

ANACONDA Minerals Company
555 Seventeenth Street
Denver, Colorado 80202
Telephone 303 575 4000

To City

JIM

AUG 0 3 1982



August 3, 1982

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AUG 0 3 1982

**DIVISION OF
OIL, GAS & MINING**

Mr. James W. Smith, Jr., Coordinator
Mined Land Development
Division of Oil, Gas, & Mining
Department of Natural Resources
4241 State Office Building
Salt Lake City, Utah 84114

Dear Mr. Smith:

Enclosed you will find four copies of the Wild Horse Ridge Exploration Plan. Beaver Creek Coal Company would like to begin road construction activities as soon as plan approval is received from DOGM. If you or your staff should have any questions concerning the exploration plan, do not hesitate to call me at (303) 575-7548. Thank you for your assistance in this matter.

Sincerely,

David R. Chenoweth
Coordinator
Permits and Compliance

Enclosures

DRC/blh

WILD HORSE RIDGE EXPLORATION PLAN

Introduction

Beaver Creek Coal Company, a wholly-owned subsidiary of Atlantic Richfield Company intends to conduct exploration activities on their proposed underground coal mine at Wild Horse Ridge. This report was prepared to meet the requirements of UMC 776.11: General Requirements exploration of less than 250 tons. Wild Horse Ridge is a coal bearing property with at least two known mineable seams, the Blind Canyon Seam and the Hiawatha Seam. Initial mining will be in the Blind Canyon Seam (upper seam). Exploration activities will help Beaver Creek Coal Company define a suitable site for the portal in the Blind Canyon Seam.

The exploration road will constitute the majority of the surface disturbance during exploration activity. The road will be constructed to Class III standards and utilized until a permit is granted to mine. At this time the road will be upgraded to Class II standards to be used throughout the life of mining operations at Wild Horse Ridge.

The name, address, and telephone number of the applicant is as follows:

Thomas H. Parker, President and General Manager
Beaver Creek Coal Company
Box AU
Price, Utah
(801) 637-5050

The name, address, and telephone number of the representative of the applicant is as follows:

Richard D. Robison
Project Engineer
Box AU
Price, Utah
(801) 637-5050

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Land Status and Location

The Wild Horse Ridge leases are comprised of 757 acres of surface fee land, 1,367 acres of federal coal, and 591 acres of fee coal. All leases are owned or controlled by Nevada Electric Investment Company. Atlantic Richfield Company has been designated the operator for developing the leases (see Exhibit A). The proposed exploration road is entirely on fee land. The property location is shown as Exhibit B. Exhibit C shows the lease boundaries and ownership.

Engineering

Scope

The exploration road will provide access for horizontal and vertical drilling in the proposed portal area to determine:

1. Extent of burned outcrop coal.
2. Thickness of the coal seam.
3. Quality of the coal.

The exploration road will also be used to conduct geotechnical studies of the portal area and access road. The geotechnical information will be necessary to plan and design the portal bench and Class II access road for the proposed mine facility. The terrain is typical for the Wasatch Plateau, which is very rugged with steep slopes. Determining the stability of road cuts and a portal bench in this terrain is essential to future planning and design.

The layout of the exploration road is shown on Map 1. The road has been staked in the field and reviewed by DOGM and U.S. Fish and Wildlife Service personnel. The road is planned and designed to meet applicable Class III requirements as specified by the DOGM. If a mine is developed, a Class II road will be built by expanding and upgrading the exploration road. The exploration road has been laid out in a manner that will enable conversion to a Class II road. The plan is to build the road in late August, 1982. If the mine is not developed for any reason, the exploration road will be reclaimed as soon as practicable according to the reclamation plans discussed in the environmental protection section.

Design

The exploration road is approximately 5,900 feet long. The road begins at the right fork of Bear Canyon off of the Co-op Mine road, and terminates on the north facing slope approximately 520 vertical feet above the Co-op road (see Map 1). The average grade is 8.9%.

The road follows the side of a dry creek bed for about 2,300 feet. The remainder of the road switchbacks up the slope to the proposed portal area. No pitch grades exceed 15%.

