



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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Salt Lake City, Utah 84180-1203  
801-538-5340

August 8, 1990

Mr. C. F. Vaughn, President  
Nevada Electric Investment Company  
6226 West Sahara  
Las Vegas, NV 89102

Dear Mr. *Charlie* Vaughn:

Re: Revised State Permit and Decision Package, Genwal Coal Company,  
Crandall Canyon Mine, ACT/015/032, Folder #2, Emery County, Utah

Enclosed is a revised permanent program mining permit for the Crandall Canyon Mine, which includes the new underground access Right-of-Way. Also included is a copy of the State's Decision Document for the Right-of-Way.

Please note that for purposes of responding to the stipulations, the permit approval date is the date at the top of the first page of the revised permit, August 8, 1990. The permit will still expire on the renewed permit expiration date, May 13, 1993. Two copies of the permit are included. Please read the stipulations in Attachment A, then sign both copies and return one to the Division.

Your cooperation during the permitting process is appreciated.

Best Regards,  
*Dianne*  
Dianne R. Nielson  
Director

DRH/djh  
Enclosures  
cc: P. Rutledge, OSM, Denver  
R. Hagen, OSM, Albuquerque  
A. Childs, Genwal  
G. Morris, USFS  
B. Malencik, DOGM, PFO  
"B" Team  
BT6085/1

UTAH DIVISION OF OIL, GAS & MINING  
STATE DECISION DOCUMENT

Crandall Canyon Mine  
Right-of-Way  
ACT/015/032

Genwal Coal Company, Inc.  
Emery County, Utah  
August 8, 1990

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Bureau of Land Management, June 19, 1990

Utah Division of Wildlife Resources, June 6, 1990

Division of State History, June 6, 1990

Office of Surface Mining Reclamation and Enforcement  
June 12, 1990

U. S. Forest Service - Manti-LaSal National Forest,  
July 31, 1990

- \* Forest Service Underground Access Special-Use Permit
- \* Revised State Permit

## ADMINISTRATIVE OVERVIEW

Genwal Coal Company, Inc.  
Crandall Canyon Mine  
Right-of-Way  
ACT/015/032  
Emery County, Utah

August 8, 1990

### BACKGROUND

Genwal Coal Company, Inc. (Genwal) has proposed to add an underground access Right-of-Way to its currently approved permit area for the Crandall Canyon Mine.

The Mining and Reclamation Plan for the Crandall Canyon Mine, Tract 1, was approved by the Office of Surface Mining in November of 1982 and by the Division of Oil, Gas, and Mining (DOGM) on May 13, 1983. The originally approved MRP consisted of an 80 acre federal lease (SL-062648, Tract 1), a 1.5 acre U.S. Forest Service special use area, and a 1.7 acre fee lease. On February 12, 1987 Genwal was issued a permit from DOGM to add Tract 2 of Lease SL-062648 to the permit area, containing 75.23 acres.

In December of 1986, Genwal was issued federal lease U-54762, containing 256.49 acres. In February of 1988, Genwal submitted a new MRP document in partial fulfillment of requirements for permit renewal. This new MRP contained information pertaining to the addition of lease U-54762 to the permit area. A revised state permit which includes lease U-54762 was issued on July 31, 1989.

Currently the Crandall Canyon Mine consists of room and pillar operations in the Hiawatha seam. The Right-of-Way will allow access to contiguous state coal leases ML-21568 and ML-21569 via presently existing portals in the Hiawatha coal seam. Work in the right-of-way will not result in additional surface structures, but will all be done underground. The right-of-way is 4670.5 feet long and 1040 feet wide. In-place coal reserves total 1,390,600 tons, of which 202,700 tons will be recovered. Six entries (20 feet wide) are proposed, with 60 by 140 foot pillars remaining. Pillars are to be maintained throughout life-of-mine to preclude any subsidence.

### ANALYSIS

No additional surface disturbance is proposed in relation to the addition of this right-of-way to the permit area. Access will be through the currently existing mine. Surface effects of mining in this area should be minimal or nonexistent since pillars will remain in place for the life of the mine.

One request for additional information was received from the Office of Surface Mining (Albuquerque Field Office). The request involved providing documents supporting the company's right to mine. This documentation was subsequently provided.

The Forest Service Underground Access Special-Use Permit has also been obtained and is included in this decision package. The Forest Service requires that a spring identified as W.U.C. No. 93-1407 (see July 31, 1990 letter to Dr. Dianne R. Nielson) be located and monitored. Also required is a commitment from Genwal to replace in quality and quantity any disrupted springs. These items are to be included as stipulations to the revised permit.

The cumulative hydrologic impact assessment (CHIA) conducted for the July 1989 permit revision covers essentially all of the area in the right-of-way, therefore the 1989 CHIA is being used for this review. Additional CHIA work and a technical analysis will be required upon the operator's application to add state leases ML-21568 and ML-21569 to the permit area.

### RECOMMENDATION

Genwal has demonstrated that mining of the right-of-way can be done in conformance with the Surface Mining Control and Reclamation Act, and the corresponding Utah Act and Performance Standards. The U.S. Forest Service has issued the Special-Use permit for the right-of-way. All issues raised during the review process have been resolved or attached to the revised permit as stipulations. No issues were raised during the public comment period. It is therefore recommended that approval, with the stipulations delineated in Attachment A, be given for addition of the underground right-of-way to the currently approved permit area.

(2)  
CRANDALL CANYON  
LOCATION MAP

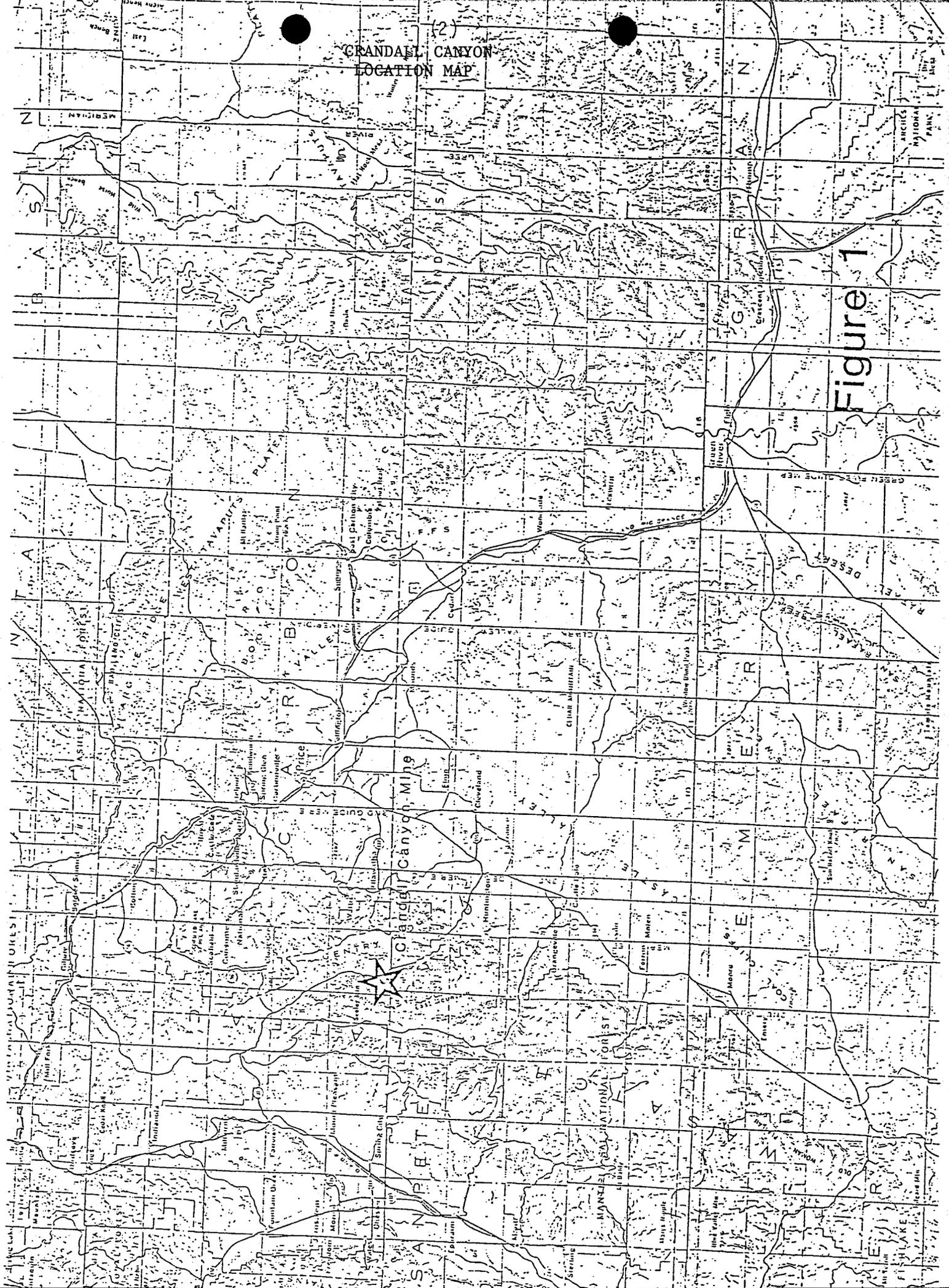


Figure 1

PERMITTING CHRONOLOGY

Genwal Coal Company, Inc.  
Crandall Canyon Mine  
Right-of-Way  
ACT/015/032  
Emery County, Utah

August 8, 1990

- 5/4/90 Division of Oil, Gas and Mining (DOGM) receives Genwal Coal Company's application for a permit revision, including plans for incorporation of a Special-Use Right-of-Way into the permit area.
- 5/9/90 Division of Oil, Gas and Mining (DOGM) sends copy of Genwal's Right-of-Way application to other agencies for their review.
- 5/25/90 DOGM determines application to be apparently complete.
- 5/30/90 DOGM forwards notice of a complete permit application to all other interested agencies.
- 6/5-6/26/90 Genwal publishes notice of a complete plan and intent to add Right-of-Way to the permit area weekly for four consecutive weeks in the Emery County Progress.
- 7/20/90 U.S. Forest Service issues special-use permit for the right-of-way.
- 7/26/90 Public comment period ends with no comments received.
- 8/3/90 DOGM receives Forest Service comments and a copy of the Decision memo and Special-Use Permit.
- 8/8/90 DOGM issues state Decision Document, revised permit.

MINE PLAN INFORMATION

Mine Name: Crandall Canyon Mine  
 Operator: Genwal Coal Company

State ID: ACT/015/032  
 County: Emery

Controlled By: Nevada Electric Investment Co.  
 Contact Person(s): Allen Childs  
 Telephone:: 687-9813

Position: Vice Pres.

