LODESTAR ENERGY, INC
Horizon Mine

Permit Boundary Modification
(Part of Federal Coal Lease UTU-74804)

August 2000

Prepared by
Lodestar Energy
Engineering
HC 35 Box 370
Helper, Utah 84526

File in:
❑ Confidential
❑ Shelf
X Expandable
Refer to Record No 0034 Date 01182000
In C/0070026 2000, Incoming
For additional information Confidential

LODESTAR ENERGY
MOUNTAIN OPERATIONS

0034

COPY

Lodestar Energy, Inc.
Mountain Operations
White Oak Mines, Horizon Mine and Grand Valley Mines
HC 35 Box 370
Helper, Utah 84526

[redacted]

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October 18, 2000

Ms. Pamela Grubaugh-Littig
Utah Coal Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Subject: Application for the Permit Boundary Extension to Include Part of the Federal Coal Lease UTU-74804

Dear Ms. Grubaugh-Littig:

Lodestar Energy, Inc. respectfully submits the attached five (5) copies of a permit application. This is a significant modification in the boundary of the permit area for the Horizon No.1 Mine. The purpose of this application is to extend the permit boundary into the Federal Lease UTU-74804 to the Beaver Creek. The area was selected for speed of approval and contained within the area encompassed by the present CHIA.

This submittal has been setup to be incorporated into the currently approved permit and include the comments in the Administrative Completeness Review.

If you have any questions, please feel free to call me at 435-448-9455.

Sincerely,

David B. Miller
Business Manager

Attachments: Five (5) copies of Permit Application
C1 and C2 forms

File:\Mydocuments\DOGM001019pap.doc

File in:
C/0070020 2000. Incoming
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☒ Expandable
Date 101800 For additional information
& Confidential

Form DOGM - C1 (Last Revised October 16, 2000)

File Folder # 3

APPLICATION FOR PERMIT PROCESSING

Permit Change X	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐	Permit Number: ACT/007/020
Title of Proposal: Permit Boundary Extension to Include Part of Federal Coal Lease UTU-74804						Mine: HORIZON No.1 Mine
						Permittee: Lodestar Energy, Inc.

Description, include reason for application and timing required to implement: Approval needed by January 15, 2001 (Critical)

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.*

X Yes	☐ No	1. Change in the size of the Permit Area? 393 acres Disturbed Area? _____ acres X increase ☐ decrease.
☐ Yes	X No	2. Is the application submitted as a result of a Division Order? DO #
☐ Yes	X No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
X Yes	☐ No	4. Does application include operations in hydrologic basins other than as currently approved?
☐ Yes	X No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
X Yes	☐ No	6. Does the application require or include public notice/publication?
X Yes	☐ No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
X Yes	☐ No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes	X No	9. Is the application submitted as a result of a Violation? NOV #
☐ Yes	X No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
☐ Yes	X No	11. Does the application affect the surface landowner or change the post mining land use?
X Yes	☐ No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
X Yes	☐ No	13. Does the application require or include collection and reporting of any baseline information?
☐ Yes	X No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	X No	15. Does application require or include soil removal, storage or placement?
☐ Yes	X No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	X No	17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes	X No	18. Does the application require or include water monitoring, sediment or drainage control measures?
X Yes	☐ No	19. Does the application require or include certified designs, maps, or calculations?
X Yes	☐ No	20. Does the application require or include subsidence control or monitoring?
X Yes	☐ No	21. Have reclamation costs for bonding been provided for?
X Yes	☐ No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes	X No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

☐ **Attach _5_ complete copies of the application.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

[signature] - BUSINESS MGR 10/17/00

Signed - Name - Position - Date

Subscribed and sworn to before me this 17 day of OCTOBER, 2000.

[signature]

Notary Public

My Commission Expires: MARCH 7, 2002

Attest: STATE OF UTAH
COUNTY OF CARBON

Notary Public
JOHN C. PAPPAS
1646 East Castle Circle
Price, Utah 84501
My Commission Expires
March 7, 2002
State of Utah

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ASSIGNED TRACKING NUMBER

Form DOGM - C2 (Last Revised 6/93)

File Folder #

Application for Permit Processing
Detailed Schedule of Changes to the MRP

Title of Application: Permit Boundary Extension to Include Part of Federal Coal Lease UTU-74804	Permit Number: ACT/007/020 Mine: HORIZON No.1 MINE Permittee: LODESTAR ENERGY, INC.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	X REPLACE	☐ REMOVE	Replace Chapter 1 text and replace Plate 1-1 Permit Boundary
☐ ADD	X REPLACE	☐ REMOVE	Replace Chapter 2 text
X ADD	☐ REPLACE	☐ REMOVE	Add Updated Hidden Splendor Lease to Appendix 2-1
X ADD	☐ REPLACE	☐ REMOVE	Add Proposed public notice Appendix 2-2
X ADD	☐ REPLACE	☐ REMOVE	Add Updated Federal lease Status letter Appendix 2-3
X ADD	☐ REPLACE	☐ REMOVE	Add corporate structure diagram to Appendix 2-4
☐ ADD	X REPLACE	☐ REMOVE	Replace Corporate Entity File with Updated pages
X ADD	☐ REPLACE	☐ REMOVE	Add Updated violation pages from September 2000 back to December 1998
☐ ADD	X REPLACE	☐ REMOVE	Replace Chapter 3 text , replace Figures 3-1 and 3-2 with Plates 3-9 Old Workings Castlegate A Seam and 3-10 Old Workings Hiawatha Seam , replace Plate 3-3 Mine Plan and Subsidence Monitoring Points.
☐ ADD	X REPLACE	☐ REMOVE	Replace Water Rights with Updated Water Rights in Appendix 3-5
X ADD	☐ REPLACE	☐ REMOVE	Add Assignment letter of Water Rights to Lodestar Energy in Appendix 3-5
X ADD	☐ REPLACE	☐ REMOVE	Add update UPDES Permit in Appendix 3-6
☐ ADD	X REPLACE	☐ REMOVE	Replace Chapter 4 text, replace Plate 4-1 Land Use, replace Figure 4-1 with Plate 4-2 Surface Ownership, replace Figure 4-2 with Plate 4-3 Coal Ownership.
☐ ADD	X REPLACE	☐ REMOVE	Replace Plate 6-1Geology revised to include expanded permit boundary.
☐ ADD	X REPLACE	☐ REMOVE	Replace Page 7-10 with Updated Water-level Data for Monitoring Wells, Revised Plate 7-1 Water Monitoring Locations and 7-3 Water Rights.
X ADD	☐ REPLACE	☐ REMOVE	Add Additional Baseline water data for the Beaver Creek Tract Lease and a location map of points JC-2 to JC-20
☐ ADD	X REPLACE	☐ REMOVE	Revised Plate 8-2 Area Soils
☐ ADD	X REPLACE	☐ REMOVE	Revised Plate 9-1 Vegetation
X ADD	☐ REPLACE	☐ REMOVE	Results and map of the 2000 Raptor Survey
☐ ADD	X REPLACE	☐ REMOVE	Revised Plate 10-1 Wildlife
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	

