyon. The proposed actions are located north of Straight Canyon, between 8,000 and 9,000 feet in elevation within T17S R6E, Section 27 and 34 and T18S R6E, Section 2.

The Trail Mountain permit area is completely within the Ferron Ranger District, Manti-La Sal National Forest, Emery County, Utah. Approval authority for this action; on an existing lease UTU-64375, within an existing mine operating permit area, falls under the jurisdiction of the Utah Department of Natural Resources, Division of Oil, Gas, and Mining. Consent and terms of occupancy must be granted by the Forest Service prior to approval by the State.

Decision and Reasons for the Decision

After careful review of the proposal, public comments, and the analysis disclosed in the environmental assessment and project file I have decided to select Alternative 3. Implementation of Alternative 3 gives Utah Department of Natural Resources, Division of Oil, Gas, and Mining my consent to approve occupancy and use of currently permitted and leased National Forest system lands. The mitigation measures listed in Appendix A of the environmental assessment are hereby incorporated into my decision as conditions of consent.

This decision is made within the authority of the following authorizing leasing and development laws and regulations: The Mineral Leasing Act of February 25, 1920, as amended; the National Forest Roads and Trails Act of 1964, as amended; the National Environmental Policy Act (NEPA) of 1969; the Federal Land Policy and Management Act (FLPMA) of 1976; the Federal Coal Leasing Amendments Act of 1976, as amended; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; Federal Regulations 30 CFR 700, 40 CFR 1500, 43 CFR 3400; and the Manti-La Sal National Forest Land and Resource Management Plan, EIS, and Record of Decision (1986), as amended.

My decision responds to the issues and anticipated effects disclosed in the EA as described below, issue by issue. **What will be the effects of exploration drilling and construction of drill pads and roads on:**

Elk and deer habitat and seasonal use?

This issue addresses concerns raised by the Trail Mountain Cattle Association, Utah Division of Wildlife Resources, and the Forest Service. Effects of the drilling proposal will not negatively effect the long-term habitat of the elk and deer nor will the population objectives of the State be affected. My decision includes a mitigation measure in Appendix A that will increase the available productive key winter range by 2 acres. This is not a great amount compared to the total 3,200 acre range, nevertheless it is an improvement and a secondary benefit addresses the road access issue in that 3 miles of unneeded, user created roads will be reclaimed. Since the project falls

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within the key winter range management area I felt it appropriate to improve the habitat in the long-term.

Water quality, quantity, and downstream beneficial uses of Cottonwood and Straight Creeks?

This issue addresses concerns raised by the Emery Water Conservancy District, the Trail Mountain Cattle Association, and the Forest Service. Long-term, negative effects to water quality are not anticipated. Effects predicted in the short-term appear to be minimal and low risk based on the EA. Water quantity would not be negatively affected. Mitigation addressing the possible effects include standards from the Forest Plan, Appendix B to reduce sedimentation from road and drill pad construction and the risk of accidental spills of drilling fluids.

Roaded recreation opportunities on Forest Development Road 50040 (Cottonwood Canyon), 50034 (Trail Mountain), 52175, and 52182 weekends and opening days of hunting seasons and holidays?

This issue addresses concerns raised by the Emery Water Conservancy District, the Trail Mountain Cattle Association, Utah Division of Wildlife Resources, and the Forest Service. The mitigation measures reduce the risk of vehicle accidents, spread of noxious weeds, and conflicts with existing permit holders. Hunters will be alerted to the presence of drilling activities by the use of warning signs. Possible impacts to Forest roads are addressed in the road use permit which must be obtained prior to project implementation.

Threatened, Endangered, or Sensitive wildlife and plant species (FSM 2670)

This issue addresses concerns raised by the Utah Division of Wildlife Resources and the Forest Service. Drilling would require approximately (445,714 gallons) 1.37 acre feet of water which would be diverted from the Colorado River System and may affect endangered fish species. I believe the mitigation listed in Appendix A of the EA will compensate for the anticipated effects as discussed in the Forest Service biological evaluation and US Fish and Wildlife Service biological opinion.

