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12/15/86 ~~Baxton~~
Mine File
S. Kramer

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Drive
Price, Utah 84501

Reply to: 2820

Date: December 1, 1986

RECEIVED
DEC 03 1986

Mr. Richard M. Holbrook
Office of Surface Mining
Reclamation and Enforcement
Brooks Towers
1020 15th Street
Denver, Colorado 80202

**DIVISION OF
OIL, GAS & MINING**

Dear Mr. Holbrook:

The Manti-LaSal National Forest has reviewed Genwal Coal Company's Mine and Reclamation Plan for Tract 2.

We consent to approval of the Plan subject to the stipulations discussed in the Environmental Assessment (EA) prepared by the Manti-LaSal National Forest on April 23, 1983 for modification of Federal Coal Lease SL-062648 (enclosed). These stipulations were included as special stipulations in Section 31 of the modified lease issued on March 31, 1984.

We also have the following comments on the Tract 2 Mine Plan which need to be addressed.

1. The table of contents at the beginning of each volume should have a title and each of the chapters should be numbered.
2. Section 3.3.8.1, Page 3-5

At the present time, Genwal Coal holds no further leases in the area, however, an application for approximately 256 acres has been filed with the Bureau of Land Management.

Federal Coal Lease U-54762 has been issued to Genwal Coal Company. This discussion should be revised accordingly.

3. Section 3.5.1.1, Page 3-6

. . . and since the operation on this permit area involves no surface disturbance, no impacts are expected to the current or future land use.

It should be discussed that there may be effects from subsidence.

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4. Section 3.5.6, Page 3-8

In addition, Genwal Coal Company is committed to mitigating as much as possible the adverse effects of mining or associated activities through a training film supplied by the UDWR.

An exploration is needed. Are there specific measures that will be required which are discussed in the training film? If so, they should be discussed in this section.

5. Section 3.5.8, Page 3-11

The only renewable resource known to exist on the surface area is not expected to have a negative impact on the forest.

This statement does not make sense as written.

6. Chapter 6, Table of Contents

The table of contents for the Chapter 6 appendix must be changed to match the table of contents at the beginning of Chapter 6. The use of tables and figures is interchanged.

7. Section 6.4.1, Page 6-2

The geology of the mine area is shown on Plate 6-1 and in a geologic cross-section on Figure C-1.

Plate 6-1 is an overburden isopach map not a geologic map, and Figure C-1 cannot be found. A geologic map at approximately the scale as Plate 6-1 should be added. Presumably, Figure C-1 referred to here is the cross-section (Figure 6-1) which was included in the appendix as Item 4. The location of the cross-section should be shown on the geologic map.

8. Section 6.4.1, Page 6-3

. . . the Blackhawk Formation is approximately 1,00 feet thick.

This should be corrected to 1,000 feet.

9. Section 6.4.2, Page 6-4

The anticline and syncline axis have a predominant east-west orientation, while the fault zones are generally oriented north-south (see Figures 6-2 and 6-3).

Figure 6-3 and Item 7, which is labeled as Figure 8, show the geologic structure. Figure 6-2 cannot be found.

10. Section 6.4.6, Page 6-6

See Plate 6-2.

This Plate cannot be found.

11. Section 6.5.6.1, Page 6-6

Appendix 6-1 shows the results of several samples taken from the floor and roof of the coal seam.

Appendix 6, Item 1, is a generalized stratigraphic section. Appendix 6, Item 8, contains the results of the discussed testing. This reference must be corrected.

12. Section 7.2.4, Page 7-32

See Item 10 in our letter to OSM, dated November 5, 1986, in response to the Tract 1 Mid-Term Review. Since Genwal Coal Company diverts water from Crandall Creek for mine use, they must assure that minimum instream flows are allowed to flow beyond their point of diversion.

The water usage on the road for dust suppression has been reduced by treatment with magnesium chloride. The 12,000 gallon per day usage has been reduced. This section should be revised accordingly.

13. Section 9.5, Page 9-3

Sensitive plant *Hedysarum occidentale* var. *canone* has been located adjacent to the permit area and may, in fact, be in the permit area. This plant was not addressed in the Tract 1 Mine and Reclamation Plan.

/s/ William H. Boley

for
REED C. CHRISTENSEN
Forest Supervisor

Enclosure

cc: Lowell Braxton - Utah Division of Oil, Gas, and Mining, D-3

FINDING OF NO SIGNIFICANT IMPACT
DECISION NOTICE

MODIFICATION
FEDERAL COAL LEASE SL-062648
EMERY COUNTY, UTAH
MANTI-LASAL NATIONAL FOREST

On November 5, 1980, Genwal Coal Company filed a request with the BLM to modify Federal coal lease SL-062648. The subject leases are located in the Manti-LaSal National Forest, Price Ranger District, Price, Utah.

Genwal Coal Company controls Federal coal lease SL-050655 located in Valentines Gulch which is approximately 10 miles north of Genwal's Federal coal lease SL-062648 in Crandall Canyon. Genwal proposed to trade SL-050655 containing 80 acres in T. 14 S., R. 6 E., Sec. 13 for lot 1 located in Sec. 6 and lot 4 located in Sec. 5, T. 16 S., R. 7 E., on the north boundary of their Crandall Canyon lease SL-062648. The combined lots contain 75.23 acres. The proposed modification is less than 160 acres and is submitted pursuant to 43 CFR 3432.0-3.