New/Existing: both Mining Method: Underground-room and pillar

Federal Lease No(s):: U-54762; SL-062648  
 Legal Description(s): U-54762: T. 15S., R. 7E. Section 31: SE 1/4 SE 1/4, Section 32: S 1/2 SW 1/4, SW 1/4 SE 1/4; T.16S, R.7E. Section 5: Lots 2, 3, and 8; SL-062648: T. 16S., R. 7E. Section 5: SW 1/4 NW 1/4, Lot 4, Section 6: SE 1/4 NE 1/4, Lot 1

State Lease No(s):: NA  
 Legal Description(s): \_\_\_\_\_

Other (identify): Forest Service <sup>R7E</sup> Special Use Right-of-Way  
 Legal Description(s): T.15 S., R.17 E., Emery County, Utah Section 31: Lots 10, 11, and 12

Ownership Data:

<u>Surface Resources (acres)</u>	<u>Existing Permit Area</u>	<u>Proposed Permit Area</u>	<u>Total Life Of Mine Area</u>
Federal	<u>414.22</u>	<u>111.5</u>	<u>525.72</u>
State			
Private	<u>1.7</u>		<u>1.7</u>
Other			
TOTAL	<u>415.92</u>	<u>111.59</u>	<u>527.42</u>

Coal Ownership (acres):

Federal	<u>411.72</u>	<u>111.5</u>	<u>523.22</u>
State			
Private			
Other			
TOTAL	<u>411.72</u>	<u>111.5</u>	<u>523.22</u>



## FINDINGS

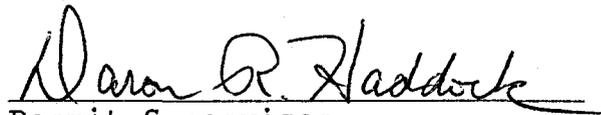
Genwal Coal Company, Inc.  
Crandall Canyon Mine  
Right-of-Way  
ACT/015/032  
Emery County, Utah

August 8, 1990

1. The revised plan and the permit application are accurate and complete and all requirements of the Surface Mining Control and Reclamation Act (the "Act"), and the approved Utah State Program have been complied with (R614-300-133.100).
2. No additional surface reclamation is required since the additional permit area will be mined as an underground extension of the existing mine. There will be no new surface facilities.
3. The assessment of the probable cumulative impacts of all anticipated coal mining and reclamation activities in the general area on the hydrologic balance has been made by the regulatory authority. The Mining and Reclamation Plan (MRP) proposed under the application has been designed to prevent damage to the hydrologic balance in the permit area and in associated off-site areas (R614-300-133.400 and UCA 40-10-11 {2}{c}) (See Cumulative Hydrologic Impact Analysis (CHIA) following this Findings Document).
4. The proposed lands to be included within the permit area are:
  - a. not included within an area designated unsuitable for underground coal mining operations (MRP, p. 2-7);
  - b. not within an area under study for designated lands unsuitable for underground coal mining operations (MRP, p. 2-7);
  - c. not on any lands subject to the prohibitions or limitations of 30 CFR 761.11 {a} (national parks, etc.), 761.11 {f} (public buildings, etc.) and 761.11 {g} (cemeteries) (MRP, p. 2-6);

- d. within 100 feet of a public road, however a hearing was held as required in June of 1981 (MRP, p.2-6)(R614-300-133.220);
  - e. not within 300 feet of any occupied dwelling (MRP, p. 2-6) (R614-300-133-220).
5. The regulatory authority's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800) (R614-300-133.600). See attached letter from State Historic Preservation Officer (SHPO) dated June 6, 1990.
  6. The applicant has the legal right to enter and complete mining activities in the Right-of-Way through a federal Special-Use Permit issued by the U.S. Forest Service (See attached permit) (R614-300-133.300).
  7. A 510(c) report has been run on the Applicant Violator System (AVS), which shows that: prior violations of applicable laws and regulations have been corrected; neither Genwal Coal Company, Inc. or its parent company are delinquent in payment of fees for the Abandoned Mine Reclamation Fund; and the applicant does not control and has not controlled mining operations with demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act (R614-300-133.730)
  8. Underground mining operations to be performed under the permit will not be inconsistent with other operations anticipated to be performed in areas adjacent to the proposed permit area. Genwal has provided to the Forest Service a \$2,500,000 bond that guarantees access to unleased Federal coal that lies to the north of the right-of-way (this allows for ramping over the right-of-way). The closest operating mine is the Bear Canyon Mine.
  9. The applicant has posted a surety bond for the Crandall Canyon Mine in the amount of \$268,000.00. No additional surety will be required, since there is no additional surface disturbance proposed (R614-300-134).
  10. No lands designated as prime farmlands or alluvial valley floors occur on the permit area (R614-300-133.200) (See MRP Items 8-2, 8-3.)

11. The proposed postmining land-use of the permit area is the same as the pre-mining land use and has been approved by the regulatory authority and the surface land management agency
12. The regulatory authority has made all specific approvals required by the Act, the Cooperative Agreement and the Federal Lands Program.
13. The proposed operation will not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habits (R614-300-133.500) (See MRP p. 10-5).
14. All procedures for public participation required by the Act, and the approved Utah State Program have been complied with (R614-300-120).
15. No existing structures will be used in conjunction with mining of the underground Right-of-Way, other than those constructed in compliance with the performance standards of R614-301 and R614-302 (R614-300-133.720).

  
Permit Supervisor

  
Associate Director, Mining

  
Director

## CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT

Genwal Coal Company  
Crandall Canyon Mine  
ACT/015/032  
Emery County, Utah

July 31, 1989

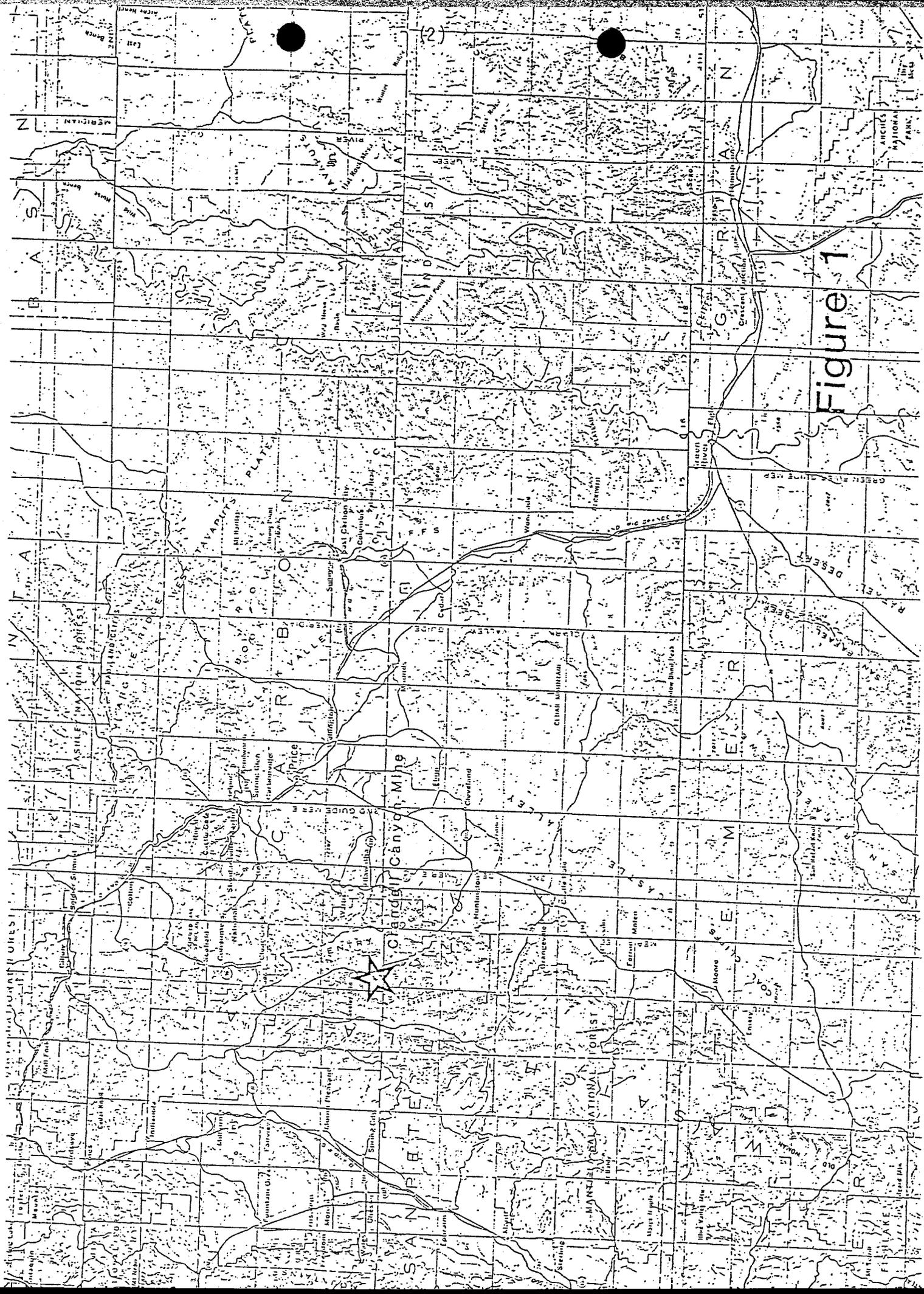
### I. Introduction

This report is to provide a Cumulative Hydrologic Impact Assessment (CHIA) for Genwal Coal Company's Crandall Canyon Mine located in Emery County, Utah. The material provided in this report evaluates the probable cumulative impacts of anticipated coal mining and assesses the operation procedures proposed under the application to ensure they are designed to prevent damage to the hydrologic balance within and outside the proposed mine plan area. This report complies with federal legislation passed under the Surface Mining Control and Reclamation Act (SMCRA) and subsequent Utah and federal regulatory programs under UMC 786.19(c) and 30 CFR 784.14(f), respectively.

Genwal Coal Company's Crandall Canyon Mine is located along the eastern margin of the Wasatch Plateau Coal Field approximately 15 miles west of Huntington, Utah (Figure 1). The eastern margin of the Wasatch Plateau forms a rugged escarpment that overlooks Castle Valley and the San Rafael Swell to the east. Elevations along the eastern escarpment of the Wasatch Plateau range from approximately 6,500 to over 9,000 feet.

Outcropping rocks of the Wasatch Plateau Coal Field range from Upper Cretaceous to Quaternary in age. The rock record reflects an overall regressive sequence from marine (Mancos Shale) through littoral and lagoonal (Blackhawk Formation) to fluvial (Castlegate Sandstone, Price River Formation and North Horn Formation) and lacustrine (Flagstaff Formation) depositional environments. Oscillating depositional environments within the overall regressive trend are represented by lithologies within the Blackhawk Formation. The major coal-bearing unit within the Wasatch Plateau Coal Field is the Blackhawk Formation.

Precipitation varies from 40 inches at higher elevations to less than 10 inches at lower elevations. The Wasatch Plateau may be classified as semiarid to subhumid.



(2)

Figure 1

Vegetation varies from the Sagebrush/Grass community type at lower elevations to the Douglas Fir/Aspen community at higher elevations. Other vegetative communities include Mountain Brush, Pinyon-Juniper, Pinyon-Juniper/Sagebrush and Riparian. These communities are primarily used for wildlife habitat and livestock grazing.

Crandall Creek which flows past the Crandall Canyon Mine is a perennial tributary to Huntington Creek which is a tributary to the San Rafael River. The upper drainage of Huntington Creek encompasses about 200 square miles of mountainous country in the Wasatch Plateau. About 90 percent of the area is higher than 8,000 feet. The average channel gradient along Huntington Creek is about 100 feet per mile. The lower reaches of the tributaries to Huntington Creek typically have surface relief between the stream channels and tops of adjacent canyon walls of 2,000 feet or more.

## II. Cumulative Impact Area (CIA)

Figure 2 delineates the current (SL-062648) and proposed (U-54762) Leases for the Crandall Canyon Mine operations as well as the CIA. The CIA includes the Crandall Canyon drainage and a portion of Huntington Creek. The CIA boundary is defined on the north by an unnamed canyon between Crandall and Blind Canyons and the drainage divide that separates those canyons, to the south and west by the Crandall Canyon drainage divide and on the east by Huntington Creek. The CIA encompasses approximately 4,290 acres.

## III. Scope of Mining

Historically, mining was conducted near this site from November of 1939 to September of 1955. Mining in Tract 1 by Genwal Coal Company began in 1983.

Genwal Coal Company currently controls approximately 158 acres in Huntington Canyon in Emery County, Utah (see Figure 3). Lease SL-062648 was mined in sequence as Tracts 1 (southern half) and 2 (northern half). Lease SL-062648 contained approximately 400,000 tons of recoverable coal. Of the recoverable coal available, 170,000 tons has been mined for advance work and 230,000 tons will be mined on final retreat. Lease U-54762 contains approximately 2.5 million tons in place of which 1.5 million tons is recoverable.

Access to the Lease U-54762 will be gained by extending the existing North Main entries into the new permit area. The same surface facilities established for Lease SL-062648 will be used for Lease U-54762.

The current method of room and pillar mining in use for Lease SL-062648 will be continued throughout Lease U-54762. Pillars will be removed upon abandonment of sections. Overall, an advance-retreat mining system is projected for the mine.



