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UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
Manti-LaSal National Forest  
350 East Main Street  
Price, Utah 84501

2600  
2820  
February 7, 1980



#2

Ms. Mary Ann Wright  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas, and Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

Dear Ms. Wright:

Reference is made to your letter to Supervisor Reed Christensen of 12-18-79 and the telephone conversation between Don Ward, Forest Biologist, and Mr. Ron Daniels concerning:

1. Utah Power and Light Company Cottonwood Portal - ACT/015/027 and
2. Utah Fuel Company Skyline Mine - ACT/007/005.

Attached are copies of the wildlife portion for the Cottonwood Mine and the Wildlife Biologist input for the Skyline Mine.

Sincerely,

for  
REED C. CHRISTENSEN  
Forest Supervisor

Enclosures

**RECEIVED**

FEB 11 1980

DIVISION OF  
OIL, GAS & MINING

# WILDLIFE : COTTONWOOD LEASE TRACT 9

- e. Short-term is defined as mine life plus five years. Long-term is defined as that time beyond the short-term in which impacts would continue to occur.
- f. Approximately 100 acres would be used for housing and infrastructure per 1,000 population.
- g. Access roads, power lines, and telephone lines are included in final reclaimed areas. Their continued use will not generally be needed once the mine is closed.
- h. Exploration drilling on about one-half mile spacing may be needed to provide information for mine design. This action will require a plan of operations which will define drill site locations, access roads, and other requirements. A site specific environmental assessment will be required for approval.
- i. Rights-of-way width requirements: Access road - 100 feet  
Power line - 30 feet  
Telephone cable - 12 feet  
Widths may change, however, from site to site, for design, or for mitigation reasons.

## B. Alternatives

- (A) 1. No Action  
The no action alternative is to not lease the Tract.
- (B) 2. Lease the Tract with Coal Extraction through Existing Portal Facilities of the Wilberg Mine (lease the tract to UP&L).
- (C) 3. Lease the Tract with Coal Extraction from New Portal Facilities in Grimes Wash (lease the tract to other than UP&L).

poor quality soils. Reclamation potential in the steep escarpment areas is expected to be low.

No threatened or endangered plants are known to occur on the tract. However, *Hedysarum occidentale* var. *canone*, a plant species proposed as threatened occurs in the ledges west of Cottonwood Road in Section 6, T.18S, R.7E. Suitable habitat for this species exists in the escarpment on the Cottonwood Tract (Welch 1977). Part of the tract is currently rated as secondary range.

#### Trends in the Affected Environment

The tract receives some use as cattle summer range. Part of the East Mountain Allotment lies on the tract. Wildlife use on the tract is not heavy during the summer. The vegetative resource on the tract is expected to remain the same.

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#### 8. Wildlife

The Cottonwood Lease Tract can be roughly broken down into the following habitat types:

	Approximate % of Total
Cliff Habitat	50%
Big Sagebrush	9%
Pinyon-Juniper	22%
Mountain Mahogany	8%
Grass-Sagebrush	4%
Aspen-Snowberry	7%

There are approximately 28 species of mammals, 12 species of raptors, and 23 species of nongame birds that utilize the above-mentioned habitat types and may occur on the lease site. Neither the bald eagle nor the peregrine falcon, both classified as endangered species, are known to occur on the lease tract.

East Mountain is crucial winter range for part of the Manti elk herd; deer use the lower areas below the Forest boundary as winter range. Big game winter use, as determined by pellet transects, is listed below. Figures represent a 3-year average (DWR Report).

Lower Grimes Wash - 6300 ft. elev. (off Forest)	10 deer days use/hectare
Grimes Wash - 6700 ft. elev. (off Forest)	16 deer days use/hectare
Grimes Wash - 6700 ft. elev. (off Forest )	20 elk days use/hectare
East Mountain - 9000 ft. elev.	17 elk days use/hectare

The cliff areas in the SE $\frac{1}{4}$  of Section 18 have been surveyed by the State Raptor Biologist to determine raptor nest location and habitat suitability. No nest sites were found on the lease. The cliff areas on the lease site were rated as low suitability for cliff nesting habitat.

There are no known threatened or endangered animal species on the lease tract. (Forest Service Report).

#### Trends in the Affected Environment

Trends in wildlife populations and habitat are expected to remain about the same.

