

**Mountain Coal Company**  
Trail Mountain Mine  
Post Office Box 1378  
Price, Utah 84501  
Telephone 801 637-5050 (Price Office)  
801 637-5203 (Mine Office)  
801 748-2140 (Mine Site)



November 8, 1991

**RECEIVED**

NOV 12 1991

DIVISION OF  
OIL GAS & MINING

Ms. Susan M. White, Reclamation Biologist  
Utah Division of Oil, Gas, and Mining  
355 West Temple  
3 Triad Center - Suite 350  
Salt Lake City, Utah 84180-1203

Re: Mountain Coal Company Exploration Application, Trail Mtn. Area,  
CEP/015/009-91<sup>B</sup>, Exploration Folder & Folder #2, Emery County, Utah  
<sup>pk</sup>

Dear Ms. White:

Per our conversation of November 5th, the attached pages serve to amend the above referenced application. These "replacement pages" make the following modifications:

**Page 4 - PRE-DRILLING ACTIVITIES:**

An on-site inspection of proposed drill sites and access routes will only be conducted "if desired" by the appropriate regulatory agencies to address their concerns. The phrase "will be conducted" was not intended to imply that a meeting must take place.

**CULTURAL RESOURCES:**

The Utah Mining Code Rules for Coal Exploration UMC R614-201-225 requires a "description of the practices that will be followed to protect the area from adverse impacts of the exploration activities". The cultural resources are addressed as part of a description of our intended practices. We recognize that a minor coal exploration permit does not specifically require a cultural resource survey.

**Page 9 - SUBSURFACE OWNER:**

The oversight which had shown the U.S. Bureau of Land Management as a subsurface owner of record has been corrected. The State of Utah is the only subsurface owner within the application area.

Mountain Coal Company has obtained written permission from Nevada Power Company (NEICO), the current lessee, to drill these holes. A Reclamation Surety Bond has been issued to the State of Utah and commitments have been made to obtain all required permits.

If you have any questions please call me at (801) 637-5050, Ext. 49 or (303) 929-5015, Ext. 246.

Sincerely,

MARK W. SCANLON

Mark W. Scanlon  
Sr. Geologist

cc: D. Guy  
K. Penoyer  
Pamela Grubaugh-Littig (Utah D.O.G.M.)

Enclosures

#### THREATENED OR ENDANGERED SPECIES:

No threatened or endangered plant or animal species have been identified within the proposed exploration areas. This determination was made after a field reconnaissance of the drill sites by U.S. Forest Service Biologist (Mr. Bob Thompson) conducted specifically to address this concern.

Similar findings have been confirmed by ARCO personnel after multiple site visits and a review of the following publications.

Dalton, Larry B., Price, Jennifer S., and Romin, Laura A., 1990. Fauna of Southeastern Utah and Life Requisites Regarding their Ecosystems, Utah Dept. Natural Res., Div. of Wildlife Res. Publication #90-11, 326 pages.

Musclow, Heather J., and Dalton, Larry B., 1990. Wildlife Mitigation Technologies for Man-Made Impacts, Utah Dept. of Natural Res., Div. of Wildlife Res. Publication #90-3, 141 pages.

#### LAND USE:

The present land use of the proposed exploration area consists of domestic grazing, wildlife habitat, watershed, timber lands, recreational lands, and intensive big game hunting. Beaver Creek is presently mining coal ;underground in a lease area near the proposed exploration area. PacifiCorp is presently mining coal in the Deer Creek and Cottonwood mines on the east side of Cottonwood Creek. Several natural gas wells have been developed along the bottom of Cottonwood Creek.

#### CULTURAL RESOURCES:

As specified in 43 CFR II Subpart 3482 (a)(3)(viii), Beaver Creek will conduct a cultural resource survey of the proposed drilling locations and access roads. This study will be conducted as soon as ground conditions permit access to the proposed locations. After archaeological studies are concluded, results will be reported immediately to the appropriate regulatory agencies. There are no known structures or sites eligible for listing on the National Register of Historic Places within the proposed exploration area.

#### PROPOSED ACCESS ROUTES:

U.S.D.A. Forest Service roads #50040 and #50034 will be the main access routes to the proposed exploration area. The proposed drill sites have been located as near to existing roads as possible. Temporary roads, to be constructed and reclaimed as they are used, will be needed for access to the drill sites (see Figure 4 and Table 3). Special-Use and Road-Use permits will be obtained from the U.S.D.A. Forest Service prior to any drilling activities.

#### 3482.1(a)(3)(iv) - Narrative Description of Coal Exploration Methods:

#### PRE-DRILLING ACTIVITIES:

Prior to any construction or drilling activities, an on-site inspection of all proposed drill sites and access routes will be conducted with representatives from all appropriate regulatory agencies at their request, to discuss site-specific concerns.

**3484.1(a)(5) - (Utilizing drill holes as water monitoring wells)**

Beaver Creek does not anticipate encountering any significant aquifers during this drilling program. Beaver Creek does not intend to complete any of these holes as water monitoring wells.

**3482.1(a)(3)(viii) - Map of Exploration Area:**

A map of the proposed exploration area at a scale of 1:24,000 (1" = 2,000'), showing all drill hole locations, existing roads and access roads to be constructed is included as Figure 4 of this plan.

**3482.1(a)(3)(ix) - Surface Owners and Subsurface Owners of Record:**

**SURFACE OWNERS:**

State of Utah  
Division of State Lands  
Department of Natural Resources  
105 State Capital Building  
Salt Lake City, Utah 84114

U.S. Department of Agriculture  
U.S. Forest Service  
Manti-LaSal National Forest  
Ferron District Office  
Ferron, Utah 84532

**SUBSURFACE OWNER:**

State of Utah  
Division of State Lands  
Department of Natural Resources  
105 State Capital Building  
Salt Lake City, Utah 84114



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter  
Governor  
Dee C. Hansen  
Executive Director  
Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

November 8, 1991

Mr. Dan Guy, Manager  
Mountain Coal Company  
P.O. Box 1378  
Price, Utah 84501

Dear Mr. Guy:

Re: Exploration Drill Holes, Mountain Coal Company, Trail Mountain Mine,  
CEP/015/009-91B, Folder #2 and Exploration Folder, Emery County, Utah

There is a discrepancy regarding land ownership (i.e., subsurface ownership). The drill sites are under state subsurface ownership. This information must be amended in the text of the Exploration Application. Additionally, documentation that the Forest Service Special-Use permit has been obtained must be submitted to the Division. Upon receipt of these two items, an exploration permit may be issued.

Sincerely,

A handwritten signature in cursive script, reading 'Pamela Grubaugh-Littig'.