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Any other specific or special instructions requi[illegible]r insertion of this proposal into the Mining and Reclan[illegible] Plan?

Redline / strikeouts of all the replacement text is included. The index references will be corrected after review and removal of the redline / strikeout references. Clean copies will be provided prior to final approval.

CHAPTER 1

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New Plate 1-1 Permit Boundary with Expanded Permit Area

CHAPTER 1

INTRODUCTION

The Wasatch Plateau area of Carbon County, Utah, contains seams of high quality bituminous coal with a long history of coal mining activities. The Horizon No. 1 Mine is located in Consumers Canyon approximately 14 miles northwest of Price, Utah.

The surface facilities, diversions, culverts, and the sedimentation pond will be installed in compliance with Utah Division of Oil, Gas and Mining (UDOGM) regulations.

The permit area (Plate 1-1) is characterized by steep, narrow canyons containing conspicuous sandstone cliffs. Intermittent and perennial streams occupy the drainages. The complex geological and geomorphological conditions have produced a variety of site specific soils that support a variety of vegetation communities. The area supports a variety of wildlife.

A distinction of an underground mine is its minimal effect on the ecosystems. The relatively small scale of surface disturbance when operated with proper drainage and sedimentation controls, causes negligible impact to the prevailing hydrologic balance of the area. Subsidence, a potential problem with any underground mining, will be monitored as mining progresses. The temporary loss of wildlife habitat due to the construction of surface facilities is negligible in light of the available nearby habitat. Upon cessation of mining and portal sealing, the reestablishment of final topography and drainage will proceed. Revegetation of disturbed areas will replace native habitat and restore the land to accommodate proposed post-mining land use(s).

~~Blue Blaze Coal Company has assigned ownership of this permit application to~~ Horizon Coal Corporation has assigned ownership of this permit application to Lodestar Energy, Inc. All references in the text, tables, figures, plates, public documents, and consultant reports will hereafter apply to ~~Horizon Coal Corporation~~Lodestar Energy, Inc. and Horizon Mine No. 1.

CHAPTER 2

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CHAPTER 2

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

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TABLE OF CONTENTS

Section — Page

110 MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION . . . . . ~~1-1~~2-1

111 Introduction . . . . . ~~1-1~~2-1

112 Identification of Interests . . . . . ~~1-1~~2-1

112.100 Business Entity . . . . . ~~1-1~~2-1
112.200 Applicant and Operator . . . . . ~~1-1~~2-2
112.300 Officers of the Applicant . . . . . ~~1-2~~2-2
112.400 Coal Mining and Reclamation Operation Owned or Controlled . ~~1-3~~2-3
112.500 Legal or Equitable Owner of the Surface and Mineral Properties ~~1-3~~2-3
112.600 Owners of Record of Property Contiguous to Proposed Permit Area . . . . . ~~1-4~~2-4
112.700 MSHA Numbers . . . . . ~~1-5~~2-5
112.800 Interest in Contiguous Lands . . . . . ~~1-5~~2-5
112.900 Certification of Submitted Information . . . . . ~~1-5~~2-5

113 Violation Information . . . . . ~~1-6~~2-6

114 Right-of-Entry Information . . . . . ~~1-6~~2-6

115 Status of Unsuitability Claims . . . . . ~~1-6~~2-7

116 Permit Term . . . . . ~~1-7~~2-7

117 Insurance, Proof of Publication, and Facilities and Structures Used in Common . . . . . ~~1-7~~2-7

118 Filing Fee . . . . . ~~1-7~~2-8

120 PERMIT APPLICATION FORMAT AND CONTENTS . . . . . ~~1-7~~2-8

130 REPORTING OF TECHNICAL DATA . . . . . ~~1-7~~2-8

140 MAPS AND PLANS . . . . . ~~1-7~~2-8

150 COMPLETENESS . . . . . ~~1-8~~2-8

LIST OF APPENDICES

Appendix

2-1 LEASE DOCUMENTS
2-2 INSURANCE AND NEWSPAPER ACKNOWLEDGMENTS
2-3 RIGHT-OF-WAY APPLICATION AND BEAVER CREEK LEASE
2-4 ENTITY REFERENCE FILE
2-5 ENVIRONMENTAL ASSESSMENT

CHAPTER 2

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

110 MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

111 Introduction

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The information contained in this section is intended to fulfill the requirements of R645-301-100 and to ensure that all relevant information on the ownership and control of the mining activities is supplied to the regulatory agency(s).

112 identification of interests

112.100 Business Entity

Lodestar Energy, Inc. is incorporated under the laws of the State of Delaware and is in good standing and has legal corporate existence.