Heritage resources (FSM 2360)

This issue addresses concerns raised by the Forest Service. Implementation of Alternative 3 will not impact existing or eligible National Historic Register sites. This conclusion was reviewed and approved by the Forest Archaeologist and the Utah State Historic Preservation Officer.

Alternatives Considered in Detail

Based on public input and IDT recommendation, I approved the following three alternatives for analysis (EA page 2-5,6). I believe each alternative sharply defined the issues and provided me with a full range of alternatives. Alternatives include mitigation and monitoring to address the issues and anticipated environmental effects.

Alternative 1: Forest Service deny consent. Utah Department of Oil, Gas, and Mining would not approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period. Site-specific project development would not be approved at this time. The operator would have to propose alternate coal exploration plans to meet their needs

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to determine coal quantity and quality for this area. Alternative 1 addresses the need to provide a "No Action" alternative (40 CFR 1502.14). No mitigation measures or monitoring would be required as part of this alternative.

Alternative 2: Forest Service consent as proposed by PacifiCorp. Utah Department of Oil, Gas, and Mining would approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period. All proposed site-specific project development would be approved. No requirements, constraints, or mitigations would be added to those already committed to in the drilling proposal other than the standard provisions for hole plugging operations required under the Utah Coal Rules. No monitoring would be required as part of this alternative.

Alternative 3: Forest Service consent subject to conditions of approval that modify the types, locations, or scheduling of development components (Selected Alternative). Utah Department of Oil, Gas, and Mining would approve PacifiCorp's exploration proposal to build access roads, drill pads, and drill 13 exploration holes over a two year period as modified by Forest Service consent decision. Site-specific project development would be approved and implementation would proceed subject to meeting conditions.

The issues and potential effects to elk and deer, water quality and quantity, recreation, noxious weeds, and cattle improvements are highlighted in Alternative 3. Mitigation measures designed to address the issues and lessen potential adverse environmental effects were included in Alternative 3. Alternative 2 does not provide the additional measures.

Measures included in Alternative 3 to address the issues and mitigate anticipated environmental effects are found in Appendix A. Many of these mitigation measures are standard coal drilling stipulations listed in the Manti-La Sal National Forest Land and Resources Management Plan (Appendix B), except for those stipulations which are already covered by commitments in PacifiCorp's exploration proposal. Implementation effectiveness monitoring would be performed to determine if the mitigation measures are effective and assure the desired results are achieved.

Public Participation

November 1993 PacifiCorp invited the Forest Service, along with representatives of the Utah Division of Oil, Gas, and Mining (UDOGM), and the Bureau of Land Management (BLM) to visit the proposed drilling project area. The project initiation letter was signed by the Forest Supervisor February 3, 1994 and scoping initiated February 25, 1994 with the mailing of scoping packages to 28 people, organizations, or agencies on the District mailing list (Project File). A news article requesting public input was printed in the March 1 issue of The Sun Advocate, the paper of record for this decision. Five scoping responses were received from potentially affected interests. A predecisional copy of the environmental assessment was sent to the individuals and agencies interested in continued participation in this decision making process. Additional copies were also available for a 30 day period ending June 6, 1994, to encourage and provide for public review and comment. One comment was received during the 30 day review period.

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Finding of No Significant Impact

Based on the following discussion and the direct, indirect, and cumulative effects disclosed in the EA I made a finding regarding "significance". Implementation of Alternative 3 will not result in significant impacts to the human environment, therefore an environmental impact statement will not be prepared.

"Significance" as used in NEPA requires consideration of both "context" and "intensity". Context means the significance of the action must be evaluated in several contexts such as society as a whole, the human scale, and local and regional interests. Intensity refers to the severity of the impacts (environmental effects) disclosed in the analysis document.

Context: Context for this action includes residents of Emery and Carbon Counties, affected interests within the Castle Valley area, and our cooperating agencies (Utah State DOGM, DWL, SHIPO, and USFWS). Coal mining operations have occurred in this region for over 100 years and both County governments, City governments, and residents are accustomed to these activities and their environmental, social, and economic effects. The proposed action involves exploring for coal reserves within an existing lease and mine permit area. The decision to lease was made using an EA and significant effects were not disclosed at that broader, decision stage. This proposal and its anticipated effects are not national in scope. Effects to the surface resources are local in scope, that is, the effects are felt only on Trail Mountain with the exception of water which continues downstream. This decision is local in effect, short-term compared to the 100 year history of coal mining, and will not negatively effect City and County governments. Therefore, in context, this decision is not significant.