Pamela Grubaugh-Littig  
Permit Supervisor

PGL/jbe  
cc: Susan White  
AT015009E



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

November 6, 1991

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Susan M. White, Reclamation Biologist *JM*

RE: Two Exploration Drill Holes, Mountain Coal Company, Trail Mountain Mine, CEP/015/009-91B, Folder #2 and Exploration Folder, Emery County, Utah

## Synopsis and Analysis

The applicant submitted an amended application to drill two exploration drill holes on state lands on Trail Mountain. All concerns from previous memos have been satisfied. However, upon further review, a discrepancy was found concerning land ownership. Page 9 lists the Bureau of Land Management as a subsurface owner. I spoke with John Blake (November 5, 1991) and he reconfirmed that the drill sites, as described in Table 1, are under state subsurface ownership. This should be amended in the text.

## Recommendation

An exploration permit may be issued upon obtaining Forest Service Special-Use permits and correction of subsurface ownership.

jbe  
AT015009.91B

9/4

Sheep fescue <i>Festuca ovina</i>	1	PLS lbs. <u>RA</u>
Thickspike Wheatgrass <i>Agropyron dasystachyum</i>	3	
Western Wheatgrass <i>A. smithii</i>	4	
Slender Wheatgrass <i>A. trachycaulium</i>	4	
Yarrow <i>Achillea millefolium</i>	.2	
Yellow Sweet Clover <i>Melilotus officinalis</i>	1	
Ladak Alfalfa <i>Medicago sativa</i>	1	

14.2 ch

1. Talked to John Blake, no bond posted. No permit, till bond
2. Change seed mix
3. Incorporate deficiencies into application

I tried to call John <sup>5/14/91</sup> Blake but didn't talk to him. (ext. 5475)

Road Use on Forest other road on TM#9

Forest Boundary	_____	(3) PUR
Road Use Permit Mill Canyon	191	(4) Con Sti Sti
	_____	(5) Fin Fil Aut
	_____	(6) Prc

I wrote a letter of request for permit <sup>5/9</sup>

Beaver Crt. Exploration  
9/4, gave application to John Blake

te	Sign-off	<u>C</u>
to get permit from State!		
Line road use per involved on state.		
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Susan -  
These 2 holes are located within the permit area. So we issue a permit. We are the land. Please review. Thanks. DO YOU HAVE TIME? (AM)

tion Company  
not source; see

PERMIT TRACKING FORM

Type of Proposal:

MRP AMENDMENT \_\_\_\_\_  
 MRP REVISION \_\_\_\_\_  
 EXPLORATION \_\_\_\_\_  
 I.B.C. \_\_\_\_\_  
 PERMIT RENEWAL \_\_\_\_\_  
 NEW PAP \_\_\_\_\_

Enforcement Action Involved:

NOV #N \_\_\_\_\_, # \_\_\_\_\_ of \_\_\_\_\_  
 CO #C \_\_\_\_\_, # \_\_\_\_\_ of \_\_\_\_\_  
 TDN #X \_\_\_\_\_, # \_\_\_\_\_ of \_\_\_\_\_  
 TDL #X \_\_\_\_\_, # \_\_\_\_\_ of \_\_\_\_\_  
 DIVISION ORDER: date \_\_\_\_\_

Title of Proposal:

2 Exploration Drill Holes (State Lands)

Company/Mine Name:

Trail Mountain #9 Mine, BCC

File # (INA / PRO / ACT / CEP)

ACT 1009 - 91

PROJECT LEADER:

	<u>Reviewers</u>	<u>Tech Memo Drafted</u>		<u>Date Completed</u>
		Yes	No	
HYDROLOGY	_____	( )	( )	_____
BIOLOGY	_____	( )	( )	_____
ENGINEER	_____	( )	( )	_____
SOILS	_____	( )	( )	_____
GEOLOGY	_____	( )	( )	_____
LEGAL/FIN	_____	( )	( )	_____

Dates:

- |                            |                |                          |       |
|----------------------------|----------------|--------------------------|-------|
| (1) Initial Plan Received  | <u>5/2/91</u>  | (3) Publication Approval | _____ |
| Tech Review Due            | _____          | (4) Conditional Approval | _____ |
| Tech Review Complete       | _____          | Stipulations Due         | _____ |
| Deficiencies Sent          | _____          | Stipulations Recieved    | _____ |
| Operator Response Due      | _____          |                          |       |
| (2) Operator Response Rc'd | <u>8/21/91</u> | (5) Final Approval       | _____ |
| Tech Review Due            | _____          | Filed in MRP             | _____ |
| Tech Review Complete       | _____          | Author                   | _____ |
|                            |                | (6) Proposal Denied      | _____ |

OTHER AGENCY INVOLVEMENT:

COMMENTS:

<u>Agency</u>	<u>Transmittal Date</u>	<u>Sign-off</u>	<u>Comments</u>
( ) OSMRE	<u>5/14/91</u>		<u>called to get permit from State lands and also prot a bond.</u>
( ) USFS (WALT NOWAK)	<u>5/9/91</u>		<u>called re: road use permit? where getting water? FS</u>
( ) BLM	<u>5/9/91</u>		<u>called no involvement on state lands (State Falls)</u>
( ) USFWS	_____	_____	_____
( ) NPS	_____	_____	_____
( ) HEALTH	_____	_____	_____
( ) UDWR	_____	_____	_____
( ) H2O RTS.	_____	_____	_____
( ) HISTORY	_____	_____	_____

→ Letter from irrigation company to FS needed (acc. ft. from that source; Access?) Authorization letter (cc: FS)



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF STATE LANDS AND FORESTRY

Norman H. Bangertler  
Governor  
Dee C. Hansen  
Executive Director  
Richard J. Mitchell  
Division Director

355 West North Temple  
3 Triad Center, Suite 400  
Salt Lake City, Utah 84180-1204  
801-538-5508

October 8, 1991

Mountain Coal Co.  
Attn: Dan Guy  
Box 1378  
Price, UT 84501

Dear Mr. Guy:

RE: Coal Exploration, State Leases ML 23177 and ML 23178

This letter serves notice that Mountain Coal Company has met Division of State Lands and Forestry requirements of operator designation and reclamation bonding to commence coal exploration under the above-numbered leases in the Trail Mountain area. You must still meet all requirements of the Utah Division of Oil, Gas, and Mining prior to the commencement of operations.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "John T. Blake".

JOHN T. BLAKE  
MINERAL RESOURCES SPECIALIST

JTB/tdw

cc: Pam Grubaugh-Littig  
Division of Oil, Gas, and Mining

RECEIVED

OCT 09 1991

DIVISION OF  
OIL GAS & MINING

October 7, 1991

MEMORANDUM TO THE DIRECTOR

SUBJECT: Acceptance of Bond #U-8003091  
ML 23177 and ML 23178--Coal

Mountain Coal Company, 555 17th Street, Denver, CO 80202, as principal, has submitted surety Bond #U-8003091 with United Pacific Insurance Company as surety in the amount of \$25,000 to cover proposed coal exploration under State Coal leases ML 23177 and ML 23178.