112.200 Permit Applicant and Mine Operator

The permit applicant and mine operator is:

Lodestar Energy, Inc.
HC 35, P.O. Box 370
Helper, Utah 84526
Telephone: (435) 472-3994
Employer I.D. No. 87-0569216

Applicant's Resident Agent:

The resident agent who will accept service of process is:

David B. Miller
Lodestar Energy, Inc.
HC 35, P.O. Box 370
Helper, Utah 84526
(435) ~~637-9200~~448-9455

The abandoned mine land reclamation fee will be paid by:

Marilyn Adamson
Lodestar Energy, Inc.
333 West Vine Street
Suite 1700
Lexington, KY 40507
(606) 255-4006

112.300 Officers of the Applicant

Principal Officers	Position	Address
John W. Hughes (606) 255-4006	President and COO	333 W. Vine Street, Suite 1700 Lexington, KY 40507
Eugene C. Holdaway (606) 255-4006	Senior Vice President	333 W. Vine Street, Suite 1700 Lexington, KY 40507
John A. Siegel, Jr. (212) 541-6000	Vice President	30 Rockefeller Plaza, Suite 4225 New York, NY 10112
Roger L. Fay (212) 541-6000	Vice President	30 Rockefeller Plaza, Suite 4225 New York, NY 10112
Michael E. Donohue (606) 255-4006	Vice President and CFO	333 W. Vine Street, Suite 1700 Lexington, KY 40507
R. Eberley Davis (606) 255-4006	Vice President and Assistant Secretary	333 W. Vine Street, Suite 1700 Lexington, KY 40507
Justin W. D'Atri (212) 541-6000	Secretary	30 Rockefeller Plaza, Suite 4225 New York, NY 10112

Dennis A. Sadlowski (212) 541-6000	Assistant Secretary	30 Rockefeller Plaza, Suite 4225 New York, NY 10112
Michael C. Ryan (212) 504-6000	Assistant Secretary	100 Maiden Lane New York, NY 10038
Ira Leon Rennert (212) 541-6000	Director	30 Rockefeller Plaza, Suite 4225 New York, NY 10112

112.400 Coal Mining and Reclamation Operation Owned or Controlled

Lodestar Holding, Inc., 30 Rockefeller Plaza, Suite 4225, New York, NY 10112 (212) 541-6000, owns 100% of the Lodestar Energy, Inc. stock. Refer to Appendix 2-4 for a listing of mining operations owned or controlled by officers or director of Lodestar Energy, Inc.

112.500 Legal or Equitable Owner of the Surface and Mineral Properties

The legal and equitable owners of the surface and mineral properties to be directly affected by this mining operation during the duration of the permit period are:

Hidden Splendor Resources
50 West Liberty Street, Suite 880
Reno, NV 89501

United States of America
Bureau of Land Management
2370 South 2300 West
West Valley City, Utah 84084

Steve and Pete (Jr.) Stamatakis
1111 South 450 West
Price, Utah 84501

Roy M. and Tessie K. Farley
5240 So. Highland Drive
Salt Lake City, Utah 84117

Arthur J. Anderson, Et al
4190 Fortuna Way
Salt Lake City, Utah 84117

Surface and coal ownership are shown on ~~Figures 4-1 and~~Plates 4-2 and 4-3.

112.600 Owners of Record of Property Contiguous to Proposed Permit Area

Owners of Surface Properties

1. U P & L
   P.O. Box 899
   Salt Lake City, Utah 84110

2. Hidden Splendor Resources
   50 West Liberty Street, Suite 880
   Reno, NV 89501

3. J. Mark & James Jacobs
   734 S. Cherry Drive
   Orem, Utah 84057

4. Agnes and Eldred E. Peirce, Jr.
   3432 South 500 East
   Price, Utah 84501

5. Steve and Pete (Jr.) Stamatakis
   1111 South 450 West
   Price, Utah 84501

6. United States of America
   Bureau of Land Management
   2370 South 2300 West
   West Valley City, Utah 84084

7. R. L. Bird
   1840 East Bryan Avenue
   Salt Lake City, Utah 84108

8. Nielson Ltd.
   P.O. Box 620
   Huntington, Utah 84528

9. Roy M. and Tessie K. Farley
   5240 So. Highland Drive
   Salt Lake City, Utah 84117

10. Robert and Linda N. Jewkes
    Wellington, Utah 84542

11. Luke G. and Gene S. Pappas
2030 S. Cave Hollow Way
Bountiful, Utah 84010

12. Milton A. Oman
1714 E. Millcreek Way
Salt Lake City, Utah 84106

13. Utah Division of Wildlife Resources
455 West Railroad Avenue
Price, Utah 84501

14. K.C. Jensen and Tonda Hampton
P.O. Box 957
Price, Utah 84501

15. Carbon County
Courthouse Building
Price, Utah 84501

16. Arthur J. Anderson, Et al
4190 Fortuna Way
Salt Lake City, Utah 84117

17. Utah State Fish and Game
1095 West Motor Avenue
Salt Lake City, Utah 84116

112.700 MSHA Numbers

The MSHA numbers issued April 20, 1995 by the Department of Labor to Horizon Mining, LLC have been transferred to Lodestar Energy, Inc. as follows:

- Horizon Mine MSHA Number 42-02074
- Horizon No. 2 Mine MSHA Number 42-02075 (not opening at present time)

112.800 Interest in Contiguous Lands

Lodestar currently owns the Beaver Creek Coal Lease (UTU-74804) which is contiguous to the current permit area, but has no interest, options or pending bids on other contiguous lands.

112.900 Certification of Submitted Information

Information submitted to the Division is certified as required by the UDOGM regulations.

113 Violation information

Neither the permittee/operator, nor any of its subsidiaries, affiliates, members or managers or persons controlled by or under common control with the applicant has had a federal or state mining permit suspended or revoked in the last five years; nor forfeited a mining bond or similar security deposited in lieu of bond.

Violation notices in connection with permit ACT/007/020 are listed in Appendix 2-4

The mining operations associated with Lodestar Energy, Inc. receiving violation notices in connection with underground or surface mining activities within the last three years are listed in Appendix 2-4.