### 9. Cultural Resources

The lease tract area is not expected to contain any archeological sites. If there are any sites present, they would probably be the lithic scatters and small campsites characteristic of other higher elevation associations found in the area (Forest Service Report).

The majority of the known and expected site concentrations are lower in elevation than the lease tract in the canyons and bottoms.

Alt. B  
impacts\*

- g. Vegetation - no impact
- h. Wildlife - subsidence may dry up the two springs near Snow Lake. This would have a negative effect on the wildlife.
- i. Cultural Resources - no impact
- j. Visual Resources - no impact
- k. Recreation - The increased local population due to mining would increase recreation use of the area.
- l. Land uses - mining related activities (subsidence) may dry up the two springs near Snow Lake. That would have a very negative effect on grazing and wildlife.
- m. Transportation and Noise - Increased production rate would increase the noise levels from the mine. If the coal is not conveyed out of Grimes Wash, increased truck traffic could be substantial. Increased local populations would result in more vehicular use of local road and highway systems.
- n. Social Economics - Increased population would impact local communities. Data are unavailable to quantify the impact.

Alt. B

## 2. Mitigating Measures

- a. Climate - none
- b. Air Quality - maintain current dust suppression standards.
- c. Topography, Geology and Paleontology - A subsidence monitoring program would need to be implemented before mining begins. Mining would need to be controlled near the escarpments to protect the escarpment. Ventilation breakout facilities would need to be constructed from inside the mine to preclude as surface access.
- d. Minerals. No decisions have been made concerning possible oil and gas drilling and coal mining of the same area. Future conflicts will need to be resolved on a case by case basis.
- e. Soils - Control mining to protect the escarpments.
- f. Water - Hydrologic monitoring plans will need to be developed and implemented before mining of the tract.
- g. Vegetation - none

Alt. B  
mitigation  
measures

- h. Wildlife. A hydrologic monitoring program will need to be implemented. Should the springs on the tract dry up, mitigation for the preservation of wildlife will be necessary. Any unforeseen impacts will need to be mitigated as these impacts are discovered.
  - i. Cultural Resources - none
  - j. Visual Resources - none
  - k. Recreation - none
  - l. Land Uses - Any current land surface improvements on the tract will need to be protected and/or maintained by the lease.
  - m. Transportation and Noise - The construction and use of conveyors would help eliminate congestion of traffic.
  - n. Social Economics - unable to evaluate

Alt. B

3. Residual Unavoidable Adverse Impacts

- a. Climate - none
- b. Air Quality - none
- c. Topography, Geology and Paleontology - Subsidence will occur, with possible major effects to the water of the tract.
- d. Minerals - A potential oil and gas and coal conflict will still be present.
- e. Soils - none
- f. Water - unable to completely assess, but subsidence could destroy around water flow patterns and change surface water.
- g. Vegetation - none
- \*h. Wildlife - unable to completely assess. Loss of springs would be adverse.
  - i. Cultural Resources - none
  - j. Visual Resources - none
  - k. Recreation - none
  - l. Land Uses - grazing may be more restricted by possible loss of springs.
  - m. Transportation and Noise - none
  - n. Social Economics - unable to evaluate

ALT. B

4. Relationship of Short Term Use and Long Term Productivity

- a. Climate - Not Applicable (NA)
- b. Air Quality - NA
- c. Topography, Geology and Paleontology NA
- d. Minerals NA
- e. Soils NA
- f. Water - Groundwater disruptions would be a long-term effect, and springs drying up would reduce the long term productivity of the lease tract.
- g. Vegetation NA
- \* h. Wildlife - possible loss of surface water could have a very long term negative impact on wildlife.
- i. Cultural Resources NA
- j. Visual Resources NA
- k. Recreation NA
- l. Land Uses - possible loss of water on the tract would reduce the stockuse and wildlife use of the tract.
- m. Transportation and Noise NA
- n. Social Economics - unable to evaluate

AH. B

5. Irreversible and/or Irretrievable Commitment of Resources

- a. Climate - none
- b. Air Quality - none
- c. Topography, Geology and Paleontology - Subsidence would be a permanent thing.
- d. Minerals - 23,160,000 tons of federal coal would be consumed as a result of mining. 34,740,000 tons of federal coal would be left in place and, under current technologies, could never be recovered.
- e. Soils - none
- f. Water - If the springs dry up, they cannot be reclaimed.
- g. Vegetation - none
- \* h. Wildlife - The low of suitable habitat by the possible loss of water is irreplacable.
- i. Cultural Resources - none
- j. Visual Resources - none
- k. Recreation - none

1. Land Uses - Cattle grazing may be reduced if water sources are removed.
- m. Transportation and Noise - none
- n. Social Economics - none
6. Net Energy Balance - no data.