Mountain Coal Company is a designated operator of the sublessee, Nevada Electric Investment Co. Zions First National Bank, Trustee for the Mckinnon Estate is the lessee of record.

This bond appears in order and I recommend that it be accepted.

Respectfully submitted,

JOHN T. BLAKE  
MINERAL RESOURCES SPECIALIST

JTB/tdw

cc: Pam Grumbaugh - Littig  
Division of Oil, Gas, and Mining

**RECEIVED**

OCT 04 1991

DIVISION OF  
OIL GAS & MINING



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF STATE LANDS AND FORESTRY

Norman H. Bangerter  
Governor  
Dee C. Hansen  
Executive Director  
Richard J. Mitchell  
Division Director

355 West North Temple  
3 Triad Center, Suite 400  
Salt Lake City, Utah 84180-1204  
801-538-5508

RECEIVED

SEP 10 1991

DIVISION OF  
OIL GAS & MINING

September 9, 1991

Mountain Coal Co.  
Attn: Dan Guy  
P.O. Box 1378  
Price, UT 84501

Dear Mr. Guy:

RE: Proposed Coal Exploration; ML 23177 and ML 23178

The Division has reviewed your coal exploration plan of April 1991, for lands under the above-numbered leases in the Trail Mountain area. Your plan as supplemented by the letter of August 18, 1991, to Division of Oil, Gas, and Mining is acceptable to Division of State Lands and Forestry.

The Division of State Lands and Forestry has two requirements prior to your commencement of operations.

1. Submit to the Division of State Lands and Forestry a letter signed by Nevada Electric Investment Co. and Intermountain Power Agency, sub-lessees of record, designating Mountain Coal Co. an operator under the subleases which were let by Zions First National Bank, Trustee, successor lessee of record of ML 23177 and 23178.

2. Submit to the Division of State Lands and Forestry a reclamation surety bond in the amount of \$25,000 covering ML 23177 and ML 23178, using the enclosed bonding form, with a surety institution licensed to do business in Utah. Alternatively, you may submit a short term C.D. in the amount of \$25,000, with a Utah financial institution, naming the Division of State Lands and Forestry as co-owner on the certificate.

In accordance with Article XVI of the leases you are hereby requested to file with the Division of State Lands and Forestry a copy of any interpretive geological or drilling reports produced pursuant to this project. The Division will maintain the confidentiality of such information.

Sincerely,

JOHN T. BLAKE  
MINERAL RESOURCES SPECIALIST

JTB/tdw  
Enclosure  
cc: Susan White, DOGM

**Mountain Coal Company**

West Elk Mine  
Post Office Box 591  
Somerset, Colorado 81434  
Telephone 303 929-5015

RECEIVED

AUG 21 1991

DIVISION OF  
OIL GAS & MINING

*Copy Susan*



August 18, 1991

*Please review  
and ~~letter~~  
write a memo.  
The Pam*

Pamela Grubaugh-Littig, Permit Supervisor  
State of Utah, Dept. of Natural Resources  
Division of Oil, Gas, and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Re: Exploration drill holes for Mountain Coal Company  
(Beaver Creek) at Trail Mountain #9 Mine, Emery  
County, Utah. CEP/015/009-91B

Dear Ms. Grubaugh-Littig:

In response to your memo to Pamela Grubaugh-Littig,  
dated June 11, 1991, this letter serves to amend the  
deficiencies in the above referenced application.

R614-201-222

The applicants representative who will be present at  
and responsible for the exploration operations is:

Mark W. Scanlon  
Senior Geologist  
Mountain Coal Company  
P.O. Box 591  
Somerset, Colorado 81434  
(303) 929-5015 Ext. 246

R614-201-223

A non-commercial road use permit will be obtained from  
the Forest Service and a bond will be posted with Utah  
State Lands.

Water is to be hauled to the drill sites and obtained  
from the Trail Mountain Mine for hole TMS-1 and  
obtained from a stock pond atop Trail Mountain for Hole  
TMS-2. This water haul plan has been reviewed with the  
Forest Service (Mr. Dale Harbor, Ferron District  
Geologist).

R614-201-223, Continued

Mountain Coal (Beaver Creek) owns 20 shares of water of the Cottonwood Irrigation Company which could be utilized in the event of inadequate water supply. All necessary special use permits will be obtained through the Forest Service.

R614-201-225

No threatened or endangered plant or animal species have been identified within the proposed exploration areas. This determination was made after a field reconnaissance of the drill sites by U.S. Forest Service Biologist (Mr. Bob Thompson) conducted specifically to address this concern.

Similar findings have been confirmed by ARCO personnel after multiple site visits and a review of the following publications.

Dalton, Larry B., Price, Jennifer S., and Romin, Laura A., 1990. Fauna of Southeastern Utah and Life Requisites Regarding their Ecosystems, Utah Dept. Natural Res., Div. of Wildlife Res. Publication #90-11, 326 pages.

Musclow, Heather J., and Dalton, Larry B., 1990. Wildlife Mitigation Technologies for Man-Made Impacts, Utah Dept. of Natural Res., Div of Wildlife Res. Publication #90-3, 141 pages.

In addition to the afore mentioned permitting and bonding, the following reclamation practices will be followed at the drill sites:

- \* All brush and trees removed from the roads or drill pads during construction will be placed back on the reclaimed area after seeding in order to protect the soil and seed.
- \* The following seed mixture approved by the Forest Service will be used during the reclamation activities:

Exploration Drill Holes

Page 3

Sheep fescue *Festuca ovina* 1 lb.  
Yarrow *Achillea millefolium* .20 lbs

R614-201-225, Continued

Thickspike - *A. dasystachyum*  
Western - *A. <sup>Species</sup>smithii* PLS lbs./acre

I	Intermediate Wheatgrass - <i>Agropyron intermedium</i>	3
N	Slender Wheatgrass - <i>Agropyron trachycaulum</i>	3
I	- Pubescent Wheatgrass - <i>Agropyron trichophorum</i>	3
I	- Smooth Brome - <i>Bromus inermis</i>	3
I	Yellow Sweet Clover - <i>Melilotus officinalis</i>	1
I	Ladak Alfalfa - <i>Medicago sativa ladak</i>	1
I	Small Burnett - <i>Sanguisorba minor</i>	1

This seed mixture must be 99 percent pure live seed and applied at the rate of 15 pounds per acre.

\* The topsoil redistributed during reclamation will be left in a roughened condition.

Drilling operations are currently scheduled for mid-September. If there are any questions or comments please contact me @ (303) 929-5015, Ext. 246 or (801) 637-5050, Ext. 49.