114 Right of Entry information

Horizon Mining, LLC agreed to assign to Lodestar Energy, Inc., all right, title and interest in the Horizon Mine, subject to Division approval of the transfer of Mine Permit No. ACT/007/020.

Lodestar Energy, Inc bases its right to enter and undertake coal mining on: 1) a lease from Hidden Splendor Resources, Ltd. and 2) the Beaver Creek Tract coal lease UTU-74804 (Appendix 2-3).

The documentation pertaining to the lease from Hidden Splendor can be found in Appendix 2-1. The Hidden Splendor lease document describes a lease of fee coal and a sublease of federal coal. The federal coal lease SL 0630311 has expired.

Horizon Mine was issued a Right-of-Way through BLM lands in 1996 to facilitate mining coal from fee lands. The Right-of-Way was incorporated into the Beaver Creek Tract coal lease UTU-74804 on September 1, 1998. Horizon stipulates that it will mine only fee coal and federal coal within the original Right-of-Way grant. The Right-of-Way lease and the Beaver Creek Tract lease can be found in Appendix 2-3. ?

The following is a description of the permit boundary for the Horizon Mine including the Hidden Splendor lease and ~~the Rightа~~ part of ~~Way UTU-73227 (17.5 acres) issued April 23, 1996 which was incorporated into~~ the Beaver Creek Tract coal lease UTU-74804 which was acquired on September 1,1998.

<u>Township 13 South, Range 8 East, SLM</u>

Section 8: ~~SE1/4 SW1/4~~W1/2SE1/4, ~~SW1/4 NW1/4 SW1/4 SE1/4~~SE1/4SW1/4, ~~W1/2 SW1/4 SW1/4 SE1/4~~S1/2SW1/4NE1/4, S1/2NE1/4SW1/4,
NE1/4NE1/4SW1/4NE1/4, S1/2SW1/4SW1/4, NE1/4SW1/4SW1/4,
S1/2NW1/4SW1/4SW1/4, S1/2NE1/4SW1/4NE1/4, NE1/4NE1/4SW1/4,
SE1/4NW1/4NE1/4SW1/4, SE1/4SE1/4SE1/4NW1/4,SE1/4SE1/4NW1/4SW1/4
Portion NW1/4NE1/4SW1/4NE1/4 Portion NE1/4NW1/4SW1/4NE1/4
Portion SE1/4NW1/4SW1/4NE1/4 Portion SW1/4NW1/4SW1/4NE1/4
Portion SW1/4NW1/4NE1/4SW1/4 Portion NW1/4NW1/4NE1/4SW1/4

Portion NE1/4NW1/4NE1/4SW1/4 Portion SE1/4SW1/4SE1/4NW1/4
Portion SW1/4SE1/4SE1/4NW1/4 Portion NW1/4SE1/4SE1/4NW1/4

Portion NE1/4SE1/4SE1/4NW1/4 Portion SE1/4NE1/4NW1/4SW1/4
Portion NE1/4SE1/4NW1/4SW1/4 Portion NW1/4SE1/4NW1/4SW1/4
Portion SW1/4SE1/4NW1/4SW1/4 Portion SE1/4SW1/4NW1/4SW1/4
Portion NE1/4NW1/4SW1/4SW1/4 Portion NW1/4NW1/4SW1/4SW1/4

Section 17~~NW1/4 NE1/4, S1/2 NW1/4~~: ~~N1/2 NW1/4 SW1/4, NE1/4 SW1/4, NW1/4 SE1/4, N1/2 SE1/4 SW1/4, N1/2 SW1/4 SE1/4, W1/2 W1/2 SW1/4 NE1/4~~

~~Containing 318 acres more or less.~~NW1/4NE1/4, N1/2NW1/4SW1/4, NE1/4SW1/4, NW1/4SE1/4,
N1/2SE1/4SW1/4, N1/2SW1/4SE1/4, SW1/4NE1/4, NW1/4

Section 18: NE1/4NE1/4

Section 7: SE1/4SE1/4SE1/4, S1/2SW1/4SE1/4SE1/4, NE1/4SW1/4SE1/4SE1/4, S1/2SE1/4SW1/4SE1/4
Portion NE1/4NE1/4SE1/4SE1/4 Portion SE1/4NE1/4SE1/4SE1/4
Portion SW1/4NE1/4SE1/4SE1/4 Portion SE1/4NW1/4SE1/4SE1/4
Portion NW1/4SW1/4SE1/4SE1/4 Portion NE1/4SE1/4SW1/4SE1/4
Portion NW1/4SE1/4SW1/4SE1/4 Portion SW1/4NW1/4SE1/4SE1/4

Containing 711 acres more or less.

115 Status of Unsuitability Claims

The permit area is not within an area or under study as an area designated as unsuitable for mining under R645-103-400, nor has any petitions been filed with the UDOGM under R645-103-420 that could affect the proposed permit area (see Plate 1-1). No surface operations or facilities are located within 300 feet of an occupied dwelling or within 100 feet of a cemetery. A public road right-of-way passes through the permit area and provides access to public property. Coal haulage activities will occur within 100 feet of the public road right-of-way where the permit area road joins a public county road. Multiple letters were received from Carbon County during 1996 concerning the use of the county road(s) by the Horizon Mine, these letters are included in Appendix 3-1 and discussed in Chapter 3.

116 Permit Term

The Horizon Mine is proposed for a 5 year term under the Permanent Regulatory Program for 5 years. Chapter 3 discusses the extent of underground mining activities to be conducted over the 5 year permit term.

117 Insurance, Proof of Publication, and Facilities and Structures Used in Common

A copy of the Certificate of Insurance issued to Lodestar Energy, Inc, by Reliance National, effective through August 1999, is on file with the Division. The insurance company has listed Lodestar Energy, Inc and subsidiaries, as the named insured party under Commercial General policy number NGB0144-018, which is currently in effect at Horizon Mine. Subsequent insurance renewal documents will be submitted to the Division and included in Appendix 2-2.