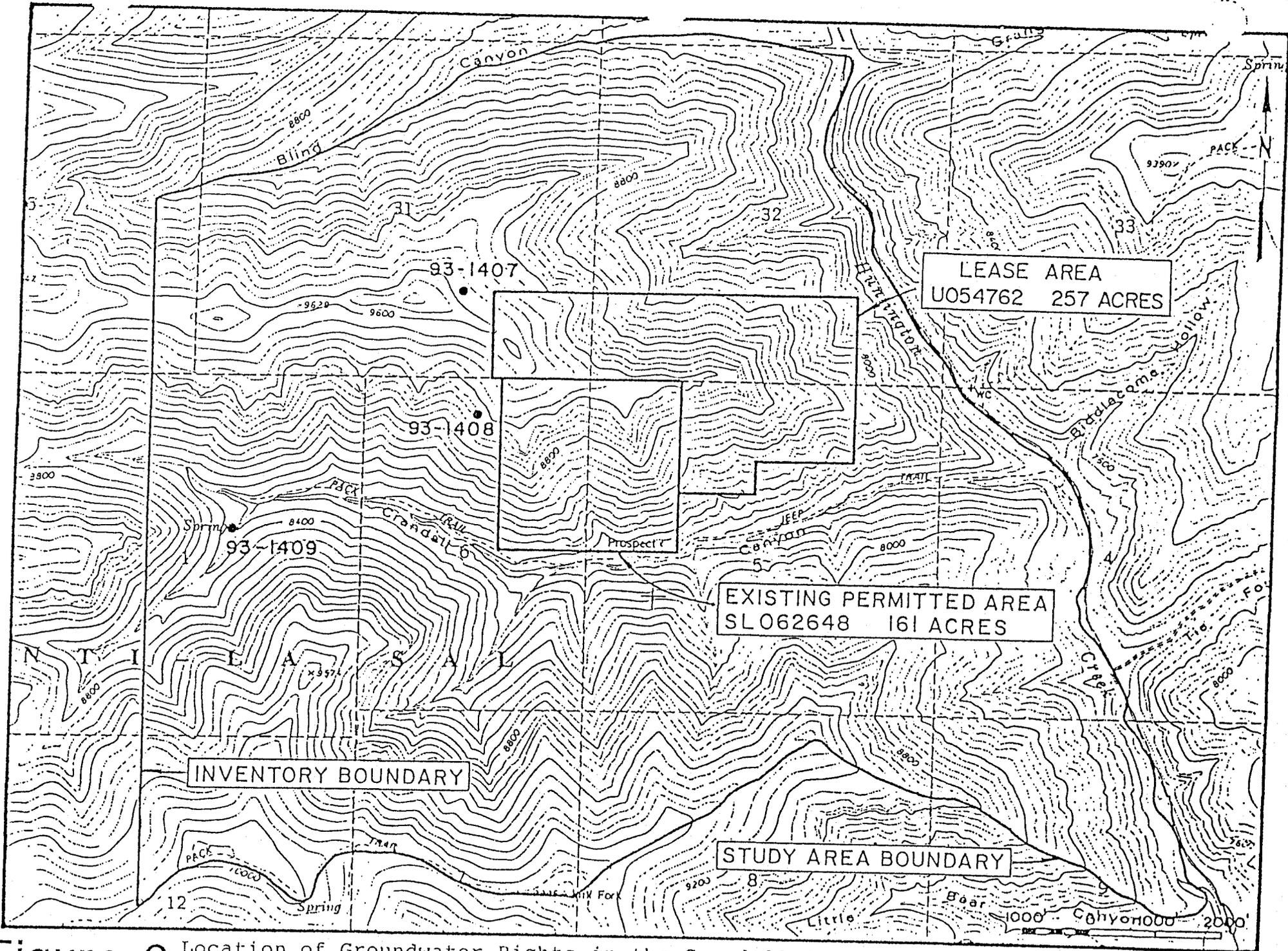


Figure 3 Location of Groundwater Rights in the Crandall Canyon Area.

The permit area is comprised of coal lands leased by Genwal Coal Company from the United States Bureau of Land Management, under leases SL-062648 and U-54762. The surface lands are controlled by the United States Forest Service, Manti-LaSal National Forest and Beaver Creek Coal Company.

The reserves within the permit area are proposed for mining through 1994, however, access will be maintained through this permit area until all future reserves to the northwest and west are mined. Presently, Genwal Coal Company holds no further leases. Genwal has indicated an interest for coal reserves west of Lease U-54762 in the south one-fourth of Section 31.

#### IV. Study Area

##### A. Geology

The formations exposed in the Wasatch Plateau are Tertiary and Cretaceous-aged sedimentary units (Figure 4). These formations are of both continental and marine origin and are comprised principally of shale and sandstone. Siltstone, mudstone and limestone occur in lesser amounts. The formations in the Wasatch Plateau area generally dip one to three degrees westward off the west flank of the San Rafael Swell. Regional dips are interrupted by principally east trending fold axes, and principally north trending fault axes.

Stratigraphic units outcropping within the study area include, from oldest to youngest, the Masuk Shale Member of the Mancos Shale, Starpoint Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, North Horn Formation and Quaternary deposits. Lithologic descriptions and unit thicknesses are shown in Figure 3.

The Hiawatha Coal Seam, which is the coal seam to be mined in the new lease area, occurs at the base of the Blackhawk Formation. The Hiawatha Coal Seam has been mined in the Tract 1 and Tract 2 areas and is exposed at an approximate elevation of 7900 feet. Maximum overburden is approximately 1500 feet in the northwest corner of the Tract 2 Lease with an average overburden of approximately 800-900 feet. The entire permit area is underlain by the Starpoint Sandstone.

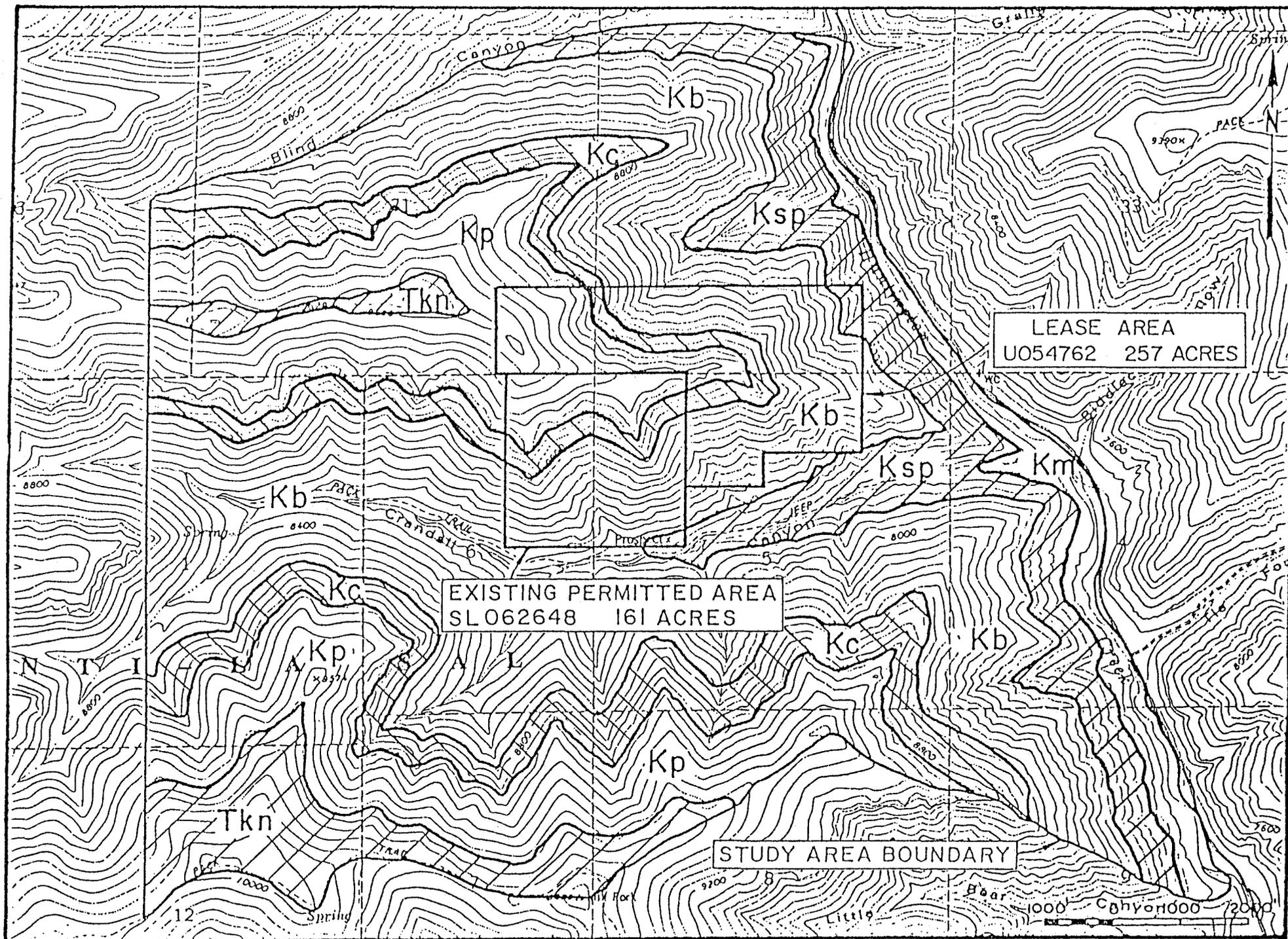


Figure 4

Geology of the Crandall Canyon Area (after Doelling, 1972).

## B. Topography and Precipitation

Topography in the area is generally very steep and rugged with elevations ranging from approximately 7,200 feet to over 10,000 feet above sea level. Slopes vary from vertical cliffs to less than 2 percent. The CIA is characterized by Crandall Canyon Creek, which originates above 10,000 feet and drains east into Huntington Creek. The CIA also includes an unnamed ephemeral drainage to the west of the permit area that also drains to the east into Huntington Creek.

Precipitation in the Wasatch Plateau ranges from 10 inches to 40 inches annually. Average annual precipitation in the CIA is approximately 20 inches (Simons 1984).

## C. Vegetation

There are five vegetative communities in the CIA including Sagebrush, Mountain Shrub/Grassland, Mixed Mountain Shrub, Conifer/Aspen and Spruce/Fir. Aspen are found on the north facing south slopes and higher up on the north slopes, on ridge tops. Spruce/Fir is also found on the north slopes and appears to be tied to both a moister site as well as areas with less sunlight. Mixed Mountain Shrub and Mountain Shrub/Grassland appear to be transitional and are predominant on the open exposed ridges at approximately mid-slope. The Sagebrush community follows primarily along the ridges and is more than likely climax in nature to the shrub grass associations.

## V. Hydrologic Resources

### A. Ground Water

The ground water regime within the CIA is dependent upon geologic and climatic parameters that establish systems of recharge, movement and discharge.

Snowmelt at higher elevations provides most of the ground water recharge, particularly where permeable lithologies or faults/fractures are exposed at the surface. Vertical migration of ground water occurs through permeable rock units and/or along zones of faulting and fracturing. Lateral migration initiates when ground water encounters impermeable rocks and continues until either the land surface is intersected (and spring discharge occurs) or other permeable lithologies or zones are encountered that allow further vertical flow.

A seep and spring survey conducted by Earthfax Engineering in June and October of 1985 provided an indication of spring and seep locations (Figure 5), geologic conditions including lithologic and structural controls and the geologic formation from which the seepage issued. Flow rates, use and field characteristics were analyzed. Water samples were collected where sufficient flows were present.

Regional ground water conditions were determined from a review of available literature.

Six formations outcrop in and adjacent to the mine area. According to Doelling (1972), the Masuk Shale Member of the Mancos Shale is a light gray to blue-gray marine sandy shale in the mine vicinity. This unit is exposed at the mouth of Crandall Canyon and in adjacent areas along Huntington Creek. The Masuk Shale Member yields water locally to seeps and springs but does not serve as a regionally important aquifer (Danielson et al., 1981).