Regards,

*Mark W. Scanlon*

Mark W. Scanlon  
Senior Geologist  
Mountain Coal Company  
P.O. Box 591  
Somerset, CO 81434

MWS/mer

cc: Susan M. White, D.O.C.M.  
Dan Guy, MCC (Beaver Creek)

748-2140



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

*Susan -*

*Is this in*

*the folder?*

June 12, 1991

Mr. Dan Guy  
Beaver Creek Coal Company  
P.O. Box 1378  
Price, Utah 84501

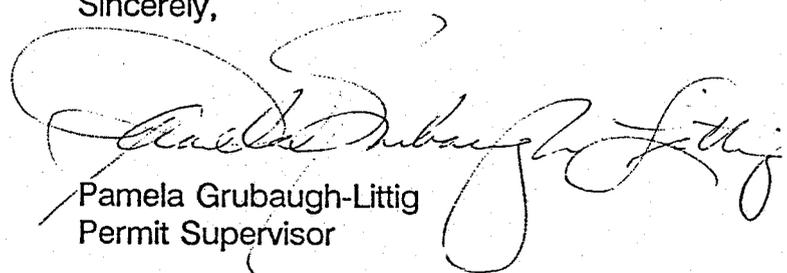
Dear Mr. Guy:

Re: Two Exploration Drill Holes, Beaver Creek Coal Company, Trail Mountain #9 Mine, CEP/015/009-91B, Exploration Folder & Folder #2, Emery County, Utah

Enclosed please find deficiencies related to the exploration of two drill holes located north of the Trail Mountain #9 permit area.

Please submit your responses by July 1, 1991.

Sincerely,



Pamela Grubaugh-Littig  
Permit Supervisor

jbe

Enclosure

cc: Susan White

AT015009.002



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

June 11, 1991

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Susan M. White, Reclamation Biologist *S.M.W.*

RE: Two Exploration Drill Holes, Beaver Creek Coal Company, Trail Mountain #9 Mine, CEP/015/009-91B, Exploration Folder & Folder #2, Emery County, Utah

## Synopsis

Beaver Creek Coal Company (Mountain Coal Company) has submitted an application for a permit to drill two coal exploration drill holes. The proposed drill holes are on State of Utah lands and are immediately north of the Trail Mountain #9 permit area. Drilling will be completed this year.

## Recommendation

The application was reviewed and found to be incomplete. Listed below are deficiencies which should be included in the application:

- R614-201-222 Please provide the Name of applicants representative who will be present at, and responsible for conducting the exploration operations.
- R614-201-223 The applicant must receive a permit and post a bond with Utah State Lands. The Forest Service would like to know where the applicant will obtain water for the drilling.
- R614-201-225 The applicant states: "No threatened and endangered plant or animal species have been identified within the proposed exploration areas." How was this determined and are any threatened and endangered species likely.

Page 2  
Memo/PGL  
CEP/015/009-91B  
June 11, 1991

A commitment that all brush and trees removed from roads or pads during construction should be placed back on the reclaimed area after seeding. This will protect the soil and seed.

The application must include a seed mixture composed of grass, forb, and shrub species which are native to the area.

A commitment that the redistributed topsoil will be left in a roughened condition.

jbe  
AT015009.001

Pan



**BEAVER CREEK Coal Company**  
Post Office Box 1378  
Price, Utah 84501  
Telephone 801 637-5050

April 29, 1991

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

RE: Application for Coal Exploration Permit (less than 250 tons), Trail Mountain Area, Mountain Coal Company.

Dear Lowell,

Mountain Coal Company, (formerly Beaver Creek Coal Company) hereby applies for a permit from the State of Utah to drill 2 coal exploration drill holes on state lands north of the Trail Mountain Mine, as outlined in the accompanying exploration plan.

Mountain Coal Company has obtained written permission from Nevada Power Company (NEICO), the current lessee, to drill these holes.

Weather permitting, and with Forest Service approval, Mountain Coal Co. plans to begin drilling activities on the permitted holes on or around June 1, 1991. Mountain Coal Company would appreciate your prompt consideration of this application. If you have any questions please call me (637-5050 ext. 49).

Sincerely,

*Kenneth S. Fleck*

Kenneth S. Fleck  
Geologist

Beaver Creek Coal Company  
P.O. Box 1378  
Price, Utah 84501

cc: D.A. Echter  
D.W. Guy

Enclosures

*Geologist  
Jerry*

**RECEIVED**

MAY 02 1991

DIVISION OF  
OIL GAS & MINING

STATE COAL  
MINOR COAL EXPLORATION APPLICATION  
EXPLORATION PLAN

TRAIL MOUNTAIN AREA  
EMERY COUNTY, UTAH

MOUNTAIN COAL COMPANY  
PRICE, UTAH  
APRIL, 1991

(303) 293-7537

Jerry Clanton

**BEAVER CREEK Coal Company**

Post Office Box 1378  
Price, Utah 84501  
Telephone 801 637-5050



April 29, 1991

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

RE: Application for Coal Exploration Permit (less than 250 tons), Trail Mountain Area, Mountain Coal Company.

Dear Lowell,

Mountain Coal Company, (formerly Beaver Creek Coal Company) hereby applies for a permit from the State of Utah to drill 2 coal exploration drill holes on state lands north of the Trail Mountain Mine, as outlined in the accompanying exploration plan.

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Weather permitting, and with Forest Service approval, Mountain Coal Co. plans to begin drilling activities on the permitted holes on or around June 1, 1991. Mountain Coal Company would appreciate your prompt consideration of this application. If you have any questions please call me (637-5050 ext. 49).

Sincerely,

*Kenneth S. Fleck*

Kenneth S. Fleck  
Geologist

Beaver Creek Coal Company  
P.O. Box 1378  
Price, Utah 84501

cc: D.A. Echter  
D.W. Guy

Enclosures

## INTRODUCTION

This Exploration Application and Exploration Plan has been prepared by Mountain Coal Company (formerly Beaver Creek Coal Company) in accordance with the requirements of the Utah Mining Code Rules for Coal Exploration UMC R614-200 - 203 (General Requirements: Exploration of Less than 250 Tons), the Code of Federal Regulations, Title 43, Chapter II, Subparts 3482 (Exploration Plans) and 3484 (Performance Standards) as well as CFR Title 30, Chapter VII, Part 815 (Permanent Program Performance Standards - Coal Exploration).

The format used in this Exploration Plan follows the format of 43 CFR, Chapter II, Subpart 3482.1 (exploration and resource recovery and protection plans).

EXPLORATION PLAN  
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EXPLORATION PLAN

3482.3(a)(3) i, ii - Names and Addresses of Applicant, Operator, and Lessee of Record:

APPLICANT:

Mountain Coal Company (formerly Beaver Creek Coal Company)  
P.O. Box 1378  
1305 S. Carbon Ave.  
Price, Utah 84501

(801) 637-5050

OPERATOR:

Mountain Coal Company (formerly Beaver Creek)

(Address and Number same as above)

LESSEE OF RECORD:

Nevada Electric Investment Co. (NEICO)

ADJACENT LEASES:

Trail Mountain Federal Lease Tract (unleased)  
Lease Application No. U-68012 (PacifiCorp)

REPRESENTATIVE OF APPLICANT:

Geologist

Mountain Coal Company  
P.O. Box 1378  
1305 S. Carbon Ave.  
Price, Utah 84501

(801) 637-5050 ext. 49

EXPLORATION PLAN

3482.1(a)(3)(iii) - Narrative Description of Exploration Area:

The proposed exploration area is located approximately 11 miles northwest of Orangeville, Utah (See Figure 1).