A Forest Service Interdisciplinary Team has evaluated the proposed action and an environmental assessment (EA) has been prepared. Copies of the environmental assessment and other pertinent documents are on file and available for review at the following locations:

Manti-LaSal National Forest
Forest Supervisor's Office
599 West Price River Drive
Price, Utah 84501

Manti-LaSal National Forest
Price Ranger District
10 North Carbon Avenue
Price, Utah 84501

Two alternatives were considered by the ID Team: no action (which would allow coal mining on SL-050655 and isolation and ultimate "loss" of the resource on the modification acreage) and the proposed action.

With due consideration for the issues and concerns and other facts addressed in the EA, it has been determined to recommend the lease modification providing that lease SL-050655 is relinquished. The modification is subject to the management requirements (Standard Coal Lease Stipulations) found in Appendix C of the EA.

Pursuant to the National Environmental Policy Act of 1969, a determination has been made, through the environmental assessment process, that the proposed action will not create any significant impacts to the human environment. An Environmental Impact Statement will, therefore, not be required. This determination was based on

consideration of a number of factors that are discussed in greater detail in the environmental assessment. The primary considerations are as follows:

1. The proposed lease modification will not be a major Federal action.
2. The proposed action can be implemented within the management guidelines and directives specified in the Manti-LaSal National Forest, Ferron-Price Land Management Plan.
3. The Interdisciplinary Team did not identify any concerns for archeological nor paleontological values; prime farm, range, or timber lands; threatened or endangered animals and plants, floodplains or wetlands; alluvial valley floors; nor RARE II further study areas within the project area.

Implementation of this action may take place immediately upon approval.

This decision is subject to administrative review (appeal) pursuant to 36 CFR 211.19.

Responsible Official:

/s/ T.A. Roederer
J. S. TIXIER
Regional Forester

4/22/83
Date

ENVIRONMENTAL ASSESSMENT
MODIFICATION OF FEDERAL COAL LEASE SL-062648
GENWAL COAL COMPANY, INC.
EMERY COUNTY, UTAH

Lead Agency: USDA, Forest Service
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Responsible Official: Regional Forester
Intermountain Region
324 25th Street
Ogden, Utah 84401

For Further Information Contact: District Ranger
Price Ranger District
Manti-LaSal National Forest
10 North Carbon Avenue
Price, Utah 84501

Preparation: Bruce Jessen, Geologist

Recommend Approval:

Don W. Hatch
District Ranger

Date:

3/3/83

Approved:

Paul C. Chamberlain
Forest Supervisor

Date:

3/9/83

I. INTRODUCTION

A. Purpose Or Need For Action

Genwal Coal Company has filed an application for modification of their Federal Coal Lease SL-062648. The BLM formally notified the Forest Service of this pending lease modification application by correspondence dated July 30, 1981 (see appendix A). Genwal is requesting the modification to permit mining of the coal reserves within the proposed modification area in conjunction with proposed mine development in their adjacent Federal Coal Lease SL-062648 (see figures 1 and 2).

The modification is contingent upon voluntary relinquishment of Genwal's lease SL-050655 in Valentines Gulch, T14S, R6E, Sec 13, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SLM, containing 80 acres. The exchange is recommended by the Forest Service, BLM, USGS and Genwal due to the Valentines Gulch lease being in a highly scenic area and compounded by the fact that access is a major problem. The general consensus is that the modification would lessen impacts to the resources and provide for the needs of the company. (see figures 1, 2, 3 and Appendix B).

Since lease SL-062648 is located entirely within the Manti-LaSal National Forest, Forest Service concurrence is required prior to approval of the proposed modification by BLM. This Environmental Assessment will determine concurrence or disapproval and establish Forest Service recommendations and constraints to be included as stipulations in the lease modification.

1. Authorizing Actions

The proposed lease modification will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 13, 1954; the Department of Energy Organization Act of August 4, 1977; the National Environmental Policy Act (NEPA) of 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; the Act of October 30, 1978 that further amended the Mineral Leasing Act of 1920; and regulations: Title 43 CFR Subpart 1821 & 3041, Part 3400, Part 2800 and Title 30 Part 211, Part 700; the Ferron-Price Land Management Plan and EIS of May 1979.

2. Relationship to Land-Use Planning and Unsuitability Criteria

The lease modification area is located within Management Unit A-3 the Huntington Canyon Unit, of the Ferron-Price Land Management Planning Unit. Management decisions and guidelines for this unit and for all the "coal lands" are specified in the "Land Management Plan, Ferron-Price Planning Unit, Manti-LaSal National Forest". Development of the modification is compatible with all pertinent management guidelines specified for Management Unit A-3, and for the "coal lands" in general. Any future surface disturbing activities will be controlled to accommodate various management guidelines.

As required by the Surface Mining Control and Reclamation Act of 1977 and subsequent regulations, the Federal Lands Unsuitability Criteria were applied to Area "A" (the "coal lands") of the Ferron-Price Planning Unit as a part of the Environmental Statement and Land Management planning process. A review of the Unsuitability Criteria and their application to the Ferron-Price Planning Unit indicates that none apply to the subject lease modification.

B. Issues, Concerns, Opportunities

The ID Team listed on page 10 has reviewed and discussed the alternatives and their effects on the environment. Based on their knowledge of the proposed action the following issues, concerns and opportunities have been identified.

1. Hydrology and Water Quality

Subsidence can occur due to undermining which could impact groundwater and surface water occurrence and quality.