The Star Point Sandstone is predominantly a light gray massive sandstone with minor interbedded layers of shale and siltstone near its base (Doelling, 1972). In the vicinity of the mine, the Star Point Sandstone is approximately 300 feet thick. The Star Point serves as an important regional aquifer (Danielson et al., 1981), yielding water to several minor and some major springs where fractured and jointed.

The Blackhawk Formation is the principal coal-bearing unit in the region (Doelling, 1972). This formation consists of interbedded layers of sandstone, siltstone, shale, and coal, all of marine origin. The Blackhawk is approximately 700 feet thick in the mine area, with the principal coal seam (the Hiawatha seam) occurring near the bottom of the formation. The formation yields water to springs and coal mines when fractured. Where it is locally interbedded with the Star Point Sandstone, the lower portion of the Blackhawk Formation is considered an aquifer (Danielson et al., 1981).

The Castlegate Sandstone overlies the Blackhawk Formation and consists of tan to brown cliff-forming sandstones of fluvial origin. The sandstones are massive and medium- to coarse-grained. In the area of the mine, the Castlegate yields water locally to seeps and springs but does not serve as an important regional aquifer because it is commonly drained within short distances from its recharge area due to deeply incised canyons (Danielson et al., 1981).



The Price River Formation consists predominantly of friable limey sandstone interbedded with pebbly conglomerates and shales. It forms steep receding slopes and reaches a maximum thickness of about 500 feet in the mine area (Doelling, 1972). This formation yields water locally to seeps and springs (Danielson et al., 1981). However, like the Castlegate Sandstone, deeply incised canyons in the area prevent the Price River Formation from being an important regional aquifer.

The uppermost formation that outcrops within the area adjacent to the mine plan area is the North Horn Formation. This formation consists of interbedded limestones, sandstones, and shales (Doelling, 1972). Due to high topographic presence, the North Horn Formation in the CIA serves primarily as a recharge unit to underlying formations rather than as an important source of water itself.

Investigations by Danielson et al. (1981) indicated that most, if not all, ground water in the region is derived from snowmelt. Recharge tends to be limited in areas underlain by the Price River Formation and older rocks (relative to recharge in areas underlain by younger rocks) due to slope steepness and relative imperviousness (both of which promote runoff rather than infiltration of snowmelt).

Detailed potentiometric surface data are not available for the CIA, however, the operator installed a ground water monitoring well in March 1987. The well was drilled using air rotary methods to a total depth of 375 feet and encountered the Star Point Sandstone through the entire depth.

The driller indicated that the formation was relatively homogeneous except in the zone from 290 to 335 feet, where the sandstone became coarser. It is from this zone that the well is producing water, with water first being encountered at a depth of about 315 feet. The static water level approximately one week after completion of the well was at a depth of 186.1 feet below ground surface.

Slug tests were performed on the completed well to determine hydraulic characteristics of the aquifer. The slug test data were analyzed using a method developed by Bouwer and Rice (1976). Transmissivities were calculated to be approximately 4.5 square feet per day assuming that the 45 foot producing zone accounts for the entire thickness of the aquifer at the site of MW-1.

The operator has committed to assess the piezometric surface of the Starpoint aquifer with the development of Lease U-54762. Two wells will be drilled within the mine before the end of the first quarter of 1989, which will allow a three point problem to be developed. Due to the steepness of the terrain and a roll within the coal seam emplacement of drilling equipment has been difficult.

Ground water inflow to the existing underground workings amounts to approximately 100 gallons per minute. The inflow is currently being used in the mining process. A modification of the NPDES permit has been obtained in the event that inflow exceeds the requirements for underground use and discharges from the mine occur .

The predominant chemical constituents in most springs in the region are calcium and bicarbonate (Danielson et al., 1981). Dissolved solids concentrations generally range from about 50 to 750 milligrams per liter. Regionally, the concentrations of major dissolved constituents in water from individual geologic units is highly variable, due to the complex lithologic nature of the area (Danielson et al., 1981).

Over 50 percent of the seeps and springs discovered during the June, 1985 inventory issued from the Blackhawk Formation. However, flow rates at these points were normally minimal (less than one gallon per minute), with seepage issuing predominantly at the interface between sandstone lenses above and less permeable shale layers below. Most of these seeps and springs had dried up prior to the October survey. Useage at these points of seepage is minimal, due to the low flow rate and inaccessibility of the seeps.

The low seepage rates measured in most of the seeps and springs issuing from Blackhawk Formation are due to the low hydraulic conductivity of the formation in its unfractured state. Laboratory permeability data provided by Lines (1985) from a core sample collected in Section 27, T. 17 S., R. 6 E. (approximately 10 miles south of the mine permit area) indicate that sandstone units within the Blackhawk Formation have an average horizontal hydraulic conductivity of  $1.3 \times 10^{-2}$  feet per day and an average vertical hydraulic conductivity of  $3.8 \times 10^{-3}$  feet per day. Shales and siltstones within the Blackhawk Formation were found to have maximum horizontal and vertical hydraulic conductivities of  $1.0 \times 10^{-7}$  and  $1.2 \times 10^{-6}$  feet per day, respectively.

The relatively large hydraulic conductivity of the sandstones of the Blackhawk Formation compared with the siltstone and shales indicates that the fine grained sediments of the formation serve as barriers to the downward movement of water. In simple terms, as water recharges the Blackhawk Formation (either through snowmelt, rainfall, or subsurface seepage from an adjacent formation), it is permitted to percolate downward within the sandstone beds.

However, upon reaching a less permeable siltstone or shale layer, the water is forced to flow horizontally to the surface, issuing at the interface between the two units.

Notable exceptions to the above generality concerning the Blackhawk Formation occur at a few springs that issue from fractured sandstone within the formation. Examples of this phenomenon were found in the western portion of the survey area, where flow rates of up to 15 gallons per minute were encountered during both the June and October inventories. Travertine deposits are common at these springs, suggesting that the recharge area for these springs is dominated by limestone (probably the North Horn Formation on the ridges to the north and west). The Blackhawk Formation apparently serves more as a conveyance body rather than a significant source of water to these springs.

Several seeps and springs issue at the site from colluvium overlying sandstone of the Blackhawk Formation and the Castlegate Sandstone. These seeps normally occur in drainage bottoms where shallow subsurface water collects at topographic lows. Nearly all flows from seeps of this type were insignificant in both June and October, suggesting (together with the topographic position) that these seeps are intermittent in nature.

Most seeps and springs issuing within the survey area from the Castlegate and Star Point Sandstones flow from bedding planes within these formations. Flows issuing in this manner were generally low during the June inventory (less than one gallon per minute) and nonexistent during the October inventory.

As noted, flow rates measured during the October survey were generally significantly less than those found during the June survey. In June, a total of 80 seeps or springs were found, 34 of which had sufficient flow to sample (the remaining 46 were seeps that could not be sampled). In October, 55 of the sources originally discovered were dry. An additional 7 sources existed only as seeps, with only 18 of the original sources containing sufficient flow to sample.

The results of the seep and spring inventory tend to support the conclusion of Danielson et al. (1981) that ground water occurs in most geologic formations at the site (all but the Masuk Shale Member of the Mancos Shale), but none of the units are saturated everywhere. No continuous zones of saturation appear to be present at the site, indicating that potentiometric surface maps would be difficult to prepare.

Based on the conclusions of Danielson et al. (1981), it is assumed that ground water within the permit and adjacent areas flows toward the main canyons (Crandall, Blind, and Huntington) and then along Huntington Canyon to the valley bottom.

The data indicates that the specific conductance of water issuing from springs in June generally increased with increasing stratigraphic depth. This is in agreement with findings of Danielson et al. (1981). Springs issuing from the Price River Formation typically had a specific conductance during the June survey that varied from 150 to 450 umhos/cm at 25°C while those issuing from the Blackhawk Formation and Star Point Sandstone had a specific conductance varying from 500 to 1000 umhos/cm at 25°C. This increase in specific conductance is indicative of leaching of minerals by the ground water as it flows through increasing distances of bedrock to the lower stratigraphic positions.

The pH of water issuing from springs in the survey area showed no trends within or between formations. Values varied from 6.80 to 8.57, averaging 7.74. Hence, spring water in the study area is slightly alkaline.

In those springs with sufficient water to sample, pH generally increased slightly between June and October. Increases normally amounted to 0.1 to 0.5 pH unit. Specific conductance showed no consistent pattern between the June and October data, with approximately as many increases as decreases between June and October.

Inflow to the existing underground workings amounts to approximately 100 gallons per minute. These inflows originate primarily in gob sections near the working face of the mine. Currently, water encountered in the mine is used underground in the mining process.

A list of surface water rights was obtained from the files of the Utah Division of Water Rights in September 1987. All surface water rights, indicated on Figure 3, are held by the U. S. Forest Service for stock watering purposes. Although the rights exist, usage of these rights are apparently curtailed.

#### B. Surface Water

Crandall Canyon is an east-flowing tributary of Huntington Creek, one of the major tributaries of the San Rafael River.

Huntington Creek had annual flows near Huntington ranging from 25,000 to 150,000 acre-feet during the period of October 1931 through September 1973, averaging 65,000 acre-feet per year (Waddell et al., 1981). Variations in the annual flow of Huntington Creek near Huntington are portrayed graphically in Figure 4.

Approximately 50 to 70 percent of streamflow in the mountain streams of the region occurs during May through July (Waddell et al., 1981). Streamflow during this late spring/early summer period is the result of snowmelt runoff. Such seasonal variations are common for streams in the area (Waddell et al., 1981).

The quality of water in Huntington Creek and other similar streams in the area varies significantly with distance downstream. Waddell et al. (1981) found that concentrations of dissolved solids varied from 125 to 375 milligrams per liter in reaches above major diversions to 1600 to 4025 milligrams per liter in reaches below major irrigation diversions and population centers. The major ions at the upper sites were found to be calcium, magnesium, and bicarbonate, whereas sodium and sulfate became more dominant at the lower sites. They attributed these changes to (1) diversion of water containing low dissolved solids concentrations, (2) subsequent irrigation and return drainage from moderate to highly saline soils, (3) ground water seepage, and (4) inflow of sewage and pollutants from population centers.

Average annual sediment yields within the Huntington Creek drainage basin range from approximately 0.1 acre-feet per square mile in the headwaters area to about 3.0 acre-feet per square mile near the confluence with the San Rafael River (Waddell et al., 1981). Increases in sediment yield with increasing distance downstream is generally the result of increasing amounts of shale and sandstone in the downstream direction (Waddell et al., 1981).

The U. S. Geological Survey established a gaging station at the mouth of Crandall Creek in 1978. Flow data collected at the gaging station are not complete for the winter in most years, due presumably to data acquisition problems. However, the limited data indicate that most of the flow of Crandall Creek occurs in the period of May through July, in keeping with the conclusions of Waddell et al. (1981). Assuming an average of 30 acre-feet per month for the period of missing record, the average annual flow for the six year period of data was 2740 acre-feet.

Surface water quality data collected from Crandall Creek by Genwal for the Tract 1 Lease from 1985 indicate that the dominant ions in Crandall Creek are calcium and bicarbonate. Total dissolved solids concentrations in the stream have varied from 180 to 286 milligrams per liter, with lower concentrations normally occurring during the high flow season. Total suspended solids concentrations in Crandall Creek have varied during the period of record from 0.5 to 208.0 milligrams per liter. As expected, the highest suspended solids concentrations generally occur during periods of highest flow.

## VI. Potential Hydrologic Impacts

### A. Ground Water

Dewatering and subsidence related to mining have the greatest potential for impacting ground water resources in the CIA.

#### Dewatering

Inflow into the existing underground workings amounts to approximately 100 gallon per minute. These inflows originate primarily in gob sections near the working face of the mine. Currently, water encountered in the mine is used underground in the mining process. Continued interception of mine inflow may potentially dewater certain localized aquifers not only during the first five year permit term but also throughout the life-of-mine as the workings are further developed.