The proposed exploration area lies within State sections 2 and 16, T.17 S. R.6 E., to the north and northwest of the existing Trail Mountain Mine. The proposed exploration areas are outlined on Figures 1 and 2, and a Legal Description of the proposed exploration area is presented in Table 1.

SURFACE TOPOGRAPHY:

Exploration activities will take place on top of Trail Mountain and in Cottonwood Canyon, between 8,400 and 9,200 feet elevation. The top of Trail Mountain consists of gently rolling terrain bounded by steep escarpments of the Castlegate Sandstone. The bottom of Cottonwood Canyon consists of gently inclined terrain cut by Cottonwood Creek (a perennial stream). Cliffs of the Castlegate Sandstone form steep bluffs above the canyon bottom.

GEOLOGY:

The proposed Trail Mountain exploration application area lies near the center of the Wasatch Plateau Coal Field within the Mahogany Point and Joes Valley Reservoir U.S.G.S. 7 1/2 minute quadrangle maps (see Figure 4).

Previous geological work has been done in this area by Spieker (1931), Ellis and Frank (1981), and Kitzmiller (1982). The U. S. Geological Survey and the Utah Geological and Mineral Survey have conducted previous exploration drilling programs in and adjacent to the proposed exploration area.

The general stratigraphy of the area consists of members of the Mancos Shale and Mesaverde Group of the Cretaceous System, and the overlying Wasatch Group of Tertiary age (see Figure 2).

The Masuk Shale member of the Mancos Shale outcrops lowest in the area. About 0 - 500' of this unit are exposed along the lower reaches of Straight Canyon and Cottonwood canyon.

Overlying the Mancos Shale are the Mesaverde Group beds, which consist of, in ascending order, the Star Point Sandstone, the Blackhawk Formation (coal bearing), and the

Price River Formation, itself consisting of the lower massive Castlegate Sandstone member and the Upper Price River member. Mesaverde Group outcrops form the steep canyon walls in the area.

The North Horn Formation and overlying remnants of the Flagstaff Limestone of Tertiary age cap the top of Trail Mountain.

The Blackhawk Formation of the Mesaverde Group is the major coal-bearing formation of the area. The only known mineable coal at Trail Mountain is the Hiawatha Seam, which is found immediately on top of the Star Point Sandstone, at the contact of the Star Point Sandstone and the overlying Blackhawk Formation. Other seams are present in the Blackhawk Formation, but all are too thin to be of economic importance in the Trail Mountain area.

The strata in the Trail Mountain area dip generally at 2 - 5 degrees to the south-southwest. Minor faulting related to the Joes Valley fault system is likely to occur along the western extent of the exploration area.

#### WATER RESOURCES:

The climate in the Trail Mountain area is considered semi-arid, receiving 10 - 20 inches of precipitation annually, depending on elevation (precipitation increases as elevation increases).

Major streams in the area include Cottonwood Creek, flowing through Section 2, and Straight Canyon Creek to the south, which is supplied year-round by Joes Valley reservoir.

Ground water aquifers are known to exist in the North Horn Formation, in sandstones of the Blackhawk Formation, and the Star Point Sandstone. Several springs originating from the North Horn Formation supply water to stock and wildlife ponds on the top of Trail Mountain. Several springs are known to feed Cottonwood Creek as well.

#### VEGETATION:

Vegetation in the exploration area consists of aspen, conifer, pinyon and juniper trees, and various grasses and mountain shrubs. No threatened or endangered plant species have been identified in the exploration areas.

#### SOILS:

Soils in the exploration areas are mainly derived from the North Horn and Blackhawk formations and have a high clay

content. By limiting the size of drill sites and retaining topsoil for reclamation purposes, revegetation should not be a problem in this area.

WILDLIFE:

Trail Mountain is a deer and elk winter range. Other animals in the area include cougar, bobcat, rabbit, squirrel, mice and other rodents, reptiles and amphibians. The proposed exploration program will be scheduled to avoid conflicts with the deer and elk on winter range.

THREATENED OR ENDANGERED SPECIES:

No threatened or endangered plant or animal species have been identified within the proposed exploration areas. ? How was this determination made?

LAND USE:

The present land use of the proposed exploration area consists of domestic grazing, wildlife habitat, watershed, timber lands, recreational lands, and intensive big game hunting. Beaver Creek is presently mining coal underground in a lease area near the proposed exploration area. PacifiCorp is presently mining coal in the Deer Creek and Cottonwood mines on the east side of Cottonwood Creek. Several natural gas wells have been developed along the bottom of Cottonwood Creek.

CULTURAL RESOURCES:

As specified in 43 CFR II Subpart 3482 (a)(3)(viii), Beaver Creek will conduct a cultural resource survey of the proposed drilling locations and access roads. This study will be conducted as soon as ground conditions permit access to the proposed locations. After archaeological studies are concluded, results will be reported immediately to the appropriate regulatory agencies. There are no known structures or sites eligible for listing on the National Register of Historic Places within the proposed exploration area.

who? - State History

PROPOSED ACCESS ROUTES:

U.S.D.A. Forest Service roads #50040 and #50034 will be the main access routes to the proposed exploration area. The proposed drill sites have been located as near to existing roads as possible. Temporary roads, to be constructed and reclaimed as they are used, will be needed for access to the drill sites (see Figure 4 and Table 3). Special-Use and Road-Use permits will be obtained from the U.S.D.A. Forest

Service prior to any drilling activities.

3482.1(a)(3)(iv) - Construction, Exploration, and Reclamation Methods:

PRE-DRILLING ACTIVITIES:

Prior to any construction or drilling activities, an on-site inspection of all proposed drill sites and access routes will be conducted with representatives from all appropriate regulatory agencies present, to discuss site-specific concerns.

Proper Road-Use and Special-Use permits will be obtained prior to use of U.S.D.A. Forest Service Roads.

State, U.S.D.A. Forest Service, and Bureau of Land Management regulatory personnel will be notified at least 48 hours before any construction or drilling equipment is moved into the project areas. All construction and drilling activities will be supervised by an authorized representative of the applicant. A copy of the exploration permit and all pertinent permit documents will be available for inspection on site at all times.

Campsites and/or staging areas to be used by the drilling contractor will be reviewed with and approved by the State of Utah or U.S.D.A. Forest Service prior to use.