Culverts will be used to cross the creek bottoms. The culverts will be sized to meet Class II road requirements using a design 10-year, 24-hour precipitation event. The culvert design and calculations are shown in Exhibit D and Map 1. A 8 foot culvert 80 feet long will be used to cross Bear Creek. A 4 foot culvert 64 feet long will be used to cross the creek bottom in the right fork of Bear Creek Canyon. A 3 foot culvert 46 feet long will be used to cross the creek bottom on the right fork of the right fork of Bear Creek. Three foot culverts will be installed where the road intersects side drainages.

To control runoff, water bars will be constructed with a maximum 300 foot spacing. The water bars will safely divert runoff accumulated on the roads to a vegetated area.

Environmental Protection

Archeology

An archeological survey performed during July, 1982 located one significant site along the proposed route. This site will be protected by routing the road to the opposite side of the stream. A letter of recommended archeological clearance from the archeological consultant is attached as Exhibit E.

Federal Threatened and Endangered Species and Other Species of High State or Federal Interest

Site examinations were made during June and July by Utah DOGM, Utah Division of Wildlife Resources, and U.S. Fish and Wildlife Service (USFWS) personnel. In addition, a wildlife consultant was retained by Beaver Creek Coal Company to conduct a tree nesting raptor survey, a survey for state and federal species of concern, and an examination of vegetation communities for potential critical habitat.

As a result of these visits and studies, one active Golden Eagle nest was located. This nest is more than one kilometer from any part of the proposed exploration road and associated activities. The nest is blocked from view of any construction activities by a high ridge. Observation by USFWS showed the eaglets have left the nest. No other active raptor nests were found within the potential disturbed area during the week of July 19.

With the exception of the Golden Eagles previously mentioned, no federally listed threatened or endangered species, migratory birds of high federal interest, or vertebrate species listed as limited by the UDWR were observed within the proposed construction area.

Road Construction/Topsoil Handling

In all areas where possible, the road will be constructed at the toe of the slope remaining as far from the stream channel as possible. Culverts will be installed at all crossings. Stream fords will not be utilized. In any area where enough overcast material is deposited in the stream channel to significantly obstruct potential flow,

this material will be removed from the channel as soon as practically possible. As few trees and large snags will be removed as practical.

Topsoil removal is not anticipated until the final mine road (Class II) is constructed in order to limit the surface disturbance at this time. Topsoil will be removed on any disturbed portions of the mine portal area. This material will be stripped to the maximum depth of usable topsoil and stockpiled. A berm will be placed around the downslope edge of this stockpile.

Reclamation

Upon completion of the road construction, all disturbed areas except the road bed, will be seeded and mulched. It is anticipated that a hydroseeder will be used. If this is not practical, alternate methods will be used. Because the exploration road will only be used for a short time and all disturbed areas will be redisturbed during the construction of the permanent mine road, a fast growing, herbaceous cover crop would be most effective in controlling erosion.

The proposed seed mix is as follows:

Temporary Seed Mix

- 4.7 lb. - Smooth Brome
- 4.8 lb. - Timothy Grass
- 3.0 lb. - Orchard Grass
- 3.0 lb. - Crested Wheat Grass
- 1.5 lb. - Kentucky Blue Grass
- 1.5 lb. - Ranger Alfalfa
- 1.5 lb. - Meadow Foxtail
- 20 lb. - per acre

Restoration

If for some reason the exploration road is not upgraded to a Class II mine road, it will be reclaimed as follows:

- (a) The road shall be closed to vehicular traffic;
- (b) The natural drainage patterns shall be restored;
- (c) All culverts shall be removed;
- (d) Roadbeds shall be ripped, plowed, and scarified;
- (e) Fill slopes shall be rounded or reduced and shaped to conform the site to adjacent terrain and meet natural-drainage restoration standards;
- (f) Cut slopes shall be reshaped to blend with the natural contour;
- (g) Cross drains, dikes, and water bars shall be constructed to control erosion; and
- (h) Road surfaces from which topsoil has been removed shall be covered with topsoil in accordance with UMC 817.24(b), and the surface shall be revegetated in accordance with UMC 817.111-817.116.