#### Subsidence

Subsidence impacts are largely related to extension and expansion of the existing fracture system and upward propagation of new fractures. Potential area of impacts is shown on Figure 5. Inasmuch as vertical and lateral migration of water appears to be largely controlled by fracture conduits, readjustment or realignment in the conduit system may potentially produce changes in the configuration of ground-water flow. Potential changes include increased flow rates along fractures that have "opened" and diverting flow along new fractures or permeable lithologies. Subsurface flow diversions may cause the depletion of water in certain localized aquifers, whereas increased flow rates along fractures would reduce ground-water residence time and potentially improve water quality.

Therefore, mining may dewater certain localized aquifers and affect flow rates along existing or new subsidence related fractures. However, these impacts will be localized near the mine permit area. No other ground water disturbances exist within the CIA and cumulative hydrologic impacts are not expected.

B. Surface Water

The main concern in terms of impact to surface water is water quality deterioration downstream from the minesite, primarily in the form of suspended sediments. Typically the suspended sediment concentration in Crandall Canyon Creek since 1983 varied from approximately 205 mg/l to 0.5 mg/l. The low suspended sediment values are associated with natural climatic and geologic processes although a proportion may be attributed to surface disturbances from roads and the mine pad area. Sediment controls do exist for the disturbed surface areas. Therefore, the impact associated with mining in Crandall Canyon is minimized by surface controls (i.e., sediment pond, diversions, etc.). No other surface disturbances due to mining occur within the CIA and therefore cumulative hydrologic impacts are not expected.

The operational design proposed for the Crandall Canyon Mine is herein determined to be consistent with preventing damage to the hydrologic balance outside the mine plan area.

0689R

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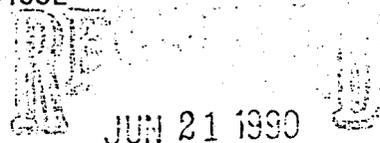
# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

3482  
SL-0062648  
U-54762  
(U-065)

Moab District  
P.O. Box 970  
Moab, Utah 84532

Daron R. Haddock, Permit Supervisor  
State of Utah  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203



JUN 19 1990

Dear Mr. Haddock:

We have received and reviewed a copy of Genwal Coal Company's Underground Right-of-Way Application, Crandall Canyon Mine, ACT/015/032(90-1). The application calls for adding this coal right-of-way to the permit area. The right-of-way application is for accessing state coal leases from mine workings on federal lease. The application right-of-way tract is 4,670.5 feet long and 1,040 feet wide, in which six underground mining entries will be developed to access the state leases to the west of the existing Crandall Canyon Mine. The mining layout was designed for underground mining access only and not for maximizing coal recovery. In fact, part of the agreement to allow a right-of-way was to design the entries and pillars to facilitate any proposals to drive rock slopes over the access entries should other companies or interests have control of the coal lands to the south and north of the right-of-way. This will allow access to unleased federal coal to the north and not create a captive coal tract.

The BLM therefore finds the proposal meets the requirements for the resource recovery and protection plan (R2P2) portion of the permit application package (PAP) and recommends that the right-of-way be added to the permit area. The R2P2 is in compliance with the Mineral Leasing Act of 1920, as amended, the regulations found at 43 CFR 3480, and the lease terms and conditions. In designing the mine workings to allow for access to other coal lands, the maximum economic recovery (MER) requirements for this lease will still be met.

If you have any questions, please contact Stephen Falk in Price at 637-4584.

Sincerely yours,

*Acting* Assistant District Manager  
Minerals

cc: SD, Utah (U-921)  
OSM, Denver  
Manti-LaSal National Forest, Price, Ut.  
Coal Office, Price



State of Utah  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF WILDLIFE RESOURCES

Norman H. Bangertor  
 Governor

Dee C. Hansen  
 Executive Director

Timothy H. Provan  
 Division Director

1596 West North Temple  
 Salt Lake City, Utah 84116-3195  
 801-533-9333

RECEIVED  
 JUN 14 1990

DIVISION OF  
 OIL, GAS & MINING

orig - mine file  
~~then to Provan~~  
 cc d. haddock

June 6, 1990

Dr. Dianne R. Nielson, Director  
 Utah Division of Oil, Gas & Mining  
 355 West North Temple  
 3 Triad Center, Suite 350  
 Salt Lake City, Utah 84180

Dear Dianne:

The Division has evaluated Genwal Coal Company's submittal for an underground right-of-way at their Crandall Canyon Mine. Since new surface disturbance will not result, the Division has no concerns. At the time of pillar extraction, if subsidence will occur, the Mine and Reclamation Plan will need to be modified to address subsidence/wildlife issues.

Thank you for an opportunity to review and provide comment.

Sincerely,

*Timothy H. Provan*  
 Acting Director

Timothy H. Provan  
 Director



# State of Utah

Division of State History  
(Utah State Historical Society)  
Department of Community and Economic Development

Norman H. Bangertter  
Governor  
Max J. Evans  
Director

300 Rio Grande  
Salt Lake City, Utah 84101-1182  
801-533-5755

June 6, 1990

*Daren Hoback*  
*Mine file*

**RECEIVED**  
JUN 11 1990

Lowell P. Braxton  
Associate Director, Mining  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

DIVISION OF  
OIL, GAS & MINING

RE: Determination of Completeness, Genwal Coal Company, Crandall Canyon Mine,  
Underground Right-of-Way Application ACT/015/032, Folder #2, Emery  
County, Utah

In Reply Please Refer to Case No. 90-0320

Dear Mr. Braxton:

The Utah State Historic Preservation Office received information on the project referenced above on June 4, 1990. Our office has no additional comments on this project at this time. We appreciate being informed as to the progress of the project and will be adding this information to the case file.

This information is provided on request to assist the Division of Oil, Gas and Mining, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional assistance, please contact me at (801) 533-7039.

Sincerely,

*Janice Reed Campbell*

Janice Reed Campbell  
Regulation Assistance Technician

JRC:90-0320 DOGM



# United States Department of the Interior

OFFICE OF SURFACE MINING  
RECLAMATION AND ENFORCEMENT  
SUITE 310  
625 SILVER AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102



In Reply Refer To:

June 12, 1990

JUN 18 1990

DIVISION OF  
OIL, GAS & MINING

Mr. Lowell P. Braxton  
Associate Director, Mining  
Division of Oil, Gas and Mining  
3 Triad Center, Suite 350  
355 West North Temple  
Salt Lake City, UT 84180-1203

Dear Mr. Braxton:

The Albuquerque Field Office received the Determination of Completeness for the underground right-of-way application at the Crandall Canyon Mine. A cursory review of the application revealed it does not contain right-of-entry information.

R614-301-114.100 states the "application will contain a description of the documents upon which the applicant bases their legal right to enter and begin coal mining \* \* \*." The application states the area is unleased Federal coal and 202,700 tons will be mined in the development of the corridor connecting Crandall Canyon's two leases.

Please provide documents supporting the company's basis for its right to mine. This information should be in the permit application prior to the application being considered administratively complete and before proceeding with the technical review of the application.

Sincerely,

Robert H. Hagen, Director  
Albuquerque Field Office

*Big mine file  
cc L Braxton  
D Haddock  
BRN*

United States  
Department of  
Agriculture

Forest  
Service

Manti-LaSal  
National Forest

599 West Price River Dr.  
Price, Utah 84501

Reply to: 2820/2720

Date: July 31, 1990

Dr. Dianne R. Nielson, Director  
Division of Oil, Gas and Mining  
State of Utah Natural Resources  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**RECEIVED**  
AUG 03 1990

DIVISION OF  
OIL, GAS & MINING

Dear Dianne:

Genwal Coal Company's application to the Forest Service for a special use permit for an underground coal right-of-way has been approved and the 45 day appeal period on the NEPA decision ended July 19, 1990. Attached for your information and records are copies of the permit and NEPA documentation.

The Forest Service holds a \$2,500,000 bond that guarantees access to unleased Federal coal that lies to the north of the right-of-way. The Bureau of Land Management has determined the fair market value of the coal. Genwal Coal Company has posted a bond for half the value of the coal (see attached BLM letter) and they must submit to the Bureau of Land Management a cash payment for the remainder prior to mining coal in the right-of-way.

We have reviewed the Mine Plan Modification for the underground right-of-way which was submitted by Genwal Coal Company on May 9, 1990.

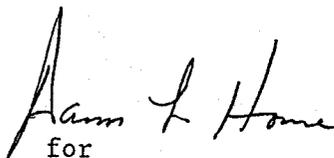
On page 13-13 (Section 13.5.1.6) Genwal Coal Company states that springs SP-47 and SP-58 will be monitored, but they were unable to locate an additional spring identified as W.U.C. No. 93-1407. Our records show that this spring has been developed with a water trough and is an important source of water for grazing in the Crandall Canyon Allotment. This spring needs to be located and identified for monitoring. On this page (Section 13.5.1.5), Genwal states that if the monitored springs are disrupted, they will contact the Utah Division of Wildlife Resources to develop plans to install guzzlers. Guzzlers may not be adequate to restore these wildlife and livestock watering sources. Genwal must commit to replacing the water sources in quality and quantity. In the case of the developed spring, another spring may need to be developed to replace the water.

We will consent to the modification, subject to the above provisions and the clauses contained in the enclosed special use permit.

In addition, we would like to participate in evaluation of the Mine Plan Amendment for mining of the State leases. Mining of these leases could affect surrounding National Forest System lands. Our concerns generally involve the watershed conditions which presently exist in the area and potential impacts to ground and surface water.

If you have any questions, please contact us at the Supervisor's Office in Price, Utah.

Sincerely,



for  
GEORGE A. MORRIS  
Forest Supervisor

Enclosures

UNDERGROUND ACCESS SPECIAL-USE PERMIT

ACT OF OCTOBER 21, 1976 (90 STAT. 2743; 43 U.S.C. 1761)

Genwal Coal Company of Huntington, Utah (hereafter called the Permittee) is hereby authorized to use National Forest lands for the development, maintenance, and use of an underground access-way within the Manti-LaSal National Forest for the following purposes: Mining activities which include transporting equipment and personnel, coal conveyor systems, and associated utilities (water, electrical power, telephone, air, etc.).

---

The lands covered by this permit are located in the County of Emery, State of Utah and are described as follows:

T.15 S., R.7 E., SLM, Emery County, Utah  
Section 31: Lots 10, 11 and 12

This permit covers a right-of-way 4,670.5 feet in length, 1,040 feet in width, containing approximately 111.5 acres, and is located under the ground according to the survey line, figures, measurements, widths, and other references shown on the map or plat attached hereto and made a part hereof.

This permit is made subject to the following terms, provisions, and conditions:

1. This permit is subject to all existing easements and valid rights existing on this date.
2. The Permittee in exercising the privileges granted by this permit shall comply with all applicable State and Federal laws, Executive Orders, and Federal rules and regulations, and shall comply with all State standards for public health and safety, environmental protection, and siting construction, operation, maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards.
3. The Permittee shall remove no coal except as authorized by development stipulations or maintenance agreements.
4. Permittee shall pay the United States for all injury, loss or damage, including fire suppression costs, in accordance with Federal and State laws.
5. Permittee shall indemnify the United States for any and all injury, loss, or damage, including fire suppression costs the United states may suffer as a result of claims, demands, losses, or judgments caused by the Permittee's use or occupancy under this permit.

6. Permittee shall pay annually in advance a sum determined by the Forest Service to be the fair market value of the use authorized by this permit. The initial payment is set at \$ 354.06 for the remainder of the calendar year. Payments for each subsequent calendar year shall be the amount of \$ 631.09 adjusted using the Implicit Price Deflator-Gross National Product index (IPD-GNP), or other factor selected by the Forest Service, to reflect more nearly the current fair market value of the use. At intervals to be determined by certain changes in the indexes used to establish the linear rights-of-way fee schedule, the fee shall be reviewed and adjusted as necessary to assure that it is commensurate with the value of the rights and privileges authorized. Failure of the Permittee to pay the annual payment, late charges, or other fees or charges shall cause the permit to terminate.

7. The Permittee shall pay an interest charge on any fee amount not paid by the payment due date.

Interest shall be assessed using the most current rate prescribed by the United States Department of Treasury Financial Manual (TFM-6-8020). Interest shall accrue from the date the fee payment was due. In addition, certain processing and handling administrative costs may be assessed in the event the account becomes delinquent and added to the amounts due.