Any proposed changes in the Exploration Plan after permit approval will be reviewed with the appropriate regulatory agencies before the changes take effect.

*brush & trees will be redistributed over the reclaimed road*

ROAD CONSTRUCTION:

Existing roads and trails will be used whenever possible, and movement of equipment across undisturbed land will be kept to a minimum. When necessary, brush will be cleared for a 12' wide path to the drill site. Trees over 8" in diameter will be cut down and skidded to a site designated by the State of Utah. New or additional roads will be constructed only when necessary and only as the drilling program progresses. Any top soil removed during road construction will be stockpiled and redistributed when the roads are reclaimed. Erosion control structures such as water bars will be installed in newly constructed roads as required by the State of Utah. Rehabilitation of existing trails and reclamation of constructed roads will be done in accordance with State of Utah regulations and stipulations.

DRILLING SITES:

Both drill sites have been located close to existing roads. (see Figure 4). Each drill site will be approximately 100'x150' in size, or the minimum size necessary for efficient drilling operations. Top soil that is present will be stripped from the drill sites and stockpiled to prevent contamination. A mud pit or pits will be dug at each site to contain drill cuttings. Water for drilling operations will be obtained at a site determined in cooperation with the State of Utah, U.S.D.A. Forest Service and the Cottonwood Creek Irrigation Co.

#### METHODS AND EQUIPMENT FOR DRILLING:

Site preparation will be done with one D-8 sized bulldozer or equivalent and one backhoe. Brush and/or trees will be cleared from the site, then the top soil will be pushed aside before pad construction is begun. Each drill site will be approximately 100' x 150' to allow sufficient space for all necessary drilling equipment.

Rotary Drilling and coring will be done by a rubber-tired truck-mounted drilling rig. Support equipment will consist of one or two water trucks, one rig-up or support truck, and 4x4 pickups for the crews and company representatives. Stationary equipment for each site will consist of a pipe truck or trailer, one or more truck-mounted air compressors or boosters and a doghouse/supply trailer. One truck mounted geophysical logging unit will be used on each hole location.

Each hole will be rotary drilled to a point approximately 50' above the top of the Hiawatha Seam. Casing will be installed in the hole as necessary to keep the hole open and to prevent drilling and circulation problems if possible. Cuttings will be sampled and logged every 10 feet when circulation is present. After the core is retrieved from the hole, the hole will be logged with a standard suite of geophysical coal logs. The hole will then be plugged according to the standards set forth in 43 CFR II 3484.1(a).

The initial diameter of each drill hole will be approximately 10 inches. The core retrieved from the hole will be 2.4 inches or 3 inches in diameter. The primary drilling medium will be compressed air with mist/foam injection to aid in the circulation of cuttings to the surface. If air and foam prove to be an insufficient drilling medium, or if lost circulation becomes a problem, drilling mud and lost circulation materials will be used.

Care will be taken to ensure that the the prevailing hydrologic balance will not be adversely affected by the drilling methods used in this program. Biodegradable drilling soap is the only chemical anticipated for use during drilling, and any other potentially toxic materials used will

be handled and disposed of in accordance with State and Federal regulations.

#### PROPOSED DRILL HOLE PLUGGING METHODS:

The hole plugging method described in 43 CFR II 3484.1(a) will be used for all holes. Each hole will be plugged with cement from bottom to 50 feet above the uppermost thick coal seam and from 50 feet below to 50 feet above any aquifers encountered in the hole (see Figure 3). The rest of the hole will be filled either with an approved completion mud or gel or cement to within 5 feet of the surface. A 5 foot cement surface plug will be set, and an appropriately labeled monument marker will be cemented into the surface plug. Surface casing will be cut off at or below the level of the soil surface.

#### ESTIMATED SIZE AND DEPTH OF HOLES:

Below the surface casing (approximately 12 inches in diameter), each hole will be started with a 9 or 10 inch rotary bit. This larger diameter hole will be drilled as far as possible to allow 8 inch diameter casing to be set through the North Horn and upper Price River formations, both of which are known for poor drilling conditions. Below these formations, a smaller (6 1/2 inch) diameter rotary hole will be drilled to core point (50 feet above the Hiawatha seam). The 6 1/2 inch rotary hole will be cased if necessary. The outer diameter of the cored portion of the hole will be 5 inches or less. A complete listing of the locations and depths of the proposed drill holes appears on Table 2.

#### MODIFICATION OF DRILL HOLES TO SURVEILLANCE OR WATER WELLS:

If significant aquifers are encountered in any of the proposed drill holes, regulatory officials will be notified. They may direct Mountain Coal Company to complete such a hole as a water monitoring well. Since Mountain Coal Company does not anticipate penetrating any significant aquifers in any of the holes, no plans are enclosed for water well completions.

#### RECLAMATION PLAN:

Reclamation activities will follow as closely as possible the completion of each hole.

1. Upon completion of drilling activities at a given site, all debris, trash, and drilling related equipment will be removed from the site.
2. When the mud pit is sufficiently dry, it will be filled with stored soil material and compacted to minimize later

settling.

3. A backhoe and a bulldozer will redistribute material on and around the drill pad to achieve as closely as is practicable the original contour of the site.
4. Stored top soil will be distributed as evenly as possible over the disturbed pad area. *Leaving a very roughened surface.*
5. The entire drill pad area will be re-seeded using a State - approved seed mix at the rate specified. *Propose seed mix mulch w/ 2 tons/acre hay, hard anchor*
6. The access road will be restored as closely as possible to the original contour and re-seeded as above. *Shrubs & trees will be placed onto of area.*
7. The drill pad and access road reclamation procedure outlined above will apply only to those areas newly disturbed for this proposed exploration. Existing roads will be left in a condition equal to or better than that observed on Mountain Coal Company's entry into the area.

**3482.1(a)(3)(v)** - Estimated Timetable for Construction, Drilling, and Reclamation Activities:

Because access to the proposed exploration area is dependent on the weather and ground conditions, the estimated startup date for construction and drilling activities will be on or around June 1, 1991.

At this time, Beaver Creek intends to drill both holes during the 1991 drilling season and still leave sufficient time for reclamation activities to be completed by October 31, 1991.

**3482.1(a)(3)(vi)** - Amount of Coal to be Removed:

Coal to be removed during this exploration will be in the form of 2 to 3 inch diameter cores. Using a total coal thickness of 12 feet in each hole and a core diameter of 3", total weight of coal to be removed will be less than 100 pounds. This coal will be tested for a wide range of quality parameters by a qualified laboratory.

**3482.1(a)(3)(vii)** - Measures to be Used to Comply with Performance Standards for Exploration (43 CFR II 3484.1(a), 30 CFR 815.15, and Utah State Permanent Program Rules):

3484.1(a)(1) - (Operator shall comply with applicable requirements of surface management agency, 30 CFR 815.15, or approved State program)

All applicable parts of the Federal and State Performance Standards for Coal Exploration have been covered in the preceding exploration and reclamation plans. Beaver Creek has reviewed, and will comply with, all applicable requirements of 30 CFR 815.15 and the Utah Mining Code as stated in UMC R614-200 - 203.