Notice of the permit transfer application was published in the Sun Advocate, Price, Utah on June 3, 1999. Proof of publication was submitted to the Division pursuant to R645-303-322 and a copy is included in Appendix 2-2.

The surveyed disturbed area boundary was found to contains 8.23 acres, however the reclamation bond calculations will continue to include reclamation of 9.15 acres.

118 Filing Fee

A copy of this permit application is on file with the Utah Division of Oil, Gas and Mining (UDOGM), P.O. Box 145801, Salt Lake City, Utah 84114-5801. A copy of the filing fee receipt is located in Appendix 2-2.

120 PERMIT APPLICATION FORMAT AND CONTENTS

This permit application will comply with R645-301-120.

130 REPORTING OF TECHNICAL DATA

All technical data submitted in the permit application will be accompanied by the name or organization responsible for the collection and analysis of data, dates of collection and descriptions of methodology used. Technical analyzes will be planned by or under the direction of a qualified professional in the subject to be analyzed.

~~140 MAPS AND PLANS~~

~~The maps and plans in the Mining and Reclamation Plan will correspond with the requirements in R645-301-140.~~

130a- AUGUST 2000 REVISION

The following list consists of the technical and professional personnel and organizations who collected, analyzed, and/or assisted in the development of the information contained in the August 2000 submittal revising the permit application.

Lodestar Energy, Inc.

David B. Miller	Business Manager - Mining Engineer, P.E.
John Walters	Sr. Mining Engineer, P.E.
Garin Harada	Mining Engineer
John Pappas	Surveying/Drafting
Richard Richey	Engineering Technician/Drafting

All technical data in this application have been analyzed under the requirements of the Rules. Many of the technical analyses have been done in accordance with the guidelines issued by the State of Utah.

The raptor survey included in this application was conducted for the Horizon Mine by Christopher J. Colt - Habitat Biologist for the Division of Wildlife Resources, John Walters - Sr. Engineer for Lodestar Energy, Inc. and the helicopter and pilot from Classic Helicopters. The entire Federal Lease area was surveyed paying special attention to those areas with known nesting sites as well as areas with desirable characteristics for nesting habitat.

The additional baseline water data and map included in this submittal was collected by Earthfax Engineering, Inc. personnel under the direction of Richard White a Professional Engineer and Hydrologist. The data was collected using approved techniques. The instrumentation used to gather ph and conductivity information was calibrated before the start of each sampling day and could be calibrated in the field if necessary. The flows were collected using a 4 oz. bottle and/or a one gallon bucket.

Updated ground water monitoring well data was gathered by both Earthfax Engineering personnel along with Lodestar Energy, Inc. personnel using a WATERLINE Envirotech LTD 1500 foot well probe. Each well was checked twice to verify depth to water and each reading was checked twice for correct measurement reading from the well probe markings.

The modified plates provided in this submittal were originally provided by Earthfax Engineering for content of data. Lodestar Energy, Inc. modified the drawings to provide the correct plate insertion number for this application. Lodestar Energy, Inc. also provided the areas of second mining that occurred in the mines adjacent to the Horizon Mine utilizing old maps of these mines.

The addresses for the organizations involved in the preparation of the data in this submittal:

Wildlife - Raptor Survey
Utah Division of Wildlife Resources
Southeastern Regional Office
455 West Railroad Ave. Box 840
Price, Utah 84501
Christopher J. Colt

Water Quantity and Quality
Earthfax Engineering, Inc.
7324 South Union Park Avenue
Midvale, Utah 84047
Richard White, P.E.

140 MAPS AND PLANS

The maps and plans in the Mining and Reclamation Plan will correspond with the requirements in R645-301-140.

150 COMPLETENESS

Lodestar believes the information in this permit application to be complete and correct.

Licenses and permits needed to conduct a coal mining operation are listed below.

LICENSES & PERMITS - HORIZON MINE

PERMIT	ISSUING AUTHORITY
ACT/007/020	Division of Oil, Gas, & Mining 1594 West North Temple, Suite 1210 P.O. Box 145801 Salt Lake City, Utah 84114-5801
Construction & Air Quality BAQE-336-91	Division of Air Quality 288 No. 1640 West P.O. Box 16690 Salt Lake City, Utah 84116-0690
Construction, Sedimentation Pond and Drainage System	Division of Water Pollution Control 288 No. 1460 West P.O. Box 16690 Salt Lake City, Utah 84116-0690
Water Rights (leased)	Division of Water Rights 453 S. Carbon Avenue Price, Utah 84501
Construction Sewer Facilities	Southeastern Utah Health District 6 East Main Street Price, Utah 84501
Carbon County Planning & Zoning	Carbon County Courthouse Price, Utah 84501
UPDES (UTG040019)	State of Utah Department of Environmental Quality Water Quality Division 288 No. 1460 West Salt Lake City, Utah 84114-4870
MSHA (see Section 112.700)	U.S. Department of Labor Mine Safety and Health Administration P.O. Box 25367 Denver, Colorado 80225

APPENDIX 2-1

Insert updated Hidden Splendor Lease Agreement

APPENDIX 2-1

LEASE DOCUMENTS

Parsons
Behle &
Latimer

A PROFESSIONAL
LAW CORPORATION

One Utah Center
201 South Main Street
Suite 1800
Post Office Box 45898
Salt Lake City, Utah
84145-0898
Telephone 801 532-1234
Facsimile 801 536-6111

Elizabeth Kitchens

E-Mail
EKitchens@pblutah.com

March 14, 2000

RECEIVED
MAR 1 7 2000
LEGAL

Eberley Davis
Vice President and General Counsel
Lodestar Energy, Inc.
333 West Vine Street, Suite 1700
Lexington, KY 40507

Re: Horizon Mine -- Hidden Splendor Resources Lease

Dear Eb:

As you may recall, a portion of the property at the Horizon Mine is controlled by Lodestar under a Mining Lease with Hidden Splendor Resources, Ltd. ("HSR"). That lease was amended by HSR and Lodestar's predecessor, Horizon Mining LLC, shortly before Lodestar's purchase of the mine. I have enclosed a copy of the amended lease for your reference. Briefly, the history between the parties to the lease is as follows.