2. Escarpment Failure

This can occur if a sufficient amount of coal is not retained on the escarpment faces or as a result of subsidence.

3. Opportunities

- a. There is an opportunity to mine coal which otherwise may be uneconomical to mining.
- b. There is an opportunity to terminate lease SL-050655 (Valentines Gulch) via Genwal's relinquishment. That lease is in a highly scenic area and would entail significant impacts upon resource values for developments. (See figures 1 & 3).

C. Negative Declaration

The ID Team did not identify any archeologic or paleontologic values; prime farm, range or timber lands; threatened or endangered animals and plants; floodplains or wetlands; alluvial valley floors; or RARE II further study areas within the project area. An archeological survey has been conducted, and threatened and endangered plant and animal reports are available in the Price Ranger District Office.

D. History, Background or Other Information

Surface developments near the proposed lease modification and future coal mining operations are covered in the Genwal Coal and Bridge, and Genwal Mine Plan Environmental Assessments. (See page 11 list of references). Mineable coal is present in the existing coal lease in both the Hiawatha and Blind Canyon seams. The Hiawatha Seam is 6.0 feet thick. Approximately

840,000 tons of coal is in place with 420,000 tons recoverable. Thirty five thousand tons were removed in the 1950's (about 2 acres). The lease modification area should contain the identical seams.

Development of the proposed lease modification can be conducted entirely from underground. No breakouts or surface facilities of any type should be required. Room and pillar mining techniques would be utilized. The lease modification tract would be mined by an extension of Genwal's proposed mining operations.

Presumably, the coal would be mined at the same rate of production and with the same work force requirements as the proposed mining operation. These are discussed in detail by Genwal's mining and reclamation plan.

II. ALTERNATIVES

A. Alternative One - No Action

Consideration of the "No Action" alternative is required and by section 1502.14(d) of the National Environmental Policy Act of 1969 (NEPA) and by CEQ guidelines as listed in the Federal Register November 29, 1979. The "No Action" alternative in this case, would be denial of the lease modification requested by Genwal Coal Company. This is the only viable alternative to the proposed action. Under the "No Action" alternative, the subject lease modification would not be granted. Mining would continue as previously planned in lease SL-062648. Once this development is completed, mining would retreat from this area, isolating the coal reserves in the proposed lease modification. As a result, these reserves would not be mined and no rental fees or royalties would be returned to the government. Lease SL-050655 (Valentines Gulch) located in a highly scenic area with access and other coordination problems may then be developed and mined. This development would be extremely undesirable from an environmental standpoint.

B. Alternative Two - Proposed Action

1. Description

The proposed action is modification of Federal Coal Lease SL-062648 as described in Genwal's application filed with BLM. Their mine plan for this lease has been approved. The proposed modification would add the adjacent northerly 75.23 acres area to lease SL-062648 (See appendix A).

Federal Coal Lease SL-062648 is located on the northern side of Crandall Canyon approximately 1½ miles west of State Hwy 31. Crandall Canyon is 15 miles north west of Huntington in Emery County, Utah. Both properties are federally-owned lands managed by the Manti-LaSal National Forest, Price Ranger District. Legal descriptions of the area being discussed are as follows:

Crandall Canyon: Coal Lease SL-062648, SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 5; SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 6,
T16S,R7E, SLM, Utah Totaling 80 acres

Crandall Canyon: Proposed Lease Modification: Sec. 5, Lot 4;
Sec. 6, Lot 1
T16S,R7E, SLM, Utah
Totaling 75.23 acres

Valentines Gulch: Coal Lease SL-050655, T14S,R6E Sec. 13, SLM, Utah
SE $\frac{1}{4}$ NW $\frac{1}{4}$,NE $\frac{1}{4}$ SW $\frac{1}{4}$
Totaling 80 acres

Figure 1 shows the general location of Coal Lease SL-062648 and SL-050655.
Figure 2 shows detailed location of the proposed lease modification.
Figure 3 shows detailed location of Coal Lease SL-050655, Valentines
Gulch, (to be relinquished).