3484.1(a)(2) - (Installation of casing and blowout preventers in drillholes in known oil, gas, and geothermal areas)

The Cottonwood Canyon area is a known natural gas field. Gas occurs in the Ferron Sandstone, approximately 3,000 feet below the Star Point Sandstone. Since the proposed drilling will not penetrate the entire Star Point Sandstone and not drill into the underlying Mancos Shale, blowout preventers will not be used. Casing will be set in each hole as necessary to maintain circulation of cuttings to the surface.

3484.1(a)(3) - (Drillhole plugging requirements)

Each drillhole will be plugged according to the requirements outlined in this section: The hole will be plugged with cement from 50 feet below to 50 feet above any coal bed over 4 feet thick and any aquifer.

The remainder of the hole will be filled with a completion mud (bentonite gel) and drill cuttings or cement to within 5 feet of the surface. A cement surface plug will be set, capped with an appropriately marked brass or aluminum monument, at or below ground level.

3484.1(a)(4) - (Retention of drill and geophysical logs by applicant)

Beaver Creek will retain in its files all drill and geophysical logs for at least 1 year, and will make them available for inspection by any authorized officer. All un-analyzed drill cores will be kept in Beaver Creek's possession for at least 1 year if requested, and will be available for inspection by any authorized officer.

3484.1(a)(5) - (Utilizing drill holes as water monitoring wells)

Beaver Creek does not anticipate encountering any significant aquifers during this drilling program. Beaver Creek does not intend to complete any of these holes as water monitoring wells.

3482.1(a)(3)(viii) - Map of Exploration Area:

A map of the proposed exploration area at a scale of 1:24,000 (1" = 2,000'), showing all drill hole locations, existing roads and access roads to be constructed is included as Figure 4 of this plan.

3482.1(a)(3)(ix) - Surface Owners and Subsurface Owners of Record:

SURFACE OWNERS:

State of Utah  
Division of State Lands  
Department of Natural Resources  
105 State Capital Building  
Salt Lake City, Utah 84114

U.S. Department of Agriculture  
U.S. Forest Service  
Manti-LaSal National Forest  
Ferron District Office  
Ferron, Utah 84532

SUBSURFACE OWNER:

State of Utah  
Division of State Lands  
Department of Natural Resources  
105 State Capital Building  
Salt Lake City, Utah 84114

U.S. Department of the Interior  
Bureau of Land Management  
Utah State Office  
324 S. State Street Suite 301  
Salt Lake City, Utah 84111-2303

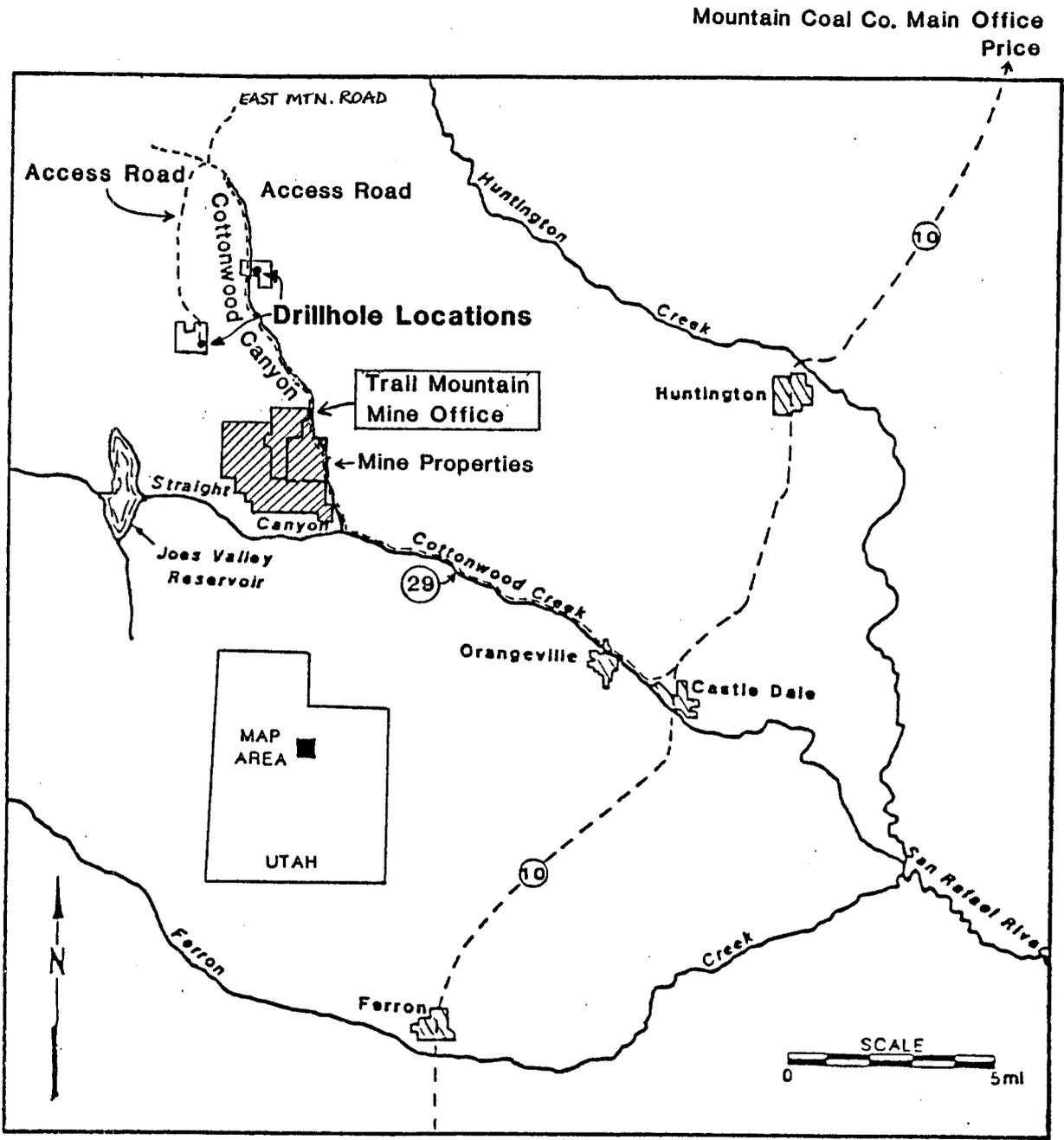


Figure 1. Location of Proposed Exploration Area.