Intensity: Intensity is evaluated by comparing and contrasting the ten criteria from 40 CFR 1508.27 (In bold) with the issues and effects disclosed in the analysis and project file.

- 1 **"Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial".**

Mining operations have an important economic and social effect to the Governments and residents of Carbon and Emery Counties. Exploration drilling, such as the proposed action, does contribute to this larger effort but, in and of itself, does not provide extraordinary beneficial or adverse outcomes. No extraordinary adverse direct, indirect, or cumulative effects are anticipated to Forest Service surface resource issues tracked in the EA (EA Chapter 4).

- 2 **"The degree to which the proposed action affects public health or safety".**

Significant impacts to public health and safety from the proposed drilling operations are not anticipated (EA page 4 - 4-5). Mitigation addressing safety of Forest visitors driving on Trail Mountain is found in the EA, Appendix page A - 2-3, 5.

- 3 **"Unique characteristics of the geographic area such as proximity to historical or cultural resources, park lands, or prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas".**

Heritage resources on Trail Mountain were surveyed, identified, and will not be negatively impacted (EA page 4 - 6, criteria 8 below). Trail Mountain does not contain prime farmland, rangeland, timberland, wetlands, floodplains, and eligible or designated wild or scenic rivers (EA page 2 - 5). The key winter range is ecologically critical to the winter population of elk

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and deer however the documented direct, indirect, or cumulative effects to the habitat are not critical or significant in the long-term nor to sustaining the State population objectives (EA 4 - 1-2, criteria 7 below).

- 4 "The degree to which the effects on the quality of the human environment are likely to be highly controversial".**

Information received during scoping (EA page 2 - 1-2) and the predecisional review period for the EA gave no indication of controversy among resource professionals addressing the anticipated direct, indirect, or cumulative effects or the effectiveness of the proposed mitigation measures designed to address the resource issues.

- 5 "The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks".**

Exploration drilling on Trail Mountain does not present highly uncertain, unique, or unknown risks to Forest Service resources. Comparing the predicted effects of past drilling operations to what actually occurred provides insight into this determination. Reclamation of past drilling operations on Trail Mountain and other sites on the Price and Ferron Ranger Districts has been very successful. Effects to wildlife, water, and other resources have not had serious long-term negative impacts. For example, the key winter range on Trail Mountain has been improving over time and no known downstream water users have had interruptions to their water supply from surface drilling operations.

- 6 "The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration".**

Consent to permit occupancy of Forest lands to explore for coal on an existing lease, within an existing permit area, will not set precedent or effect future considerations or decisions. For example, this decision does not commit the Forest Service to consent to leasing additional lands for coal development, nor does it consent to any additional exploration drilling. This action is fully consistent with the Manti-La Sal Land and Resources Management Plan (EA page 3 - 1, 4 - 1-6).

- 7 "Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts".**

The analysis in the EA addressing elk and deer issues (EA page 4 - 1-2) was conservative, or overestimated effects because several assumptions were spatially or temporally conservative. For example, the analysis assumed all drilling and furrow disturbances will be within the 3,200 acre key elk winter range. Actually all the existing "treatable" key winter range has been treated with furrows and the project would probably fall within general winter range in and around Reynolds Point. In addition, new information gathered from PacifiCorp indicates the reasonably foreseeable future drilling activities are projected further north toward Flat Canyon. Therefore, the reasonably foreseeable spatial effects to the key winter range would not be additive or cumulative.

The reasonably foreseeable furrow project may be implemented within the next ten years. It is not included in our current out-year budgeting process which includes the next three years.

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Therefore, I believe anticipated temporal effects of this project will not have a significant cumulative effect because reclamation will be completed by the time a furrow project is planned, funded, and implemented.

Cumulative adverse effects to the water quality, quantity, and downstream users, Heritage Resources and endangered fish species are not anticipated (EA page 4 - 3-6).