Horizon Coal Corporation entered into the original Mining Lease with Hidden Splendor Resources, Ltd. ("HSR") on February 1, 1995 (the "HSR Lease"). Horizon Coal Corporation subsequently assigned the lease to Horizon Mining LLC on August 29, 1997. At that time, the HSR Lease included private coal owned by HSR and federal coal held by HSR under federal coal lease SL-063011. However, after the HSR Lease was executed, the BLM terminated federal lease SL-063011 effective June 1, 1992. Horizon obtained control over the federal coal through Lease UTU-74804 issued to it on September 1, 1998, which lease was assigned to Lodestar at closing.

The termination of HSR's federal coal lease created a dispute between HSR and Horizon regarding the HSR Lease. Horizon wanted the HSR Lease amended to allow Horizon to recoup from HSR the amount of $315,000, which is the amount of the bonus bid to be paid to the BLM over the next three years to maintain Federal Coal Lease UTU-

paragraph 8(b) on page 6 of the enclosed amended lease. The parties left the term "net revenues" to be defined at a later date.

HSR's attorney, Oliver Gushee, has contacted me regarding coming to an agreement regarding the definition of "net revenues." If Lodestar has a preferred definition of net revenues or net proceeds, we can forward that to Mr. Gushee for his client's consideration. Otherwise, I suggest something along the following lines, which I drafted based upon some typical net revenues and net profits definitions from mining agreements we have used here at the firm.

> The term "net revenues" is defined as the gross receipts from all sales of coal mined from lands covered by Federal Coal Lease UTU-74804 (the "Federal Coal") less such costs and expenses attributable to development, mining, and marketing of the Federal Coal as would be deductible under generally accepted accounting principles and practices consistently applied, including without limitation:
>
> (i) the proportion attributable to the production of the Federal Coal of all costs and expenses of replacing, expanding, or modifying from time to time the mining facilities;
>
> (ii) ad valorem real property and unsecured personal property taxes, and all taxes, other than income taxes, applicable to mining of the Federal Coal, including without limitation, all state mining taxes, sales taxes, severance taxes, license fees and governmental levies of a similar nature;
>
> (iii) transportation charges, including the wheelage to HSR, and including freight, delivery, loading and unloading charges attributable to the Federal Coal;
>
> (iv) rental, royalty, production and purchase payments on the Federal Coal;
>
> (v) all costs of treatment necessary to make the Federal Coal marketable or to meet contract specifications;
>
> (vi) a reasonable allowance for overhead costs, to the extent attributable to the production of the Federal Coal;
>
> (vii) actual costs of operation attributable to production of the Federal Coal; and

(viii) the proportion attributable to the production of the Federal Coal of the interest on monies borrowed or advanced for operational costs and expenses, but in no event in excess of the maximum permitted by law.

Are there any other deductions that you think would be appropriate in this context? Are any of the above not appropriate in your view? I do not want to create an accounting nightmare for Lodestar, but we should, of course, try to deduct all reasonable costs to reach "net revenues."

Please contact me at your convenience with your thoughts.

Sincerely,

Elizabeth Kitchens

E-K/sh
Enclosure

SECOND AMENDMENT OF MINING LEASE

THIS SECOND AMENDMENT OF MINING LEASE ("Amended Lease") made and entered into as of the 1st day of November, 1998, by and between HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation, hereinafter referred to as "Owner," and HORIZON MINING, LLC, a Utah limited liability corporation ("Horizon"), hereinafter referred to as "Lessee."

WITNESSETH:

WHEREAS, Owner and Horizon Coal Corporation entered into a Mining Lease dated February 1, 1995 ("Lease") and Memorandum of Mining Lease was recorded February 28, 1995 in Book 354, Page 699 of the records of Carbon County, Utah; and

WHEREAS, the Lease was amended on June 30, 1997, to delete certain properties deeded to Carbon County, Utah, and add certain properties deeded to Hidden Splendor by Carbon County (a copy of said Amendment of Mining Lease dated June 30, 1997 is attached as Attachment I and incorporated herein by reference); and

WHEREAS, Horizon Coal Corporation entered into an Operating Agreement dated August 19, 1997, assigning the Lease to Horizon Mining, LLC, an entity related to and controlled by Horizon Coal Corporation, consistent with Article III, ¶4 of the Lease; and

WHEREAS, Federal Coal Lease SL 063011, described in the Lease as the "Subleased Property," was terminated by the Federal Bureau of Land Management on June 2, 1995, effective June 1, 1992, and Hidden Splendor's sublease to Horizon was never approved in accordance with the terms of the Lease; and

WHEREAS, Federal Coal Lease UTU-74804 has been acquired by Horizon covering the lands formerly subject to terminated Federal Coal Lease SL 063011 and, also, other lands as described herein at Attachment II; and

WHEREAS, the parties desire to modify and amend the Lease to reflect the recited changes and resolve other issues on the terms hereinafter set forth.

ARTICLE I

1. NOW, THEREFORE, for and in consideration of the sum of Ten Dollars ($10.00) paid by Lessee to Owner, receipt whereof is hereby acknowledged, and for and in consideration of the covenants and agreements hereinafter set forth, Owner does hereby lease, let and demise all of its right, title and interests in the following described lands situated in the County of Carbon, State of Utah:

Leased Property

Township 13 South, Range 8 East, SLM

Section 8:	SE¼SW¼
Section 16:	W½SE¼
Section 17:	NW¼NE¼, W½SE¼, SE¼SE¼, S½NW¼, N½SW¼, SE¼SW¼, excluding a 66 foot right-of-way within the E½SW¼ referred to as the "Realigned Parcel" and more particularly described in Exhibit A to Attachment I hereto
Section 20:	NE¼NW¼, NW¼NE¼, SE¼NE¼
Section 21:	NW¼NE¼ including a 66 foot wide roadway containing approximately 1.31 acres referred to as the "Vacated Parcel" and more particularly described in Exhibit B to Attachment I hereto

(containing in total 640.00 acres, more or less)

together with all dumps, plant, fixtures, improvements, rights and privileges, in anywise belonging.