System	Group	Formation		Thickness (feet)	Description
Tertiary	Wasatch	Flagstaff Limestone		100-1,000	Light gray to cream limestone; thin and even bedded; dense; fossiliferous; ledge- and cliff-forming.
		North Horn Formation		900-2,000	Mostly red-, brown-, and salmon-colored shales; varying thicknesses of sandstone, freshwater limestone and conglomerate; slope-forming.
Cretaceous	Mesa Verde	Price River Fm.	Upper Price River Member	400-800	Mostly tan and gray, medium- to coarse-grained sandstone; some gray shale and conglomeratic sandstone; ledge- and slope-forming.
			Castlegate Sandstone Member	150-500	Light gray, yellowish brown, and white, medium- to coarse-grained sandstone and conglomeratic sandstone; cliff-forming.
		Disconformity			
		Blackhawk Formation		400-1,100	Light to medium gray sandstones; gray to black shales; gray siltstones; important coal beds in lower half; sandstones weather tan, brown, yellowish brown; ledge- and slope-forming.
	Star Point Sandstone		200-1,000	Tan, light gray, and white massive sandstones separated by one or more shale tongues; cliff-forming.	
	Mancos Shale	Masuk Shale		300-1,300	Light gray to blue gray sandy massive shale; thins to west and south; slope-forming.

Figure 2. Generalized stratigraphic column of rock units exposed in the Wasatch Plateau Coal Field (Davis and Doelling, 1977).

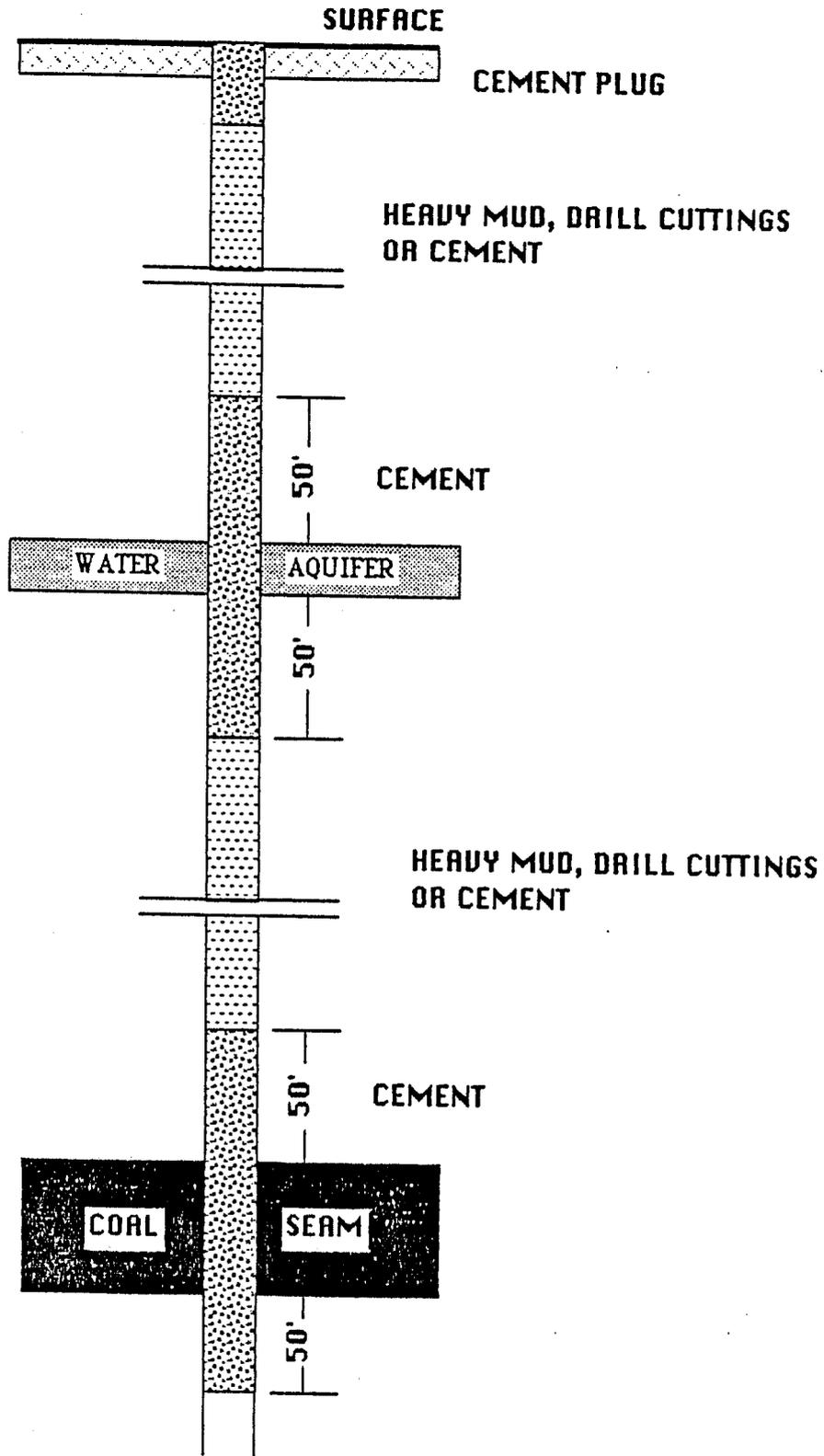


Figure 3. Drill hole plugging method.

TABLE 1

LEGAL DESCRIPTION  
TRAIL MOUNTAIN 1991  
STATE COAL EXPLORATION APPLICATION AREA

T. 17 S., R. 6 E., Salt Lake Meridian, Emery County, Utah.

Section 2, E1/2, NW1/4; (480.00 Ac)

Section 16, E1/2, SW1/4, S1/2 NW1/4, NW1/4 NW1/4.  
(600.00 Ac)

Containing 1,080.00 acres, more or less.

**Drill Hole Locations:**

TMS-1 Section 2, SE1/4 SW1/4 NW1/4

TMS-2 Section 16, SW1/4 SE1/4 SE1/4

TABLE 2.

## LOCATIONS AND DEPTHS OF PROPOSED DRILLHOLES:

HOLE NO.	LOCATION	EST. ELEV.	EST. TOTAL DEPTH*
TMS-1	SW1/4NW1/4 SEC. 2 T17S R6E	8450'	600'
TMS-2	SE1/4SE1/4 SEC.16 T17S R6E	9350'	2,300'

\* Hole depths include a 30' "rat hole" at the bottom of the hole to ensure complete geophysical logging.

TABLE 3.

AREAS OF DISTURBANCE ASSOCIATED WITH ACCESS ROAD  
AND DRILL SITE CONSTRUCTION:

Hole No.	Constructed Road Length	Acres of Road Disturbance	Total Disturbance (Road + 100'x150' Pad)
TMS-1	1,000'	.30	.64 ACRES
TMS-2	200'	.06	.40
TOTAL	1,200'	0.36	1.04 ACRES

(Assume 12' disturbed width associated with road construction and 100'x150' disturbed area for drill pads.)