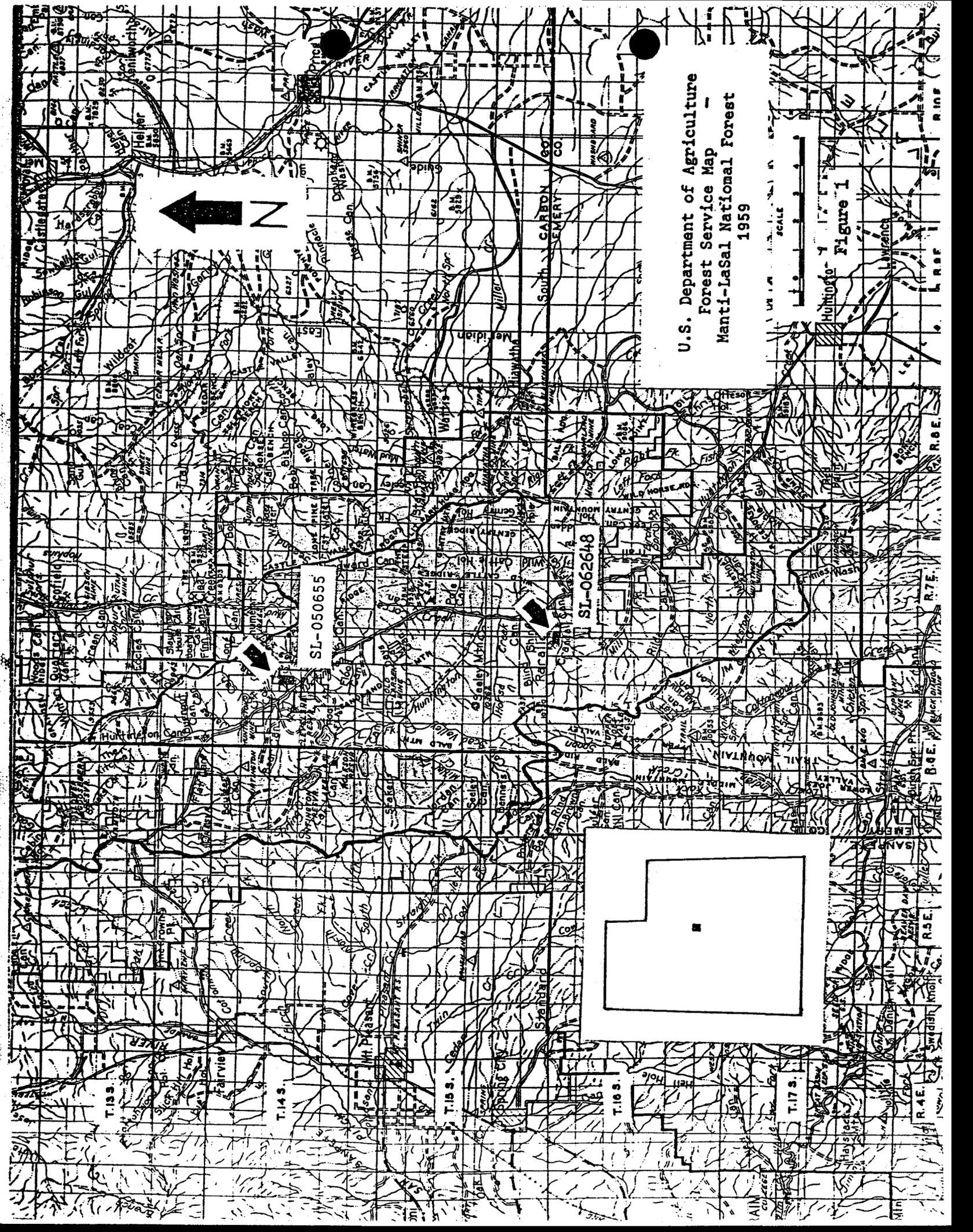
The mine workings under development on Lease SL-062648 provide the best feasible means of access to the tract. The entire south boundary of the proposed lease modification is adjacent to lease SL-062648. Both known coal seams would be accessible with a rock slope entry if not mined from the existing lease. This would entail surface access to the proposed modification tract which could only be achieved by building access roads and surface facilities on the steep slopes and cliffs present on the north side of Crandall Canyon. The relatively small quantity of mineable reserves present within the proposed lease modification could not justify the economic and environmental costs associated with these developments.

2. Management Requirements, Constraints and Mitigations

The standard surface protection coal lease stipulations will be applicable to the lease modification. (See appendix C).

III. DESCRIPTION OF EXISTING ENVIRONMENT-AFFECTED ENVIRONMENT

Environmental factors-resource elements discussed in this section are those that were identified during the ID Team review. The affected environment is generally described in the "Final Environmental Statement: Development of Coal Resources in Central Utah"; the "Final Environmental Statement: Ferron-Price Planning Unit, Manti-LaSal National Forest"; and the "Land Management Plan, Ferron-Price Planning Unit, Manti-LaSal National Forest". The existing regime is fully described in the aforementioned environmental assessments involving Genwal Coal Company mine plan in Crandall Canyon; the Valentines Gulch, 1980, Lease SL-050655 readjustment EA; and the Beaver Creek Coal Company ($\frac{1}{2}$ mile east & south), 1981 Emergency Coal Lease U-48492, EA.



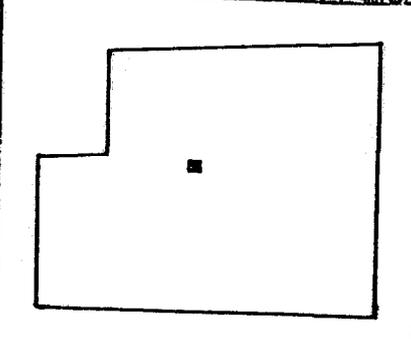
U.S. Department of Agriculture
Forest Service Map -
Manti-LaSal National Forest
1959