TO HAVE AND TO HOLD said Leased Property and rights (hereinafter referred to as "Leased Property" or "Leased Premises"), unto Lessee for a term ending at midnight on the 31st day of January, 1998 (the "Primary Term"), and for a period as long thereafter as any mining, production and/or development operation is being conducted hereunder on a continuous basis (the "Secondary Term"), unless terminated as hereinafter provided; together with the right to use the same and the workings therein for all uses and purposes incident to Lessee's mining operations in the Leased Premises and in other properties, and for any and all other uses and

purposes, including the right to develop, mine (by any and all mining methods), excavate, remove, ship, and market all coal and minerals owned by Owner taken from the Leased Premises. It shall be considered that such operations are continuous unless and until after the end of the Primary Term, a period of three hundred sixty-five (365) consecutive days elapses during which no mining, production and/or development operation is conducted, excepting periods of shut-down in the normal course of operations and force majeure. The term "development" shall mean work, including construction, in preparation for mining. Unless otherwise specified, all references to the term of this Amended Lease shall mean and include both the Primary Term and the Secondary Term.

2. Owner covenants and agrees that, following execution of this Amended Lease unless previously furnished to Lessee or Lessee's predecessor in title, Owner will make available to Lessee for examination any and all abstracts of title, title opinions and such other title materials to the Leased Premises as it may have in its possession and will furnish Lessee with an opinion of title from Pruitt, Gushee and Bachtell. Lessee may obtain such additional abstracts and title materials at its own expense as it deems necessary to examine the title. If the examination of the title discloses or there otherwise appears to be a defect or defects in the title to coal rights in the said Leased Premises and Owner is apprised, in writing, of the same, Lessee agrees and is hereby authorized, at its election and sole expense, to file any papers as the agent of Owner or to take any other action it deems necessary to perfect Owner's title to coal rights.

ARTICLE II

In consideration of said demise, Lessee covenants and agrees:

1. That it will, upon undertaking work in or upon the Leased Premises, forthwith post and thereafter keep posted in conspicuous places at entrances to the Leased Premises, and also file the same with regulatory authorities, such notices as may be necessary adequately to notify all persons who may come in or upon the Leased Premises that they are held by Lessee under this Amended Lease from Owner and that Lessee is liable for all labor performed and supplies and materials used by Lessee in and upon said Leased Premises and that Lessee,

and not Owner, will be responsible for any and all debts and expenses incurred in operations under this Amended Lease.

2. That Lessee shall forthwith commence assembling all necessary data and shall do or arrange to have done all necessary engineering and studies preparatory to acquiring mining permits and complying with necessary regulations and to then immediately file the necessary applications in order to commence operations on the Leased Premises as soon as possible. Such studies, engineering and applications shall proceed in an orderly and progressive manner with copies to the Owner.

That, upon receiving proper regulatory approval, Lessee shall enter upon the Leased Premises forthwith and, commencing on the effective date of permit approval, shall begin working on said Leased Premises, and all work done by Lessee in the Leased Premises will be performed in a good and minerlike manner, with due regard to the safety, development and preservation of the Leased Premises and workings and operations therein; and Lessee will remove, insofar as is practicable and consistent with good mining practice, all minable and merchantable coal encountered in exploration, development and mining operations in the Leased Premises and carefully calculate by weight or volumetric measurement, coal removed from the Leased Property, upon which royalty shall be paid, and coal from other property upon which wheelage shall be paid. All work shall at all times be under the sole control of and done in accordance with the exercise of the discretion and judgment of Lessee as to time, place, method and manner of operation.

3. That Lessee will expend during the time this Amended Lease is in effect not less than $50,000 per lease year in work on, in or for the benefit of the Leased Property ; provided that monies expended for work performed in any lease year in excess of the amount required shall apply in satisfaction of the work requirement for any succeeding lease year or years, and should this Amended Lease be terminated prior to the end of a lease year, the amount Lessee shall be required to expend for that lease year shall be the fractional part of the lease year as the part of the year the Amended Lease is in effect bears to the full lease year. Lessee will, on or before the 60th day after the end of each such lease year, submit to Owner a detailed written report describing the work performed and a financial statement listing all funds spent during the preceding lease year. As used herein "expenditures" mean money, labor and/or

material purchases for mine exploration, development and mine operations on or for the benefit of the Leased Premises. A lease year is a period of one (1) year commencing on the effective date of this Amended Lease or any anniversary of the effective date of this Amended Lease.

4. That Lessee will furnish and pay for all labor, power, tools, equipment, explosives, timber and other materials and supplies that may be used in the prosecution of work under this Amended Lease, and will not allow any claim or lien for any such thing to be effectively made or asserted against the Leased Premises or against Owner.

5. That Lessee will make available for inspection by Owner a map showing all workings made in the Leased Premises by Lessee. If Lessee so requests, Owner shall have access to any other exploration and development data generated by Lessee in or for the benefit of the Leased Premises. Owner shall have the right to obtain copies of all such maps and other data at Owner's expense.

6. That Lessee will comply with the provisions of the Utah Worker's Compensation and Occupational Diseases Acts and other federal, state, and local legislation, rules and regulations applicable to the Leased Premises, including reclamation of the Leased Premises; and Lessee will make all payments, returns and reports required of it in complying with and conforming to the requirements, laws, ordinances, rules and regulations of all governmental authority having jurisdiction over the Leased Premises.