A penalty of 6 percent per year shall be assessed on any fee amount overdue in excess of 90 days from the due date of the first billing.

Payments will be credited on the date received by the designated collection officer or deposit location. If the due date(s) for any of the above payments or fee calculation statement fall on a nonworkday, the charges shall not apply until the close of business of the next workday.

8. All development of the underground access-way shall be in accordance with plans, specifications, and written stipulations approved by the Forest Service prior to beginning such development.

9. The Permittee shall repair fully all damage to National Forest roads and trails caused by the exercise of the privileges granted by this permit.

10. The United States may use the underground access-way without cost for all purposes deemed necessary or desirable in connection with the protection and administration of the lands or resources of the United States.

11. The Forest Service retains the right to occupy and use the right-of-way and to issue or grant rights-of-way for land uses, upon, over, under, and through the permit area provided that the occupancy and use do not interfere unreasonably with the rights granted herein.

12. The Forest Service shall have the right to cross and recross the premises and underground access-way at any place by any reasonable means and for any purpose in such manner as does not interfere unreasonably with use of the underground access-way.

13. Unless sooner terminated in accordance with the provisions of the permit, or revoked by the Regional Forester, this permit shall expire and terminate on December 31, 2009. The permit shall not be reissued.

14. This permit may be terminated or suspended upon breach of any of the conditions herein, or revoked at the discretion of the Regional Forester.

15. Upon termination or revocation of this special-use authorization, the permittee shall remove within a reasonable time the structures and improvements and shall restore the site to a condition satisfactory to the authorized officer, unless otherwise waived in writing or in the authorization. If the Permittee fails to remove the structures or improvements within a reasonable period, as determined by the authorized officer, they shall become the property of the United States, but this does not relieve the Permittee from liability for the removal and site restoration costs.

This permit is made subject to the standard and special provisions and requirements, items 16 to 34 on pages 4 through 7 attached hereto and made part of this permit.

In Witness Whereof, the parties hereto have caused this permit to be duly executed on this 20<sup>th</sup> day of July, 1990.

Permittee  
by [Signature]  
(Name)  
(Title)  
(Company)  
Vice President  
General Coal Co.

USDA - Forest Service  
by [Signature]  
(Name)  
Acting Forest Supervisor  
Hart-LaSalle National Forest

STANDARD PERMIT CLAUSES

16. (B-2) During the performance of this authorization, the holder agrees that:

1. The holder and employees shall not discriminate by segregation or otherwise against any person on the basis of race, color, or national origin by curtailing or refusing to furnish accommodations.

2. Title VI attaches coverage to the holder's employment practices if discrimination in employment impeded the delivery of services and benefits to people on the basis of their race, color, or national origin.

3. The holder shall include and require compliance with this nondiscrimination provision in any subcontract made with respect to the operations under this authorization.

17. (B-26) Holder shall take all measures necessary to protect the health and safety of all persons affected by its activities performed in connection with the construction, operation, maintenance, or termination of the right-of-way, and shall promptly abate as completely as possible any physical or mechanical procedure, activity, event, or condition, existing or occurring at any time: (1) that is susceptible to abatement by the holder, (2) which arises out of, or could adversely affect the construction, operation, maintenance, or termination of all or any part of the underground access, and (3) that causes or threatens to cause: (a) a hazard to the safety of workers or to public health or safety, or (b) serious and irreparable harm or damage to the environment (including but not limited to areas of vegetation or timber, fish or other wildlife populations, or their habitats, or any other natural resource). Holder shall immediately notify the authorized officer of all serious accidents which occur in connection with such activities.

18. (D-18) The holder agrees to take all necessary precautions to avoid damage to property and resources of the United States and will, independently and upon request of the Forest Service, prevent and suppress fires on or near lands occupied, or to be occupied, under this permit, and to pay and indemnify the United States for any and all injury, loss, or damage, including but not limited to fire suppression costs, the United States may suffer as a result of claims, demands, losses, or judgments caused by the holder's use or occupancy to the maximum extent possible in accordance with State laws, ordinances, regulations, and rules.

19. (F-21) The holder shall be held liable for all injury, loss, or damage, including, but not limited to fire suppression costs, directly or indirectly resulting from or caused by the holder's use and occupancy of the area covered by the permit, regardless of whether the holder is negligent, provided that the maximum liability without fault shall not exceed \$1,000,000 for any one occurrence and provided further that the holder shall not be liable when such injury, loss, or damage results from a negligent act of the United States, or a third party not involving the facilities of the holder.

Liability for injury, loss, or damage, including fire suppression costs, in excess of the specified maximum, shall be determined by the laws governing ordinary negligence.

20. (X-17) If, prior to or during excavation work, items of archaeological, paleontological, or historic value are reported or discovered, or an unknown deposit of such items is disturbed, the holder will immediately cease excavation in the area so affected. Holder will then notify the Forest Service and will not resume excavation until written approval is given by the authorized officer.

If it deems it necessary or desirable, the Forest Service may require the holder to have performed recovery, excavation, and preservation of the site and its artifacts at the holder's expense. At the option of the Forest Service, this authorization may be terminated at no liability by the United States when such termination is deemed necessary or desirable to preserve or protect archaeological, paleontological, or historic sites and artifacts.

21. (X-49) This permit is not exclusive; that is, the Forest Service reserves the right to use or permit others to use any part of the permitted area for any purpose, provided such use does not interfere with the rights and privileges hereby authorized.

22. (X-74) This permit confers no right to the use of water by the holder.

23. (X-96) Appeal of any provisions of this authorization or any requirements thereof shall be subject to the appeal regulations at 36 CFR 251, Subpart C (54 FR 3362, January 23, 1989), or revisions thereto.

## SPECIAL PERMIT CLAUSES CONTINUED

24. The underground entries shall be developed in accordance with information provided in the special-use permit application. Any modification to the proposed design must receive approval prior to implementing the proposed change.
25. The underground access-way shall be limited to full-support first mining associated with development of mains and cross-cuts. The permittee shall maintain sufficient pillar safety factors to prevent subsidence and surface impacts and ensure the ability of a third party to safely develop cross-over entries.
26. A bond in the amount of \$2,500,000 shall be posted for the purpose of ensuring access via rock slopes to coal reserves north of the right-of-way by a third party. The bond shall be posted prior to issuance of the permit.
27. If the permit holder becomes the lessee of the coal to the north of the right-of-way, the right-of-way shall terminate upon the permittee's obtaining a permit to mine. The \$2,500,000 bond will be released at this time. Should a third party become the lessee of the coal lying to the north of the right-of-way, the \$2,500,000 bond will guarantee payment of costs associated with the third party accessing the northern coal.
28. Section maps (two complete sets) showing development progress of the right-of-way entries shall be provided to the Forest Service on a monthly basis for the purpose of estimating production by volumetric calculation. Scale weights for total mine production (two complete sets) will also be provided to the Forest Service on a monthly basis. The Forest Service will transfer one copy of the maps and scale weights to the BLM.
29. As required by 43 CFR 3431.2(a), the fair market value of coal removed in connection with this right-of-way has been estimated by the Bureau of Land Management (BLM) to be \$4.15 per ton. This reflects the estimated average F.O.B. mine price less average direct operating costs. An estimated 200,000 tons of coal will be removed in connection with this right-of-way resulting in an estimated payment of \$830,000.

30. Payment shall be made to the Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84154-0155. Indicate the payment is to account 145003.3 for UTU-66838. A payment of \$415,000 (one half of the estimated total payment) shall be made prior to removing any coal in connection with this right-of-way. A bond in the amount of \$415,000 shall be provided with this initial payment as security for the remainder of the total estimated payment. This can be accomplished by providing a surety bond in the amount, submitting a cash bond, or providing a personal lease bond secured by negotiable U.S. Bonds of a par value equal to the amount required.
31. Upon completion of the right-of-way entries, a final determination as to the total coal removed in connection with the right-of-way shall be made by BLM. A bill representing payment for the total coal removed less the \$415,000 initial payment shall be sent to the applicant. Payment shall be due within 30 days of receipt of the billing statement. Upon receipt of the final payment, the \$415,000 bond shall be released.
32. An estimate of coal stockpiled at the mine shall be provided to BLM immediately before and after completion of the right-of-way entries.
33. The BLM inspectors shall be allowed access to the entries for the duration of the permit.
34. As per 43 CFR 3431.2(c), the removal of the coal shall be subject to the Surface Mining Control and Reclamation Act of 1977.

DECISION MEMO  
GENWAL COAL COMPANY  
UNDERGROUND ACCESS RIGHT OF WAY

PRICE RANGER DISTRICT  
MANTI-LA SAL NATIONAL FOREST  
EMERY COUNTY, UTAH

I have decided to approve Genwal Coal Company's (Genwal) application for a special use permit for an underground right-of-way (ROW) for the purpose of accessing coal reserves on State lands (Utah State Coal Leases ML-21568 and ML-21569) within the Manti-La Sal National Forest. These reserves are located about 1500 feet underground and are uneconomical to access by new shaft facilities. Genwal is the holder of the State leases and their existing Crandall Canyon Mine provides underground access to within approximately 4670 feet of the State land. The underground access ROW passes through Federal Coal reserves beneath lands administered by the Manti-La Sal National Forest.

The ROW would be 4670 feet long and 1040 feet wide. There would be 6 entries together with a series of crosscuts to provide the necessary access to accommodate coal mining activities on the State land. The 6 entries would be used for transporting coal, equipment and personnel, and will include a coal conveyor system, and associated utilities such as water, electrical power, communications, and ventilation.

The project area is located about 15 miles northwest of the town of Huntington, Utah, adjacent to Genwal's existing Federal coal lease U-54762 in Crandall Canyon. All activities on the proposed ROW will take place underground. No sensitive underground resources are present in the project area. No impacts will occur to surface resources.

Project scoping identified one issue:

Coal reserves which lie north of the state leases, ROW and existing Crandall Canyon Permit area would be isolated, creating a captive coal situation.

To avoid the captive coal situation, Genwal Coal Company has designed an underground access-way with sufficient roof support to allow a competing or second mine to ramp to access the potentially captured coal to the north. Genwal will provide a \$2.5 million bond to guarantee this access.

The application, operation plan, maps, and drawings contained in the case file fully explain the proposal. These documents along with the Scoping Document are available for review at the Price Ranger District Office and the Manti-La Sal National Forest Supervisors Office, Price, Utah

First-mining of the present Genwal coal leases is nearly complete. In order to continue mining operations, Genwal needs to access and begin mining the State leases.

This proposed action falls within category 3, issuance of authorizations or agreements for such uses of lands as rights-of-way and easements and no extraordinary circumstances exist that might cause the action to have significant effects. Based on an analysis of the proposal, this action is categorically excluded from documentation in an environmental impact statement or an environmental assessment (FSH 1909.15, section 26.2).

This project is consistent with the management directions, including standards and guidelines, in the Manti-La Sal National Forest Land and Resource Management Plan, 1986. The ROW lies within an RNG management unit. The management prescription is for range forage production. Underground mineral activities are allowed with mitigation to assure continued livestock access and use (page III-66). The attached mitigations will be included in the special-use permit clauses.

This decision may be implemented after the 45 day appeal period.

This decision is subject to appeal pursuant to 36 CFR 217 or 36 CFR 251, Subpart C, in the case of decisions regarding written instruments authorizing occupancy and use of National Forest System lands. If you qualify under 36 CFR 251 you can elect which process to use for obtaining review of the decision, but in so doing you thereby forfeit all right to appeal the same decision under the other review process. Any written notice of appeal of this decision must be fully consistent with 36 CFR 217.9 or 36 CFR 251.90, as appropriate. The "Content of Notice of Appeal," including the reasons for appeal, must be filed with: J.S. Tixier, Intermountain Regional Forester, 324 25th Street, Ogden, Utah 84401 within 45 days of the date specified in the published Legal Notice in the Price, Utah Sun Advocate for appeals under 36 CFR 217 (or within 45 days of the date of this decision for appeals under 36 CFR 251). Simultaneously send a copy of the Notice of Appeal to this office in care of: George A. Morris, Forest Supervisor, Manti-La Sal National Forest, 599 W. Price River Drive, Price, Utah 84501.