EXHIBIT A

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE:
SERIAL No.: U-38727

and hereby designates

NAME: Atlantic Richfield Company
ADDRESS: 555 E. 17th/Denver, CO 80202

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

T16S - R73

Sec 24: SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{2}$
Sec 25: NE $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ E $\frac{1}{2}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{2}$ SE $\frac{1}{2}$

T16S - R8E

Sec 19: Lots 2,3,4, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{2}$
containing 740.39 acres

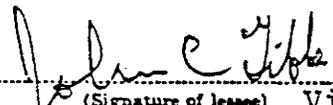
It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

April 21, 1982

(Date)



(Signature of lessee) Vice President

NEVADA ELECTRIC INVESTMENT COMPANY
P. O. Box 230
Las Vegas, Nevada 89151

(Address)

EXHIBIT A
DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE:
SERIAL No.: U-020668

and hereby designates

NAME: Atlantic Richfield Company
ADDRESS: 555 E. 17th/Denver, CO 80202

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

T16S - R7E
Sec 25: SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$

T16S - R8E
Sec 30: Lots 1-4, W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ W $\frac{1}{2}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$
Sec 31: NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$
containing 626.32 acres

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

April 21, 1982

(Date)



(Signature of lessee)

Vice President

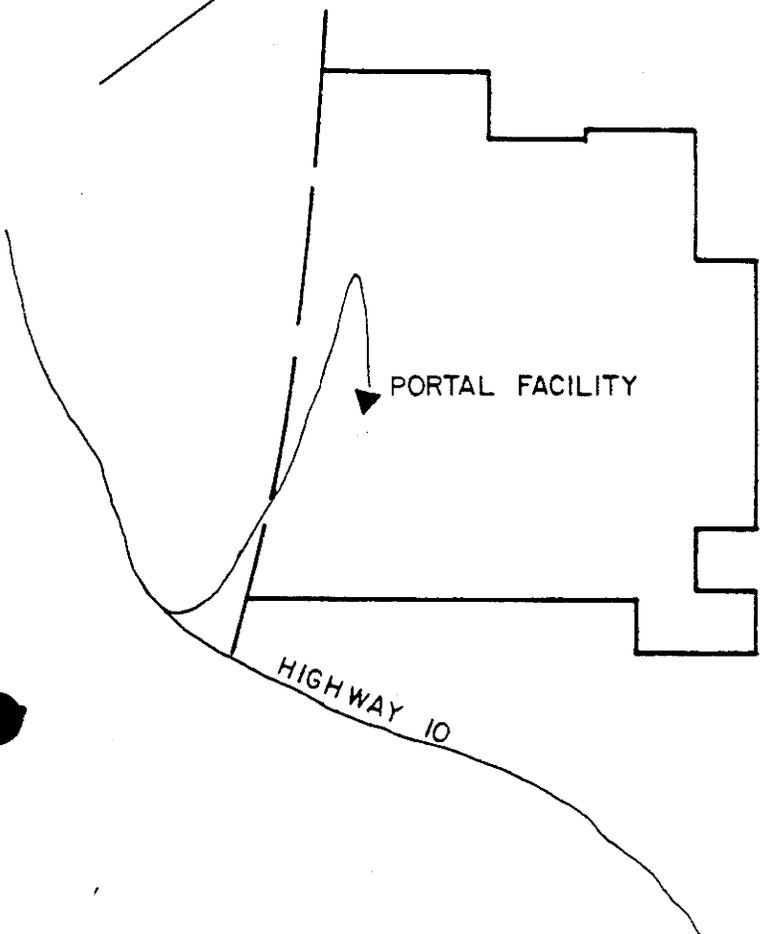
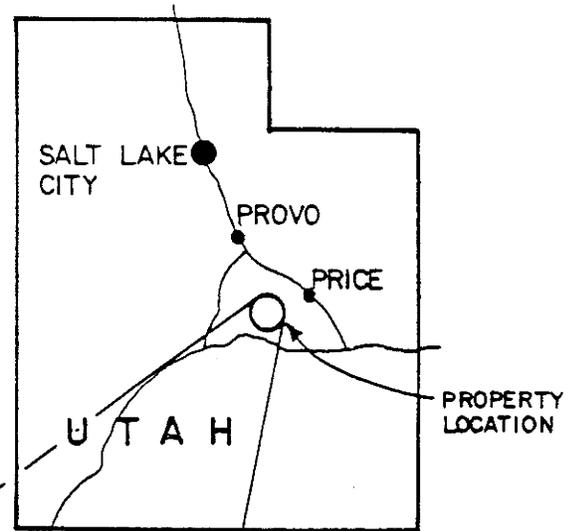
NEVADA ELECTRIC INVESTMENT COMPANY
P. O. Box 230
Las Vegas, Nevada, 89151