- 8 "The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources".**

Direct, indirect, or cumulative "adverse effects" to heritage resources are not foreseeable, therefore no significant effects are anticipated because proposed roads and drill pads avoid identified resources (EA, page 4 - 6).

- 9 "The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973".**

Direct, indirect, or cumulative "adverse effects" to endangered fish species are not foreseeable. Alternative 2 and 3 both would have a "may effect" on the fish species. This is not a significant effect because there are no adverse effects and water diversion fees will be paid to US Fish and Wildlife service (EA, page 4 - 5) as mitigation.

- 10 "Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment".**

The analysis did not identify any adverse effects that threaten a violation of Federal or State laws designed to protect the environment (EA page 1 - 2, 2 - 4-5, 4 - 3-6).

Findings Required by other Laws and Regulations

The analysis tiered to the Manti-La Sal National Forest Land and Resources Management Plan, EIS, and Record of Decision (1986), as amended. Twelve of the thirteen drill pads and associated roads fell within Management Area KWR, Key Winter Range (pages III 58-60) and drill pad TMTN-27 fell within WPE, Watershed Protection and Improvement (pages III 77-79). This analysis also incorporates by reference the analysis disclosed in the Trail Mountain Mining and Reclamation Plan, environmental assessment for Beaver Creek Coal Company, Coal lease Application UTU-64375, Trail Mountain Tract, and the cumulative hydrological impact assessment (CHIA) for the Trail Mountain Mine. The analysis considered potential amendments and their effects on Forest Plan direction and standards.

My decision is consistent with the Forest Plan and will not require amendments (EA 4 - 1-6). I considered and find the decision consistent with the National Forest Management Act requirements as expressed in 36 CFR 219.27. The decision complies with the Endangered Species Act of 1973 and Section 106 of the National Historic Preservation Act of 1966 (EA page 4 - 5-6, Project File).

In this decision the Forests Service will give consent to occupy Federal lands to the State of Utah. Issues of consumers, civil rights, minority groups, and women are not within the scope of the consent decision. The project area does not contain prime farmland, rangeland, timberland, flood plains, and/or wetlands (EA page 2 - 5).

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Implementation Date

If no appeals of this decision are filed, my decision may be implemented by Utah Division of Oil, Gas, and Mining on or after August 20, 1994.

Administrative Review or Appeal Opportunities

I am willing to meet, listen, and discuss any concerns or issues related to this decision. The decision is not subject to appeal under 36 CFR 217.

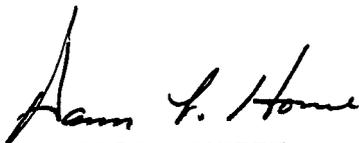
This decision is subject to appeal under 36 CFR 215.7. Any written notice of appeal must be fully consistent with 36 CFR 215.14 including the reasons for the appeal and must be filed on or before August 15, 1994. Notice of Appeal and statement of reasons must be submitted in writing to: ATTN: Appeal Deciding Officer, USDA Forest Service, 324 25th Street, Ogden, UT 84401.

This decision is subject to appeal under 36 CFR 251, Subpart C. Any written notice of appeal submitted by the holder of a written instrument to occupy and use National Forest System lands must be fully consistent with 36 CFR 251.90 including the reasons for the appeal and must be filed on or before August 15, 1994. Notice of Appeal and statement of reasons must be submitted in writing to: ATTN: Appeal Deciding Officer, USDA Forest Service, 324 25th Street, Ogden, UT 84401. Simultaneously send a copy of the Notice of Appeal to: ATTN: Forest Supervisor, Manti-La Sal National Forest, 599 West Price River Drive, Price, UT 84501.

Contact Person

The decision, FONSI, and environmental assessment (EA) are available for review at the Ferron Ranger District and the Forest Supervisor's office in Price. Any persons with questions related to this decision or project may contact David Hatfield at the Ferron Ranger District, PO Box 310, Ferron, UT 84523 or call (801) 384-2372.

Signature and Date

for 
GEORGE A. MORRIS
Forest Supervisor

Date

6/30/94