Figure 1

SL-050655

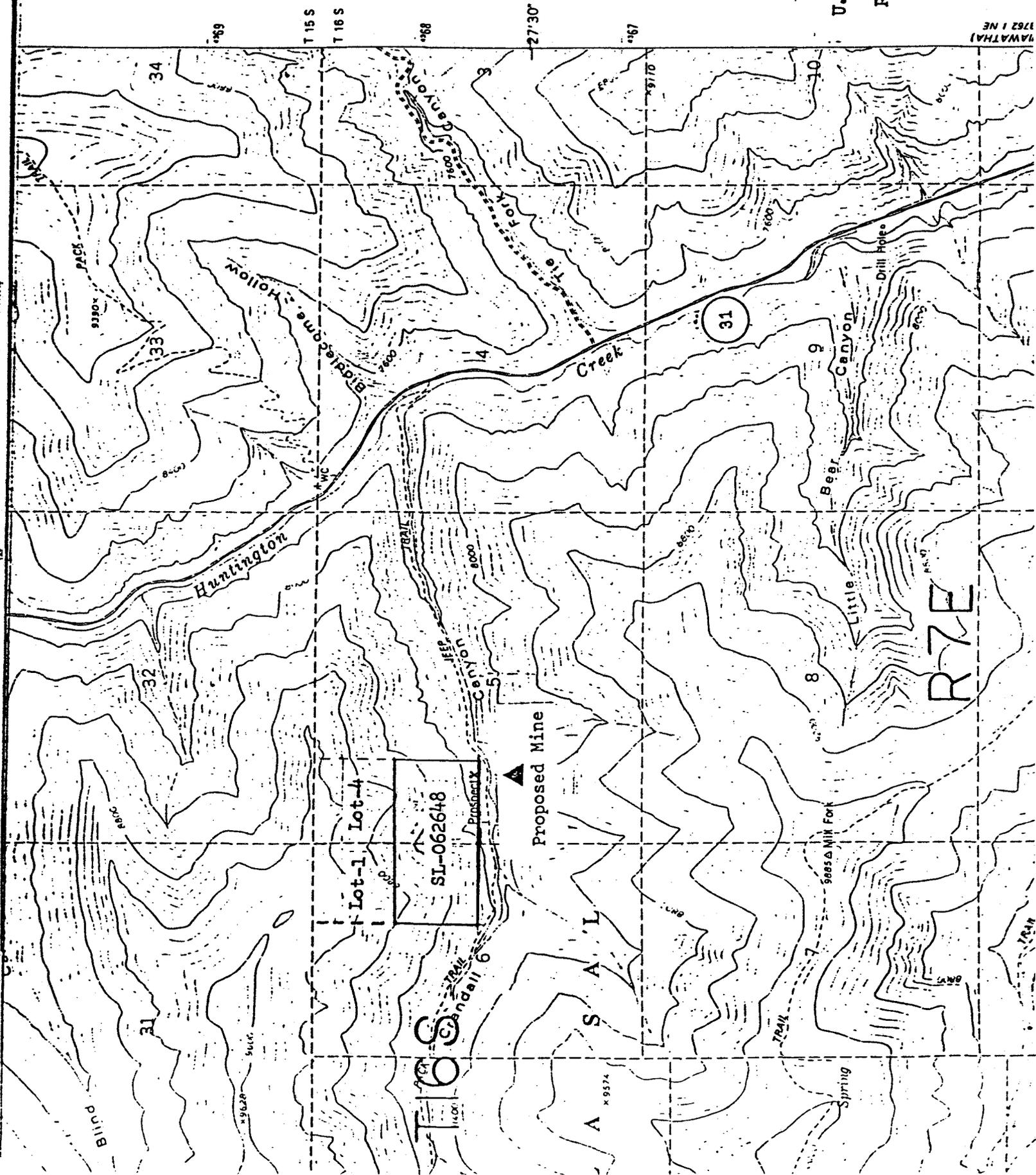
SL-062648



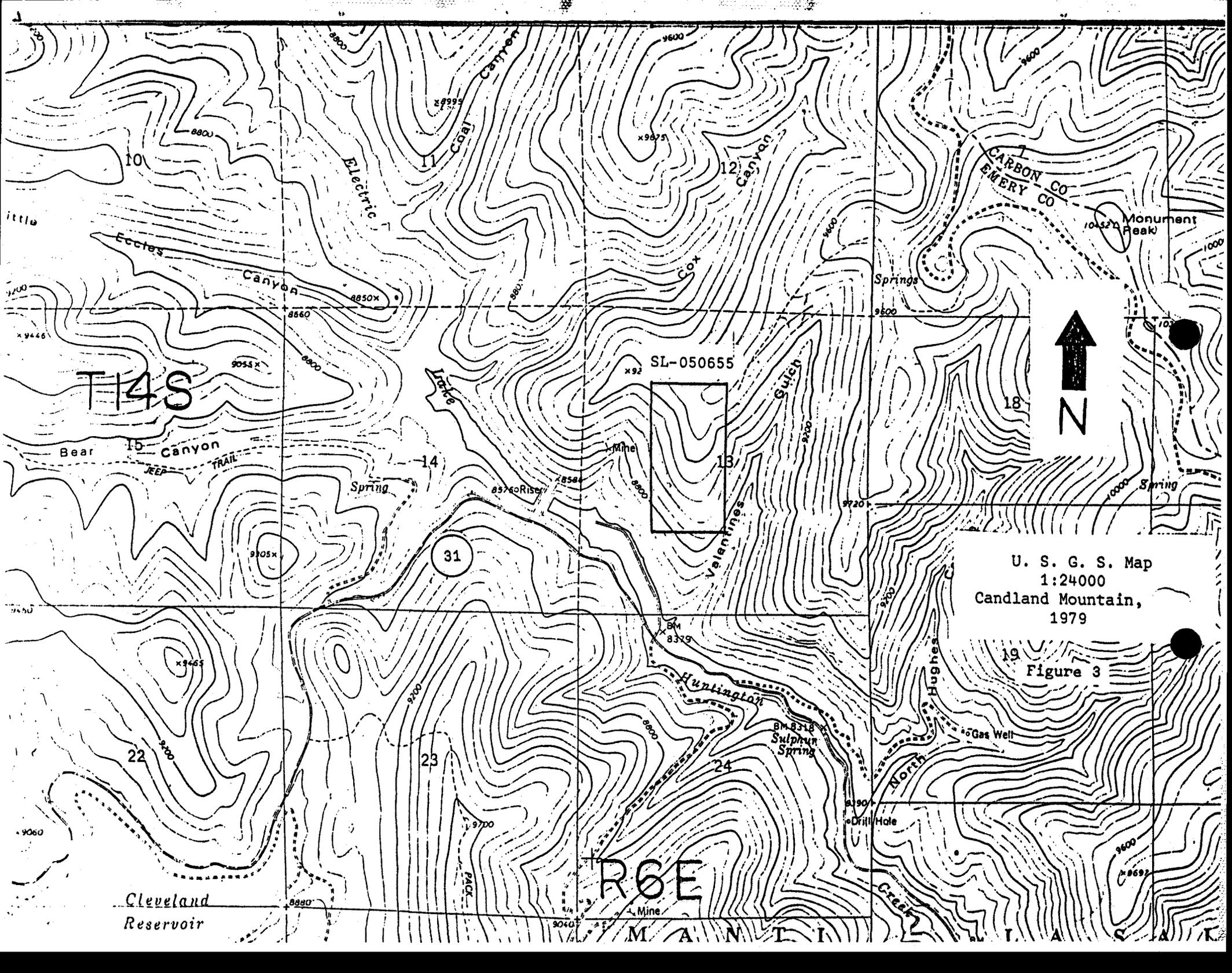


U. S. G. S. Map
1:24000
Rilda Canyon
1979

Figure 2



1752 1 NE
1752 1 NE



T14S

SL-050655



U. S. G. S. Map
1:24000
Candland Mountain,
1979

Figure 3

R6E

Cleveland
Reservoir

MANTIA CREEK

A. Hydrology and Water Resources

The lease modification is within the Crandall Creek and Huntington Canyon drainages. Groundwater in the area of the lease modification is generally of good quality.

IV. ENVIRONMENTAL CONSEQUENCES-ENVIRONMENTAL IMPACTS

A. Alternative One - No Action

Under the "No Action" alternative mining would still occur on the original 80 acres area of lease SL-062648 as proposed by Genwal Coal Company. A number of mining related impacts would occur, however, they would not be extended to include the proposed lease modification area. These impacts are discussed in the following section of this report. Impacts to the various resources could occur if development of lease SL-050655 were to take place.

B. Alternative Two - Proposed Action

1. Short-Term and Residual Impacts

Subsidence could create some impacts to surface resources on the lease modification area. At the present time, these impacts cannot be accurately predicted; however, several general types of impacts may be expected. Changes in the ground water system caused by subsidence could affect surface water occurrence and yield. Any resultant changes in water distribution could affect vegetative growth and/or wildlife use. Topographic surface expressions of subsidence, such as depressions, slope failures, tension cracks, etc., can also be expected.

Appropriate mitigation measures applied to developments can reduce the significance of most of these impacts. Although most of the impacts would not be permanent, they would exist through the duration of the mining operation.

2. Short-term and Long-term Productivity

Development of the proposed lease modification would return rental fees and production royalties to the United States at the rates applicable to lease SL-062648.

Most of the major long-term effects would result from associated developments, such as portals, conveyor systems, power plants, etc., which are not proposed for this lease modification.

The proposed action over the long-term would result in consumption of a non-renewable resource and will deny its use for future generations.