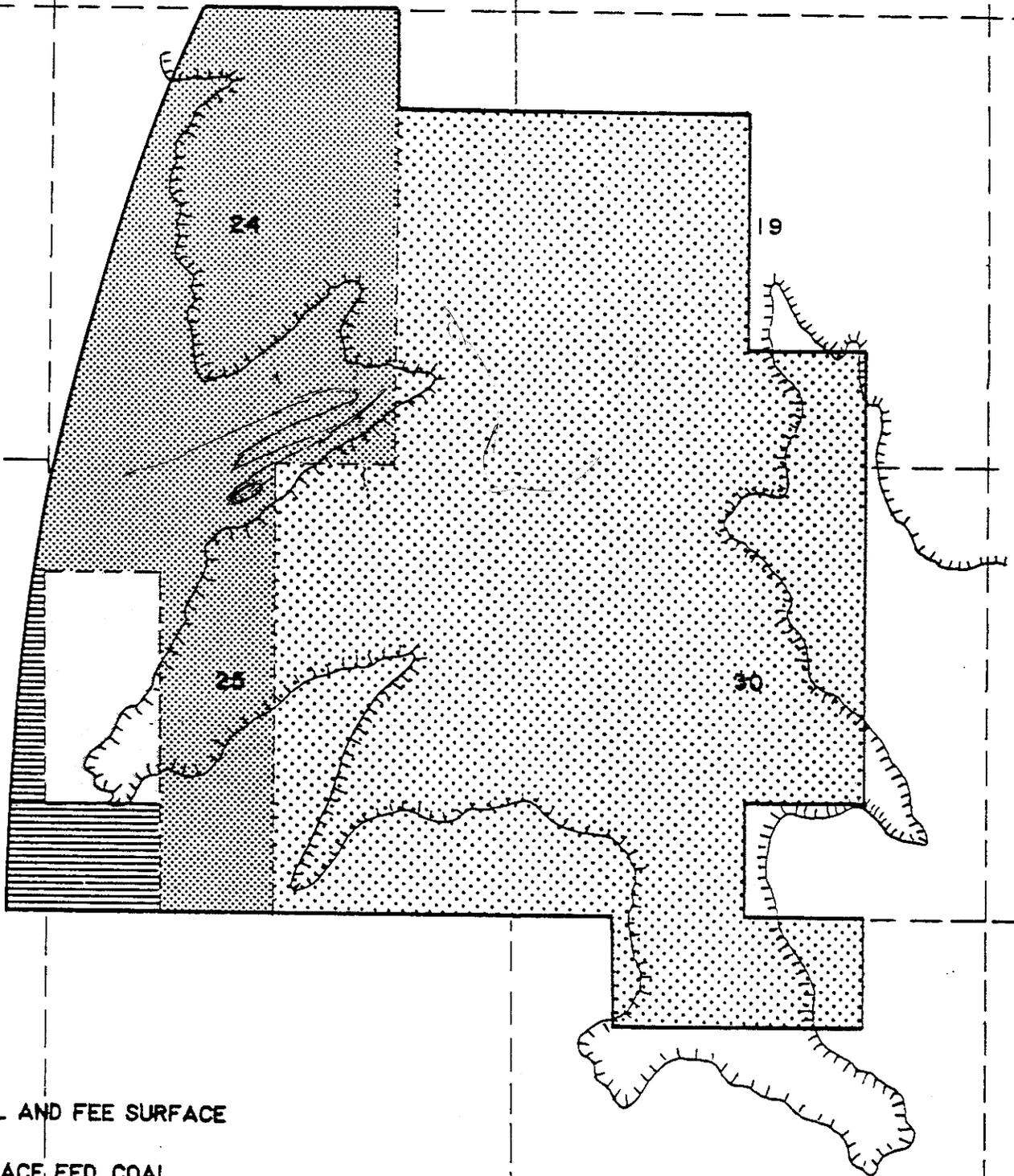
(Address)