For further information on the above please contact Ira Hatch or Walter Nowak at 599 W. Price River Drive, Price, Utah 84501 or call (801) 637-2817.

Approved by: Warren R Jensen Date: June 6, 1990  
Acting for George A. Morris  
Forest Supervisor

## SPECIAL PERMIT CLAUSES CONTINUED

24. The underground entries shall be developed in accordance with information provided in the special-use permit application. Any modification to the proposed design must receive approval prior to implementing the proposed change.
25. The underground access-way shall be limited to full-support first mining associated with development of mains and cross-cuts. The permittee shall maintain sufficient pillar safety factors to prevent subsidence and surface impacts and ensure the ability of a third party to safely develop cross-over entries.
26. A bond in the amount of \$2,500,000 shall be posted for the purpose of ensuring access via rock slopes to coal reserves north of the right-of-way by a third party. The bond shall be posted prior to issuance of the permit.
27. If the permit holder becomes the lessee of the coal to the north of the right-of-way, the right-of-way shall terminate upon the permittee's obtaining a permit to mine. The \$2,500,000 bond will be released at this time. Should a third party become the lessee of the coal lying to the north of the right-of-way, the \$2,500,000 bond will guarantee payment of costs associated with the third party accessing the northern coal.
28. Section maps (two complete sets) showing development progress of the right-of-way entries shall be provided to the Forest Service on a monthly basis for the purpose of estimating production by volumetric calculation. Scale weights for total mine production (two complete sets) will also be provided to the Forest Service on a monthly basis. The Forest Service will transfer one copy of the maps and scale weights to the BLM.
29. As required by 43 CFR 3431.2(a), the fair market value of coal removed in connection with this right-of-way has been estimated by the Bureau of Land Management (BLM) to be \$4.15 per ton. This reflects the estimated average F.O.B. mine price less average direct operating costs. An estimated 200,000 tons of coal will be removed in connection with this right-of-way resulting in an estimated payment of \$830,000.

30. Payment shall be made to the Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84154-0155. Indicate the payment is to account 145003.3 for UTU-66838. A payment of \$415,000 (one half of the estimated total payment) shall be made prior to removing any coal in connection with this right-of-way. A bond in the amount of \$415,000 shall be provided with this initial payment as security for the remainder of the total estimated payment. This can be accomplished by providing a surety bond in the amount, submitting a cash bond, or providing a personal lease bond secured by negotiable U.S. Bonds of a par value equal to the amount required.
31. Upon completion of the right-of-way entries, a final determination as to the total coal removed in connection with the right-of-way shall be made by BLM. A bill representing payment for the total coal removed less the \$415,000 initial payment shall be sent to the applicant. Payment shall be due within 30 days of receipt of the billing statement. Upon receipt of the final payment, the \$415,000 bond shall be released.
32. An estimate of coal stockpiled at the mine shall be provided to BLM immediately before and after completion of the right-of-way entries.
33. The BLM inspectors shall be allowed access to the entries for the duration of the permit.
34. As per 43 CFR 3431.2(c), the removal of the coal shall be subject to the Surface Mining Control and Reclamation Act of 1977.



# United States Department of the Interior



MANTI-LASAL N.E. BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE  
APR 16 1990 324 SOUTH STATE, SUITE 301  
SALT LAKE CITY, UTAH 84111-2303

*Alt*

*CC D-3*

*CLARSON*

IN REPLY REFER TO:  
3431  
(U-921)

April 12, 1990

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

Dear George:

Your request for information regarding Genwal Coal Company's right-of-way application was received by the Moab District Office and was subsequently sent to this office for response. The items you identified are answered in order of request:

1. The proposal by Genwal to access coal reserves by an independent operator with rock slopes driven over the entries developed in the Hiawatha seam is technically feasible as supported by a report developed by Redpath Engineering Inc., Mesa, Arizona, dated January 24, 1990. Multiple seam mining is a common mining practice throughout the intermountain west. As the rock slopes will be developed in rock a minimum of 30 feet above the roof in the development entries, the integrity of the rock mass above and below the Hiawatha seam can be assured. There are many cases of multiple seam first mining occurring with less than 30 feet of interburden separating the seams with no ill effects. The cost of developing the rock slopes will be on the order as determined by Redpath. The BLM had made a preliminary estimate of the costs for this work and the two estimates were within 10 percent. There are many cases of development work in the Wasatch Plateau which would be similar to the proposed project and the costs per foot advance are comparable.

It is our opinion that three slopes developed as proposed would provide adequate ventilating capacity. The length of the slopes is only 1,050 feet and the extent of recoverable reserves is 4,000 feet beyond the rock slopes. For the limited amount of recoverable reserves north of the ROW, it is anticipated that a single continuous miner section would be dedicated to the recovery of these reserves.

2. It is important to have included in the ROW, the barrier pillars as proposed in the application in order to protect both potential operators from improper extraction of coal reserves. The barriers are necessary to protect the integrity of the rock slopes and to protect the main entries and ensure the maximum economic recovery of the coal resources to the west of the ROW application area. For this reason the ROW width as requested is appropriate.

3. Estimates of the minable coal reserves (thickness > 5 feet, and including barriers, top and bottom coal) are 1,390,000 tons. Tonnage mined by first mining methods as outlined in the application are approximately 200,000 tons. No coal in the ROW will be sterilized as all reserves will be accessible from the ROW entries or from adjacent areas. If all the coal reserves in the area were under the effective control of one operator the coal would still be mined in a manner similar to the proposal as access to the west reserves must be maintained by the use of barrier pillars. The width of barrier pillars will vary upon mining method, coal thickness, and depth of cover, among other factors, but for main entry protection barrier pillar width in this type of scenario is on the order of 250 to 350 feet wide.

4. Permit stipulations as required by BLM are as follows:

a. As required by 43 CFR 3431.2(a), the fair market value of coal removed in connection with this right-of-way has been estimated to be \$4.15 per ton. This reflects the estimated average F.O.B. mine price less average direct operating costs. An estimated 200,000 tons of coal will be removed in connection with this right-of-way resulting in an estimated payment of \$830,000.

b. Payment shall be made to the Bureau of Land Management, Utah State Office, PO Box 45155, Salt Lake City, UT, 84145-0155. Indicate the payment is to account 145003.3 for UTU-66838. A payment of \$415,000 (one half of the estimated total payment) shall be made prior to removing any coal in connection with this right-of-way. A bond in the amount of \$415,000 shall be provided with this initial payment as security for the remainder of the total estimated payment. This can be accomplished by providing a surety bond in the amount, submitting a cash bond, or providing a personal lease bond secured by negotiable U.S. Bonds of a par value equal to the amount required.

c. Upon completion of the right-of-way entries, a final determination as to total coal removed in connection with the right-of-way shall be made by BLM. A bill representing payment for the total coal removed less the \$415,000 initial payment shall be sent to the applicant. Payment shall be due within 30 days of receipt of the billing statement. Upon receipt of the final payment, the \$415,000 bond shall be released.

d. The right-of-way entries shall be developed in accordance with information provided in the special use application and report and maintained in a manner which will prevent surface impacts and ensure the ability of a second party to safely develop crossover entries to access coal to the north. Any modification to the proposed design must receive prior approval from the BLM prior to implementing the proposed change.

e. Section maps showing development progress of the right-of-way entries shall be provided to BLM on a monthly basis for the purpose of estimating production by volumetric calculation. Scale weight for total mine production will also be provided to BLM on a monthly basis.

f. An estimate of coal stockpiled at the mine shall be provided to BLM immediately before and after completion of the right-of-way entries.

g. The BLM inspectors shall be allowed access to the entries for the duration of the permit.

h. A bond in the amount of \$2,500,000 shall be posted with BLM, in the manner indicated above, for the purpose of ensuring access via rock slopes to coal reserves north of the right-of-way by a second party. The bond shall be posted prior to issuance of the permit.

i. If the permit holder becomes the lessor of the coal included within the right-of-way, the right-of-way shall terminate upon the permittee's obtaining a permit to mine. The \$2,500,000 bond will be released at this time. Should a third party become the lessor of the coal lying to the north of the right-of-way, the \$2,500,000 bond may be attached to cover costs associated with the third party accessing the northern coal.

j. As per 43 CFR 3431.2(c), the removal of the coal shall be subject to the Surface Mining Control and Reclamation Act of 1977.

If you have questions concerning any aspect of this letter, please call Randy Heuscher at (801) 539-4034. Thank-you for all of your assistance in this matter.

Sincerely,



Howard A. Lemm  
Deputy State Director,  
Mineral Resources

MAIL ROOM N.R.

JUN 29 1990

FS

3432  
SL-0007448  
0-06762  
(11-065)

Local District  
P.O. Box 970  
Moab, Utah 84054

*Act*

Baron A. Haddock, Permit Supervisor  
State of Utah  
Division of Oil, Gas and Mining  
230 West North Temple  
3 Trial Center, Suite 350  
Salt Lake City, Utah 84180-1203

~~CC'D-3~~  
W. Northrup

*Carson CP*

Dear Mr. Haddock:

We have received and reviewed a copy of Genwal Coal Company's Underground Right-of-Way Application, Crandall Canyon Mine, ACT/015/032(90-1). The application calls for adding this coal right-of-way to the permit area. The right-of-way application is for accessing state coal leases from mine workings on federal lease. The application right-of-way tract is 4,870.6 feet long and 1,040 feet wide, in which six underground mining entries will be developed to access the state leases to the west of the existing Crandall Canyon Mine. The mining layout was designed for underground mining access only and not for maximizing coal recovery. In fact, part of the agreement to allow a right-of-way was to design the entries and pillars to facilitate any proposals to drive rock slopes over the access entries should other companies or interests have control of the coal lands to the south and north of the right-of-way. This will allow access to unleased federal coal to the north and not create a captive coal tract.

The BLM therefore finds the proposal meets the requirements for the resource recovery and protection plan (R2P2) portion of the permit application package (PAP) and recommends that the right-of-way be added to the permit area. The R2P2 is in compliance with the Mineral Leasing Act of 1920, as amended, the regulations found at 43 CFR 3480, and the lease terms and conditions. In designating the mine workings to allow for access to other coal lands, the maximum economic recovery (MER) requirements for this lease will still be met.

If you have any questions, please contact Stephen Falk in Price at 637-4384.

Sincerely yours,

*/s/ Brent Northrup*

Assistant District Manager  
Minerals

cc: SO, Utah (0-921)  
OSM, Denver  
Land-Label National Forest, Price, Ut.  
Coal Office, Price  
SFalk:as:e/5/90  
Wang 1773D

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
(801) 538-5340

This permit, ACT/015/032, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Genwal Coal Company  
P. O. Box 1201  
Huntington, Utah 84528  
(801) 687-9813

for the Crandall Canyon Mine. Genwal Coal Company is the lessee of federal coal lease SL-062648 and the lessee of a fee-owned parcel affected by surface operations. A performance bond is filed with the DOGM in the amount of \$268,000.00, payable to the state of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). DOGM must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct underground coal mining activities on the following described lands (as shown on the map appended as Attachment B) within the permit area at the Crandall Canyon Mine situated in the state of Utah, Emery County, and located:

Township 15 South, Range 7 East, SLBM

Section 31: SE 1/4 SE 1/4, S 1/2 S 1/2 Lots 10, 11 and 12  
Section 32: S 1/2 SW 1/4, SW 1/4 SE 1/4

Township 16 South, Range 7 East, SLBM

Section 5: SW 1/4 NW 1/4, Lots 2,3, 4 and 8  
Section 6: SE 1/4 NE 1/4, Lot 1 (NE 1/4 NE 1/4)

This legal description is for the permit area (as shown on Attachment B) of the Crandall Canyon Mine. The permittee is authorized to conduct underground coal mining activities connected with mining on the foregoing described property subject to the conditions of the lease, the approved Right-of-Way, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

- Sec. 3 PERMIT TERM - This revised permit is effective on August 8, 1990 and expires on May 13, 1993.
- Sec. 4 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R614-303.
- Sec. 5 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- A. have the rights of entry provided for in 30 CFR 840.12, R614-400-110, 30 CFR 842.13 and R614-400-220; and,
  - B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R614-400-100 , R614-400-200 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.
- Sec. 6 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 7 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- A. accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
  - B. immediate implementation of measures necessary to comply; and
  - C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

- Sec. 8 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.
- Sec. 9 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:
- A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
  - B. utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 10 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 11 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 12 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 13 CULTURAL RESOURCES - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.
- Sec. 14 APPEALS - The permittee shall have the right to appeal as provided for under R614-300.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and/or requirements set out in the leases, the federal mining plan approval, and this permit, the permittee shall comply with the special conditions appended hereto as Attachment A.