## *Alternative*

### C. Lease the Tract with Coal Extraction Through New Portal Facilities in Grimes Wash

The canyon walls are very steep and road construction would be costly and difficult, with only a small area available for portal facilities. Impacts and effects of exploratory drilling will not be assessed in the report.

A. Individual environmental assessment will need to be prepared after submittal of a drilling program.

#### 1. Impacts

- a. Climate - none
- b. Air Quality - Particulate pollution, especially fugitive dust during the construction phase, would increase in the area result of mining. It is expected that the annual average increased TSP concentration would be below the 19 ug/m<sup>3</sup> incremental limitation.

No impacts to any class I areas are expected.

- c. Topography, Geology, and Paleontology. Topography will be affected by subsidence, but this impact cannot be quantified at this time. The effects of subsidence would be expected to be most significant to the steep escarpments and groundwater.

Significant paleontological resources could be disturbed or destroyed by construction of new surface facilities. Most of the scientifically significant fossils that would be disturbed would be in the Blackout Formation. Surface ventilation breakouts may be necessary.

- d. Minerals. The entire lease tract is leased to oil and gas. To date no wells (oil and gas) have been drilled on the tract.

However, future conflicts may arise if both coal mining and oil and gas exploration are permitted on the tract. 23,160,000 tons of Federal coal would be mined; 34,740,000 tons of Federal coal would be left in the ground. In addition, coal lease boundary barriers would need to be left along the 3.25 miles boundary of the tract that adjoins existing leases held by UP&L. UP&L would also need to lease boundary barriers in their leases, thus reducing the total amount of coal to be extracted.

- e. Soils - Construction of new surface facilities would need to be, for the most part, on the steep escarpments. Cuts in these soils would require extensive upslope cuts that will be impractical if not impossible to reclaim. The low soil moisture and low fertility would make revegetating disturbed areas extremely difficult. Subsidence may increase soil erosion, especially on the steep side slopes, but this cannot be quantified.
- f. Water - Construction of new surface facilities may allow more soils and silts to be lost in times of runoff. However, as no perennial streams are present, this impact would not be great. The area is susceptible to flash flooding, which could be a potential threat to mine safety. Subsidence could cause the springs present to dry up. This would be a negative impact for both livestock and wildlife.
- g. Vegetation - Construction of new surface facilities would require 45-55 acres of surface disturbance. The majority of this disturbance would be on the steep escarpments. The revegetation potential for these soils on the steep canyons is very low if not impossible. Construction would remove 45-55 acres from vegetative production for at least the 40 year mine life.
- h. Wildlife - The removal of 45-55 acres of vegetation for the construction of surface facilities would result in some wildlife habitat loss. Some deer winter range may be lost,

*AH.C impact*

but this is less than 1% of the deer winter range and is not expected to be significant. Subsidence could dry up the two springs on the tract that receive regular use in the summer by wildlife. Removal of this water source would have a significant impact on wildlife.

- i. Cultural Resources - Construction of new surface facilities may disturb archeological resources being impacted are small because most of the surface disturbance would occur on the steep escarpments.
- j. Visual Resources - The construction of an access road in the draw one mile south of Wilberg Mine portal may not meet visual quality objectives. If the access road is constructed on the south-facing slope of the draw, it will not meet the visual quality objective. An access road on the north-facing slope of the draw will meet the visual quality objective.
- k. Recreation - The increased local population due to mining would increase recreation use of the area, but probably not of the tract.
- l. Land Uses - Subsidence may dry up the two springs on the tract. These two springs and Snow Lake are used extensively for stock water and by wildlife.
- m. Transportation and Noise - The construction of new access routes would be necessary for coal extraction from a new mine. Increased coal haul traffic would occur in Grimes Wash. This increase is not expected to exceed this road capacity. If the coal were hauled to rail facilities, coal truck traffic would increase on State Highways 29 and 10 and possible State Highway 236. This cannot be fully assessed now. Increased local population would also increase vehicular use on local roadways. Noise associated with construction, mining and coal transportation would increase, but cannot be quantified at this time.
- n. Social Economics - Increased population would impact local communities, but data are unavailable to quantify the impact.