EXHIBIT B

WILD HORSE RIDGE

EMERY COUNTY, UTAH





-  OUTCROP
-  FEE COAL AND FEE SURFACE
-  FEE SURFACE FED. COAL
-  FEDERAL COAL
-  FEE SURFACE ONLY



**BEAVER CREEK COAL CO.
WILD HORSE RIDGE**

PROPERTY MAP

EXHIBIT D

CULVERT DESIGN

WILD HORSE RIDGE PROJECT

DESIGN BASIS

Class II (Future Upgrading)

10-Year 24-Hour Storm

CULVERT 1

Drainage Areas Contr. 1 - 4 (Per attached map)

Peak $Q_{10} = 500$ cfs

(Refer to Computer Printout)

$Q_{25} = 750$ cfs

Q_{10}	No. CMP's*	$\frac{Q_{10}}{\text{CMP}}$	D	$\frac{\text{HW}}{\text{D}}$	HW Ft.
500	1	500	84"	1.9	13.3
500	2	250	72"	1.3	7.8
500	2	250	60"	2.4	12.0
500	3	167	60"	1.4	7.0
500	1	500	96"	1.3	10.4

Available Cover Across Bear Creek Per Field Survey = 20'

750	1	750	84"	4.0	28.0
750	2	375	72"	2.1	12.6
750	2	375	60"	5.0	25.0
750	3	250	60"	2.4	12.0
750	1	750	96"	2.0	16.0

*Corrugated Metal Pipe

For 12' Roadway width; L = 80'

<u>Culvert Size</u>	<u>HW 10 Year</u>	<u>HW 25 Year</u>
1 96"	10.4	16.0

Use 1 96" 16 gauge 3 x 1 CMP due to importance of structure.

CULVERT DESIGN
 WILD HORSE RIDGE PROJECT
 CULVERTS 2, 3, 6, 9

These Culverts intercept drainage from natural gullies, but do not intercept creek bed.

Drainage Area 4 = .78 Acre

Contributing DA for design = .13 Acre

$$Q_{\text{design}} = Q_{10} \left(\frac{.13}{.78} \right)^{1/2} = Q_{10} (.40)$$

$Q_{10} = 200$ cfs Area 4 Per Printout.

$$Q_{\text{design}} = 200 (.40) = 80 \text{ cfs}$$

Available Cover = 10'

D	$\frac{HW}{D}$	HW	
24	off chart		
30	7	17.5 > 10	NG
36	3	9' < 10	OK

2, 3, 6, 9 use 36" 16 GA 2-2/3" x 1/2" cmp

CULVERT DESIGN
WILD HORSE RIDGE
CULVERTS 4, 5

These Culverts Intercept Creek at Lower End.

$$Q_{10} = 200 \text{ cfs}$$

DA Contributing = .60 acre

$$Q_{\text{design}} = 200 \left(\frac{.6}{.78} \right)^{1/2} = 175 \text{ cfs}$$

Available Cover = 15'