With the acquisition and development of the additional acreage the projected mine life of 5 years or the annual production rate of 132,000 tons as described in the approved mine plan would require change. Essentially the mine life or the production rate would approximately double. In the case of the former, the impacts would remain essentially the same only cover a 10 year or longer period. In the case of the latter, production and coal haul facilities would require upgrading to sustain the 250,000 tons/year plus production rate over 5 years, which could yield additional environmental impacts. Either case would require the filing of a mine plan modification that would be subject to review and approval.

Long-term biologic productivity based on pre-existing yield of ground water aquifers may be reduced if aquifers are contaminated due to mining operations. Where yield of an aquifer is reduced, reduction of dependent productivity will be permanent. Disruption of an aquifer by underground mining or subsidence may permanently affect water availability.

3. Irreversible and Irretrievable Commitments

Approval of the lease modification would irreversibly and/or irretrievably commit the coal resources of the subject lands. All other resources for this area would remain uncommitted.

Extraction of coal and associated developments would require a commitment of liquid fossil fuel, electric power, lubricants, explosives, manpower, machinery, structural materials, etc. These materials and efforts will be irretrievably lost to other uses.

Those aquifers that would be physically disturbed during mining or subsidence could be irreversibly changed. The chemical quality of water in some aquifers could be irreversibly changed.

V. PERSONNEL AND PUBLIC INVOLVEMENT

A. Forest Service ID Team

The following Forest Service ID Team convened November 2 and 3, 1981 to identify and discuss the issues and concerns, anticipated effects, possible alternatives and mitigating measures associated with this project.

Brent Barney	Engineer, SO
Dennis Kelly	Hydrologist, SO
Steven Spencer	Range Conservationist, D-3
Bruce Jessen	Geologist, D-3

Consultant with Others

Ira Hatch	District Ranger, D-3
Dan Larsen	Soils, SO
Jim Jensen	Visual and Recreation, SO
Dwain McGarry	Geologist, D-3
Carol Morrison	Wildlife, D-3
Walt Nowak	District Geologist, D-3
Gary Say	Forester, D-3

VI. LIST OF APPENDICES

- A. Letter dated July 30, 1981, from BLM to the Forest Service.
- B. Letter dated June 17, 1981, from the Forest Service to BLM.
- C. Standard Coal Lease Stipulations.