- f. Water - A hydrologic monitoring plan will need to be implemented before mining begins.
- g. Vegetation - *Hedysarum occidentale* var. *canone*, a plant species proposed as threatened has suitable habitat on the escarpments of the lease tract. Before any surface disturbance occurs, the tract must be surveyed by competent personnel for threatened or endangered plant species. Measures must be taken to protect it, and/or its habitat. Construction of surface facilities would necessitate vegetative removal from 45-55 acres. These areas disturbed would need to be reclaimed at the conclusion of mining.
- \* h. Wildlife - A possible mitigation for the deer and elk of the tract would be to construct a trail off of East Mountain that big game could use as a migratory route. In years of heavy snowfall, elk especially need a migration route off East Mountain.
- i. Cultural Resources - Archaeological surveys and clearance will need to be done prior to any surface disturbances.
- j. Visual Resources - The road needs to be built up the north-facing side of the draw to meet visual quality objectives.
- k. Recreation - None
- l. Land Uses - Any current surface improvements on the tract will need to be protected and/or maintained by the lessee.
- m. Transportation and Noise - Some stipulations are placed on transportation facilities for the control of fugitive dust. These stipulations are discussed under Part IV c2b (Mitigating measures for air quality). Adequate roads for coal haulage will need to be constructed and maintained. Data are not available to evaluate mitigating measures concerning noise.
- n. Social Economics - Data are not available to evaluate any mitigating measures that may need to be taken.

Alt. C  
mitigating  
measures

### 3. Residual Unavoidable Adverse Impacts

- a. Climate - None
- b. Air Quality - Residual TSP emissions would be an estimated 20 tons per year during the 40 year mine life.
- c. Topography, Geology and Paleontology - Topography will be affected by subsidence, but the effects cannot be quantified at this time.
- d. Minerals - Oil and gas exploration and coal mining activities may still be in conflict, even after mining is done.
- e. Soils - If reclamation cannot be successfully done within five years of mining commencement, a long-term scar will be left on the land.
- f. Water - Subsidence could dry up the two springs present on the tract, with negative residual impacts to both wildlife and cattle.
- g. Vegetation - Depending on reclamation success, some areas may be taken out of vegetative production.
- \*h. Wildlife - Subsidence could dry up the springs present on the lease tract, thus removing the significant wildlife water source.
- i. Cultural Resources - None
- j. Visual Resources - None
- k. Recreation - None
- l. Land Uses - If the springs dry up, the land would not be of great value for livestock use because of the reduction of available water.
- m. Transportation and Noise - None
- n. Social Economics - Unable to evaluate.

*All of  
unavoidable  
adverse  
impacts*

### 4. Relation of Short-Term Use and Long-Term Productivity

- a. Climate - Not Applicable (N.A.)
- b. Air Quality - Short-term impacts only.

- c. Topography, Geology and Paleontology - N.A.
- d. Minerals - N.A.
- e. Soils - If the steep escarpments could not be reclaimed within five years, the impact would be a long term one.
- f. Water - Unable to completely assess. Loss of springs would be a long-term impact.
- g. Vegetation - Long-term productivity could be lost if the reclamation is not successful.
- \* h. Wildlife - A possible loss of surface water could result in a loss of long-term wildlife productivity.
- i. Cultural Resources - N.A.
- j. Visual Resources - N.A.
- k. Recreation - N.A.
- l. Land Uses - If springs were to dry up because of mining, cattle grazing on the tract would be reduced, thus reducing the long-term productivity of the tract.
- m. Transportation and Noise - N.A.
- n. Social Economics - Unable to evaluate.

5. Irreversible and/or Irretrievable Commitment of Resources

The only category to be affected would be that of Minerals. Approximately 23,160,000 tons of Federal coal would be irretrievably consumed as a result of mining. 34,740,000 tons of Federal coal would be left in place and, with current technologies, could never be recovered. The lease boundary barriers would also need to be left in the ground.

Possible irreversible and/or irretrievable loss of resources may occur based upon the effects of subsidence. Groundwater movement could be disturbed, with possible loss of surface springs. This loss would be irreversible. The loss of this water would also hurt the wildlife and range resources.