D	$\frac{HW}{D}$	HW	
36	off chart		
42	5.5	19.25 > 15	NG
48	3.5	14 < 15	OK

4.5 Use 48" 16 GA 2-2/3 x 1/2 cmp

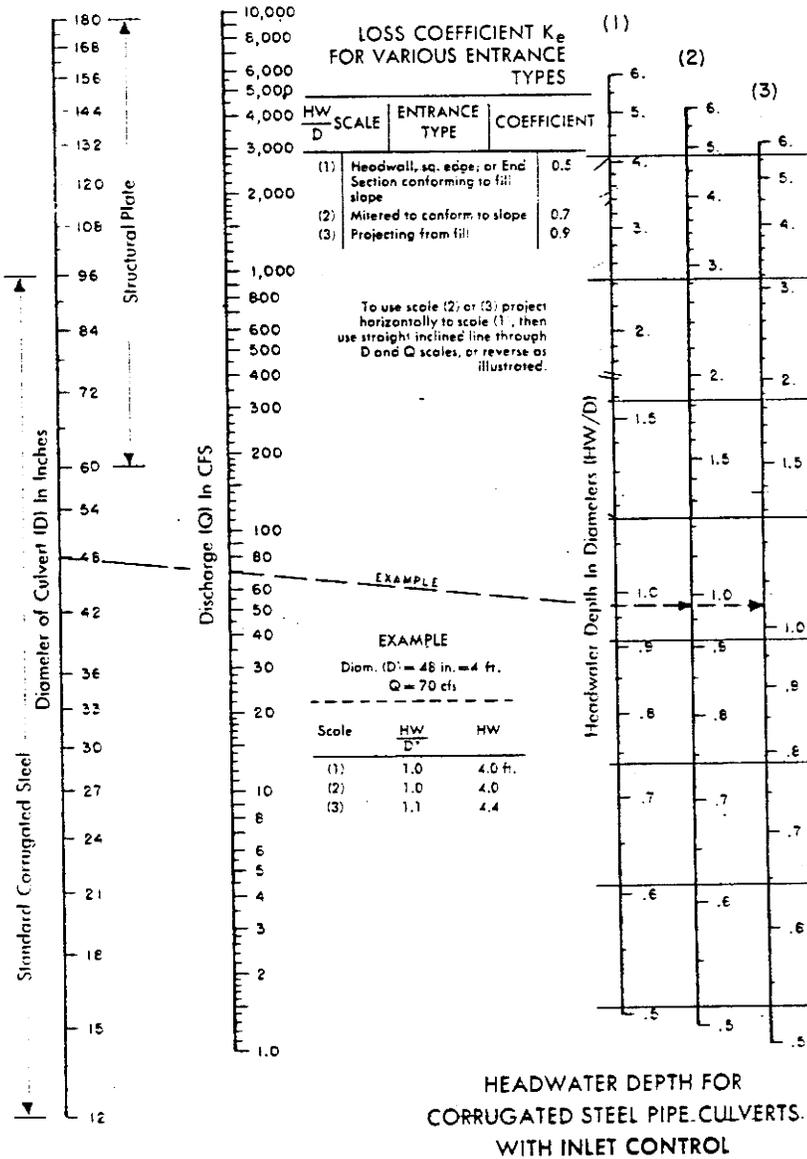


Fig. 4-18. Inlet control nomograph for corrugated steel pipe culverts. The manufacturers recommend keeping HW/D to a maximum of 1.5 and preferably to no more than 1.0.

EXHIBIT E

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HEALTH, SAFETY & ENVIRONMENT

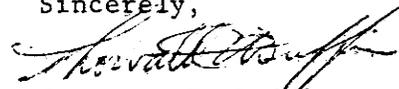
20 July 1982

Mr. Gregg R. Squire
Project Representative
Beaver Creek Coal Company
555-17th Street - Suite 1760
Denver, Colorado 80202

Mr. Squire:

Subsequent to our archaeological survey of the Beaver Creek Coal Company Lease, during which we found one significant site in the path of the proposed access road, we have tested the site and recommended that it be avoided. We understand that the Beaver Creek Coal Company has re-located the road to the east side of Bear Creek in this area, and are therefore recommending to the Bureau of Land Management that a cultural resource clearance be granted for your project. We hope this will keep activities rolling while we are preparing the final report on the survey.

Sincerely,



Thorvald E. Duffin
Business Manager - CRMS/BYU