REFERENCES

1. Apparent Completeness Review, 3 volumes, 1981, Crandall Canyon Coal Mine, Genwal Coal Company.
2. Environmental Assessment, 1981, "Beaver Creek Coal Company Emergency Coal Lease".
3. Environmental Assessment, 1981, "Crandall Canyon Road and Bridge".
4. Environmental Assessment, 1982, "Crandall Canyon Mine".
5. Environmental Assessment, 1981, "Valentines Gulch Lease Readjustment".
6. Genwal Coal Company, 1981, Permit Application and Mine Plan, Vol. 1, Crandall Canyon Coal Mine.
7. USDA, Forest Service 1979, "Land Management Plan Ferron-Price Planning Unit, Manti-LaSal National Forest.
8. _____, 1979, "Final Environmental Statement: Ferron-Price Planning Unit, Manti-LaSal National Forest".
9. USDI, US Geological Survey, 1979, "Final Environmental Statement: Development of Coal Resources in Central Utah".
10. USDA, Forest Service, 1983, "Environmental Assessment, Readjustment of Federal Coal Lease SL-062648.

environmental assessment report is sufficiently advanced to schedule the public meeting. The Moab District Office would be BLN's contact on this matter.

We have enclosed a copy of the application and Geological Survey Report for your information.

Sincerely yours,

Dean E. Stapanian

State Director

ACTING

Enclosure
Geological Survey Report
Exploration Plan

cc:— Forest Supervisor, Manti-LaSal National Forest
350 East Main, Price, Utah 84501
Moab District Office

324 25th Street
Ogden, UT 84401

2820

JUN 17 1981

Mr. Dean E. Stepanek
Acting Utah State Director
Bureau of Land Management
136 East South Temple
Salt Lake City, UT 84111

Dear Mr. Stepanek:

Enclosed is an Environmental Assessment pertaining to the readjustment of Federal Coal Lease SL-050655. The assessment addresses both the readjustment of the coal lease and a preferred alternative which involves the relinquishment of the subject lease and a modification of Federal Coal Lease SL-062648 to embrace an additional 80 acres of coal lands in:

- T. 16 S., R. 7 E., SIM namely;
- Sec. 5, lot 4;
- Sec. 6, lot 1.

As indicated in Appendix A of the EA, the possibility of such an action was explored about 4 years ago. Our files show there has been no followup to this proposal, although all concerned parties (FS-BLM-GS) and the lessees were agreeable to the action.

Before we submit our final recommendations on this lease readjustment, we would appreciate your review of our EA and your evaluation of the possibility of a modification of SL-062648 to include 80 acres of coal land, in effect an exchange for coal lease SL-050655.

Sincerely,

William L. Johnson

for L. KENT MAYS, JR.
Deputy Regional Forester
Resources

Enclosure

cc:
Manti-LaSal NF

APPENDIX *AC*

MANAGEMENT REQUIREMENTS
STANDARD COAL LEASE STIPULATIONS

STIPULATION 1

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

STIPULATION 2

All support facilities, structures, equipment, and similar developments will be removed from the lease area within two years after the final termination of use of such facilities. All disturbed areas and those areas occupied by such facilities will be rehabilitated in accordance with an approved reclamation plan, 30 CFR 211 and the "Surface Mining Control and Reclamation Act of 1977" or approved Utah program as applicable.

STIPULATION 3

(a) Before undertaking any activities that may disturb the surface of the leased lands, the Lessee may be required to conduct a cultural resource intensive field inventory in a manner specified by the Regional Director and the Authorized Officer of the surface managing agency on portions of the mine plan area and adjacent areas, or exploration plan area, that may be adversely affected by lease-related activities and which were not previously inventoried at such a level of intensity. The inventory shall be conducted by a qualified professional cultural resource specialist (i.e., archaeologist, historian, or historical architect, as appropriate), approved by the Authorized Officer of the surface managing agency and a report of the inventory and recommendations for protecting any cultural resources identified shall be submitted to the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area) and the Authorized Officer of the surface managing agency. The Lessee shall undertake measures, in accordance with instructions from the Regional Director (or the District Mining Supervisor if activities are associated with coal exploration outside an approved mining permit area), to protect cultural resources on the leased land. The Lessee shall not commence the surface disturbing activities until permission to proceed is given by the Regional Director or the District Mining Supervisor as appropriate.

(b) The Lessee shall protect all cultural resource properties within the lease area from lease-related activities until the cultural resource mitigation measures can be implemented as part of an approved mining and reclamation plan or exploration plan.

(c) The cost of conducting the inventory, preparing reports, and carrying out mitigation measures shall be borne by the Lessee.

(d) If cultural resources are discovered during operations under this lease, the Lessee shall immediately bring them to the attention of the Regional Director (or the District Mining Supervisor as appropriate), and the Authorized Officer, Surface Management Agency. The Lessee shall not disturb such resources except as may be subsequently authorized by the Regional Director (or the District Mining Supervisor). Within two (2) working days of notification, the Regional Director (or the District Mining Supervisor, as appropriate) will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect or preserve such discoveries.

(e) All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.