The above conditions (Secs. 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By:

James R. Nelson

Date:

8/8/90

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

\_\_\_\_\_  
Authorized Representative of  
the Permittee

Date: \_\_\_\_\_

APPROVED AS TO FORM:

By:

[Signature]  
Assistant Attorney General

Date:

8-9-90

ATTACHMENT A

STIPULATIONS

Genwal Coal Company  
Crandall Canyon Mine  
ACT/015/032  
Emery County, Utah

August 8, 1990

Stipulations USFS (1-2)

1. Within 30 days of permit approval the operator must submit to the Division a commitment to replace any disrupted wildlife or livestock watering sources in quality and quantity. (See letter dated July 31, 1990 from the U.S. Forest Service to Dianne Nielson).
2. Within 30 days of permit approval the operator must locate and identify for monitoring the additional spring identified as W.U.C. No. 93-1407 in the Crandall Canyon Allotment. (See letter dated July 31, 1990 from the U.S. Forest Service to Dianne Nielson).

BT6085

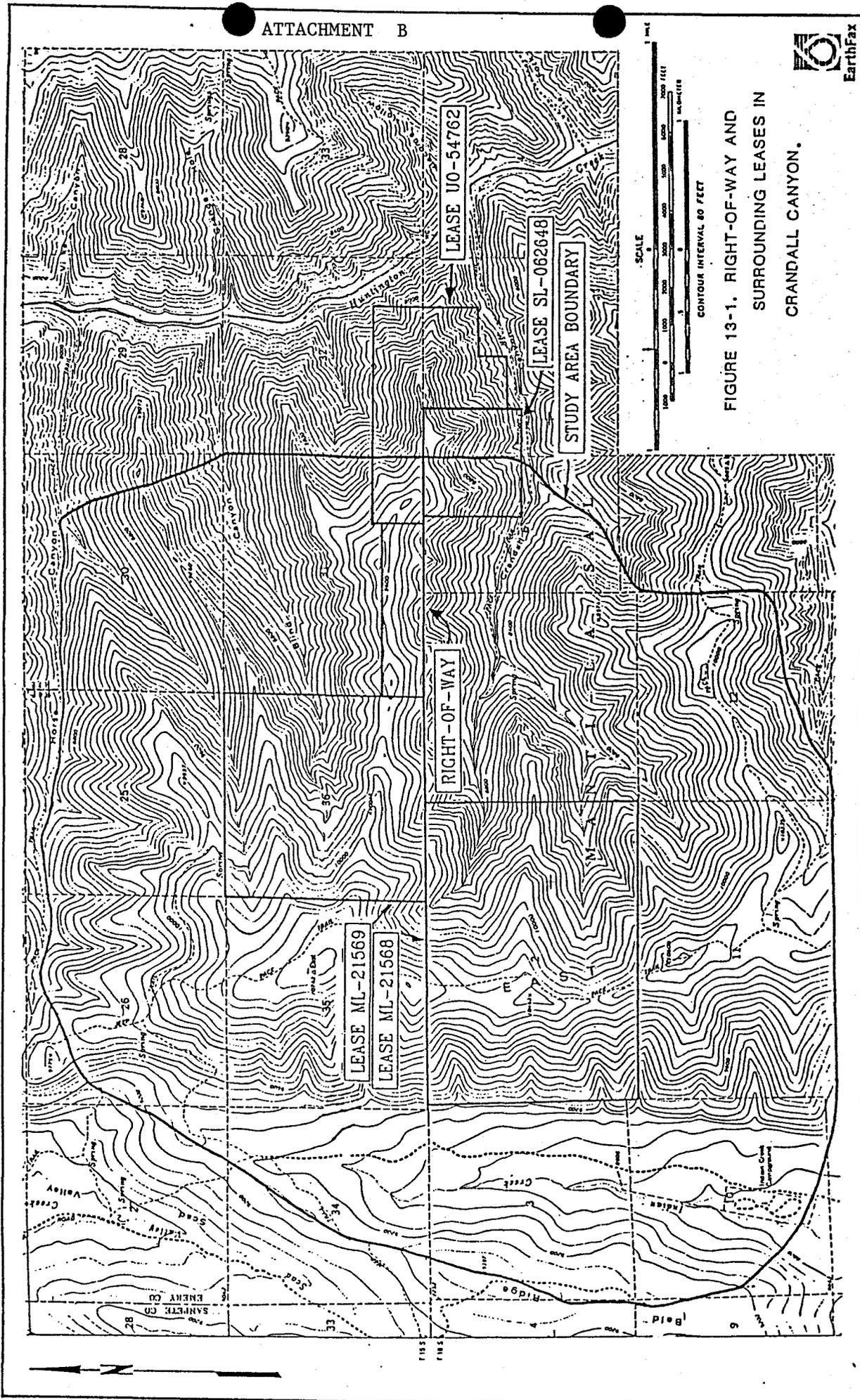


FIGURE 13-1. RIGHT-OF-WAY AND SURROUNDING LEASES IN CRANDALL CANYON.



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
(801) 538-5340

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P. O. Box 1201  
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Section 32: S 1/2 SW 1/4, SW 1/4 SE 1/4

Township 16 South, Range 7 East, SLBM

Section 5: SW 1/4 NW 1/4, Lots 2,3, 4 and 8  
Section 6: SE 1/4 NE 1/4, Lot 1 (NE 1/4 NE 1/4)

This legal description is for the permit area (as shown on Attachment B) of the Crandall Canyon Mine. The permittee is authorized to conduct underground coal mining activities connected with mining on the foregoing described property subject to the conditions of the lease, the approved Right-of-Way, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

- Sec. 3 PERMIT TERM - This revised permit is effective on August 8, 1990 and expires on May 13, 1993.
- Sec. 4 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R614-303.
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- A. have the rights of entry provided for in 30 CFR 840.12, R614-400-110, 30 CFR 842.13 and R614-400-220; and,
  - B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R614-400-100 , R614-400-200 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.
- Sec. 6 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 7 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- A. accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
  - B. immediate implementation of measures necessary to comply; and
  - C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

- Sec. 8 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.
- Sec. 9 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:
- A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
  - B. utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 10 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 11 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 12 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 13 CULTURAL RESOURCES - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.
- Sec. 14 APPEALS - The permittee shall have the right to appeal as provided for under R614-300.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and/or requirements set out in the leases, the federal mining plan approval, and this permit, the permittee shall comply with the special conditions appended hereto as Attachment A.

The above conditions (Secs. 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: *Danny R. Nelson*  
Date: 8/8/90

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

\_\_\_\_\_  
Authorized Representative of  
the Permittee

Date: \_\_\_\_\_

APPROVED AS TO FORM:  
By: *[Signature]*  
Assistant Attorney General

Date: 8-9-90

ATTACHMENT A

STIPULATIONS

Genwal Coal Company  
Crandall Canyon Mine  
ACT/015/032  
Emery County, Utah

August 8, 1990

Stipulations USFS (1-2)

1. Within 30 days of permit approval the operator must submit to the Division a commitment to replace any disrupted wildlife or livestock watering sources in quality and quantity. (See letter dated July 31, 1990 from the U.S. Forest Service to Dianne Nielson).
2. Within 30 days of permit approval the operator must locate and identify for monitoring the additional spring identified as W.U.C. No. 93-1407 in the Crandall Canyon Allotment. (See letter dated July 31, 1990 from the U.S. Forest Service to Dianne Nielson).

BT6085

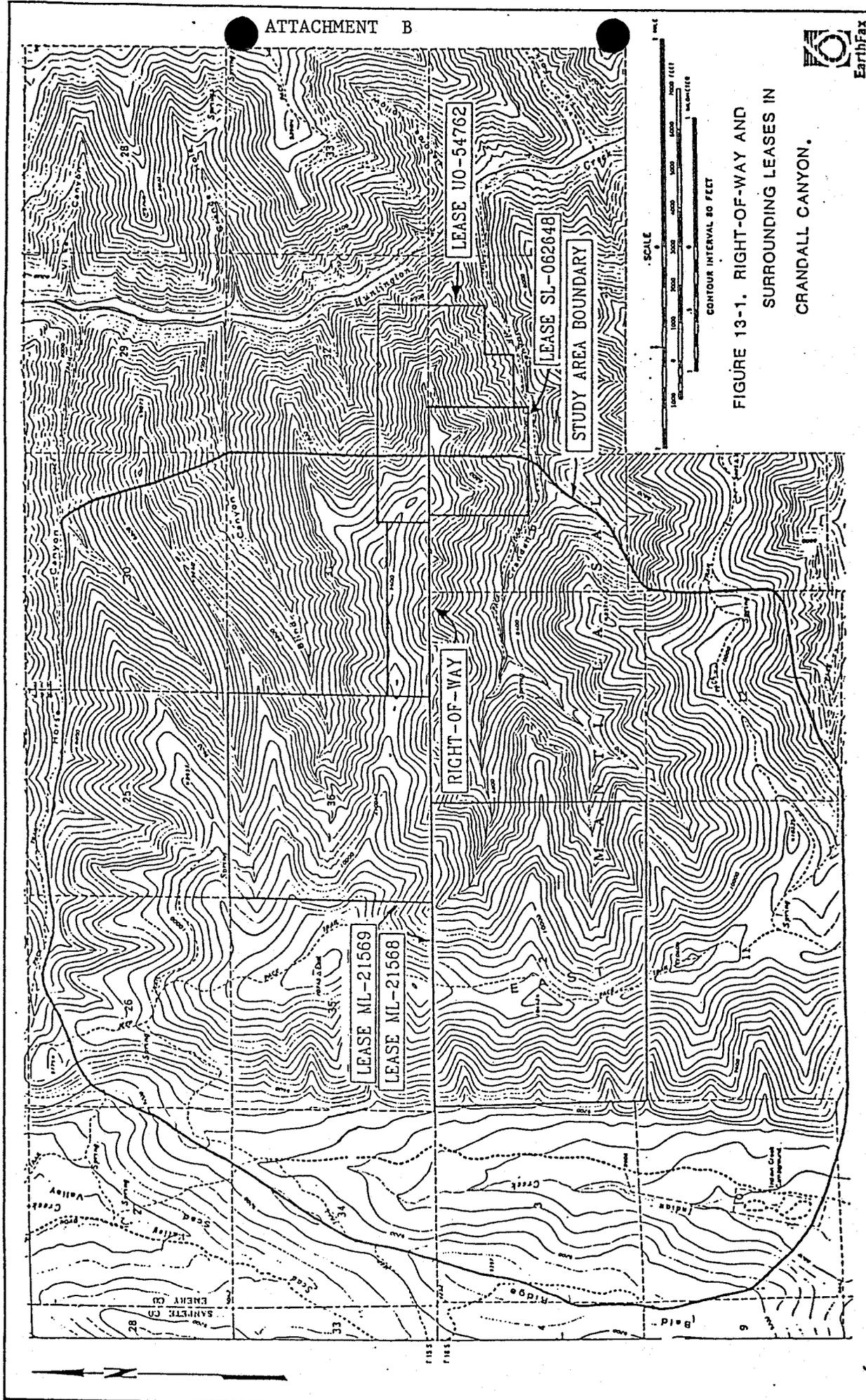


FIGURE 13-1. RIGHT-OF-WAY AND SURROUNDING LEASES IN CRANDALL CANYON.