STIPULATION 4

Before undertaking any activities that may disturb the surface or the leased lands, the Lessee shall contact the Regional Director and Authorized Officer of the Surface Management Agency to determine whether the Lessee will be required to conduct a paleontological appraisal of the mine plan and adjacent areas, or exploration plan areas, that may be adversely affected by lease-related activities. If the Regional Director and Authorized Officer, Surface Management Agency, determines that one is necessary, the paleontological appraisal shall be conducted by a qualified paleontologist approved by the Authorized Officer of the surface management agency, using the published literature and, where appropriate, field appraisals for determining the possible existence of fossils of scientific significance. A report of the appraisal and recommendations for protecting any fossils of significant scientific interest on the leased lands so identified shall be submitted to and approved by the Regional Director and the Authorized Officer, Surface Management Agency. When necessary to protect and/or collect the fossils of significant scientific interest on the leased lands, the Lessee shall undertake the measures provided in the approval of the mining and reclamation plan or exploration plan.

(a) The Lessee shall not knowingly disturb, alter, destroy, or take any fossils of significant scientific interest, and shall protect all such fossils in conformance with the measures included in the approval of the mining and reclamation plan or exploration plan.

(b) The Lessee shall immediately bring any such fossils that might be altered or destroyed by his operation to the attention of the Regional Director or the District Mining Supervisor, as appropriate. Operations may continue as long as the fossil specimen or specimens would not be seriously damaged or destroyed by the activity. The Regional Director or the District Mining Supervisor, as appropriate, shall evaluate or have evaluated such discoveries brought to his attention and, within five (5) working days, shall notify the Lessee what action shall be taken with respect to such discoveries.

(c) All such fossils of significant scientific interest shall remain under the jurisdiction of the United States until ownership is determined under applicable law. Copies of all paleontological resource data generated as a result of the lease term requirements will be provided to the Regional Director or the District Mining Supervisor, as appropriate.

(d) These conditions apply to all such fossils of significant scientific interest discovered within the lease area whether discovered in the overburden, interburden, or coal seam or seams. Fossils of significant scientific interest do not include those fossils commonly encountered during underground mining operations such as ferns and dinosaur tracks. Skeletal remains shall be considered significant.

STIPULATION 5

The Lessee shall, prior to entry upon the lease, conduct an intensive field inventory for threatened and endangered plant and/or animal species, bald or golden eagles, or migratory species of high Federal interest on those areas to be disturbed and/or impacted including the access routes to the lease area. The inventory shall be conducted by a qualified specialist(s) approved by the Authorized Officer, Surface Management Agency, and a report of the inventory and recommendation for the protection of these species submitted to and approved by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate. An acceptable report of any findings shall include the specific location, distribution, and habitat requirements of the species. The Lessee shall protect these species within the lease area from any activities associated with operations conducted under the terms of the lease and shall undertake such protective measures as may be required by the Authorized Officer, Surface Management Agency, and Regional Director or District Mining Supervisor as appropriate.

STIPULATION 6

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to conform with the publication "Suggested Practices for Raptor Protection on Powerlines" (Edison Electric Institute, 1975). When feasible, powerlines will be located at least 100 yards from public roads.

STIPULATION 7

The Lessee shall provide for the suppression and control of fugitive dust on all haul roads, and at coal hauling, transportation, and storage facilities. The migration of road surfacing materials shall be controlled by watering, chemical treatment or hard surfacing. Loss of gravel courses shall be periodically replaced.

STIPULATION 8

In order to avoid surface disturbance on steep canyon slopes and the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific locations approved by the Regional Director with the concurrence of the Authorized Officer, Surface Management Agency and the District Mining Supervisor.

STIPULATION 9

Prior to mining, the Lessee shall perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. The study will be established in consultation with and approved by the Authorized Officer, Surface Management Agency, the Regional Director, and the District Mining Supervisor and shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation, and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

STIPULATION 10

The Lessee shall establish a monitoring system to locate, measure, and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology, and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a sufficient number of points over the lease area. The monitoring shall be an extension of the baseline data and shall be conducted by a method approved by the Regional Director in consultation with and concurrence by the Authorized Officer, Surface Management Agency and District Mining Supervisor.

STIPULATION 11

Underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to surface structures, and improvements, and (3) damage or alter the flow of perennial streams. The Lessee in his mining plan shall provide specific measures for the protection of escarpments. The Regional Director in consultation with and concurrence of the District Mining Supervisor and Authorized Officer, Surface Management Agency, shall approved such measures and may prescribe any additional measures to be employed such as mining methods, specify the amount of coal recovered, and determine any corrective measures considered necessary to assure that escarpment failure does not occur except at specifically approved locations, or that hazardous conditions are not created.

STIPULATION 12

Existing surface improvements required for the surface uses of the lease area will need to be protected or maintained to provide for the post-mining continuance of the current land uses. Existing surface improvements whose utility may be lost or damaged as a result of mining activities are to be replaced or restored.

STIPULATION 13

The Lessee shall reclaim all areas disturbed as a result of mining and exploration operations to a land use capable of supporting the premining levels of livestock grazing, big game winter range, and other wildlife habitat.

STIPULATION 14

At the conclusions of the mining operation, or at the request of the Authorized Officer of the Surface Managing Agency, all damaged, disturbed, or displaced land monuments, accessories and appendages shall be replaced or restored in their original location (or at other locations that meet the needs of the land net, and as approved by the Authorized Officer of the Surface Managing Agency) and shall be done at the expense of the Lessee.