7. That Lessee will hold Owner harmless and fully indemnify it against all claims or demands of any kind or nature which may be made upon Owner or against the Leased Premises, for or because of any debt or expense contracted or incurred by Lessee, as well as against any and all acts, transactions, omissions of Lessee, its agents or servants, and Lessee will defend and save Owner harmless and fully indemnify Owner for all costs and expenses, including attorney's fees as to any liability or asserted liability for reclamation of the Leased Premises, and for or because of injury to or death of any person or damage to any property sustained during the period this Amended Lease remains in effect, alleged to have resulted from any act or omission of Lessee, its agents or servants, or the unsafe condition of the Leased Premises, except when Owner has assumed the risk, as provided in Section 15 of this Article.

8. That Lessee will pay to Owner the following:

(a) On all coal mined, removed and sold from the Leased Property, a royalty of fifty cents (50¢) per ton of 2,000 pounds;

(b) In the event Lessee mines coal from lands other than the Leased Property and removes such coal therefrom by means of passageways, tunnels, shafts, portals or other openings through the lands covered by this Amended Lease, Owner shall be paid the sum of ten cents (10¢) per ton as wheelage for each ton of such coal hauled through the passageways, tunnels, shafts, portals or other openings on the lands covered by this Amended Lease; provided, however, such wheelage payments will be reduced to Five Cents ($.05) per ton until after Lessee receives net revenues (a definition of "net revenues" to be agreed by the parties in writing) of $315,000 from the sale of coal mined and removed from lands covered by Federal Coal Lease UTU-74804; and

(c) In the event Lessee receives revenue from oil, gas and other minerals (i.e., other than coal) in and under the Leased Premises (including gas produced by Lessee or any third party from coal formations or seams and any zones in communication therewith and all associated hydrocarbons contained therein, collectively called "Coalbed Gas"), Lessee shall pay Owner a royalty of Five Percent (5%) of such revenue received by Lessee.

Settlement for royalty on coal shipped from the Leased Property, after having first applied and credited advance royalty paid as provided in Article II, Section 9, and settlement for wheelage on coal from lands other than the Leased Property and settlement for royalty due Owner on Coalbed Gas, oil, gas and other minerals shall be made on or before the last day of each calendar month or as soon thereafter as necessary data are available for all coal shipped and sold and wheelage entitlement and revenue received by Lessee on production of Coalbed Gas, oil, gas and other minerals from the Leased Premises, during the preceding calendar month by forwarding the same to Owner at its address set forth in this Amended Lease, accompanied by a written statement showing the factors used in determining the amount of the royalty and wheelage payments.

9. That while this Amended Lease remains in effect, Lessee will have paid, or will pay, on or before each of the following dates, not less than the amount set opposite such date respectively. Any amount so paid in excess of royalties payable to Owner on production from the Leased Property shall be advance royalties and shall be applied against future production, and no royalties on production shall be paid except to the extent that there shall be a balance

due on production after having applied and credited against the said production all royalties previously paid in advance (including credit for payments made by Lessee under Letter Agreement between Owner and Lessee's predecessor dated November 7, 1994):

On or before the first day of each calendar month beginning February 1, 1995, and continuing thereafter	$2,000.00

Payments hereunder shall be made by forwarding the same to Owner at the address set forth in this Amended Lease.

10. That Owner, at any time or from time to time, may require Lessee to wire payments to Owner's bank or such other depository as Owner may direct.

11. That any sum of money not paid when due to Owner shall bear interest at the rate of fifteen percent (15%) per annum until paid.

12. That Lessee will pay, before they become delinquent, all taxes levied upon the Leased Premises, the improvements and personal property, pro-rated to the date of this Amended Lease, and all occupation taxes, computed with a deduction for royalties payable to Owner under this Amended Lease, property taxes based on net proceeds, computed with a deduction for royalties payable as aforesaid, and any other taxes (existing and/or subsequently enacted), that may accrue for or because of or be applicable to the operations of Lessee under this Amended Lease (but not income taxes); and will send to Owner a copy of receipts for all taxes paid.

13. That Lessee agrees to carry insurance covering Lessee's employees and operations with limits of not less than the following:

(a) Workmen's Compensation and Occupational Disease Disability Compensation Insurance, in the amount specified in the Utah Statutes.

(b) Comprehensive General Liability:

Bodily Injury:

Each person	$ 500,000
Each accident	$1,000,000

(c) Automobile Liability, if applicable:

Bodily Injury:

Each person	$ 500,000
Each accident	$1,000,000

Property Damage:

Each accident	$ 500,000

Before commencing any work under this Amended Lease, Lessee will furnish to Owner a certificate of the insurance carrier that Lessee has such coverage, which certificate shall show Owner as an additional insured and shall include an agreement that such insurance coverage will not be cancelled without first giving at least ten (10) days written notice to Owner.

14. That Lessee agrees any third party rental, royalty, overriding royalty payments or similar burdens assessed upon coal and other minerals extracted and removed from the Leased Premises, present or future, shall be assumed by Lessee, and if Owner becomes obligated to pay for the same and does so, Lessee agrees to promptly reimburse Owner therefor. Owner represents that, to the best of its knowledge, all third party rental, royalty, overriding royalty or similar burdens affecting the Leased Premises are listed in Attachment III attached hereto and all payments for same had been made up to February 1, 1995 (the date of the Lease), except as otherwise noted in said Attachment III. In the event Lessee subsequently determines that any of such obligations were outstanding at February 1, 1995, Lessee shall proceed to pay any such obligations accrued prior to February 1, 1995 and may

offset such payment against royalty on actual production due Owner subsequent to this Amended Lease.

15. That Lessee will permit Owner or its representatives, authorized in writing, at all reasonable times to enter at Owner's risk on to the Leased Premises and into workings therein for the purpose of examining and inspecting the same and for surveying and sampling and ascertaining whether the terms and conditions of this Amended Lease are being performed and carried out by Lessee, but representatives of Lessee may accompany Owner or its representatives; and Owner or its representatives authorized in writing, at all reasonable times, shall have access to records of production from the Leased Premises and such other records as will show compliance on the part of Lessee with provisions of this Amended Lease.

16. That if Lessee shall at any time be in default in the performance of any of the terms and conditions hereof upon them made incumbent, including royalties and wheelage payments, such default shall not operate to or give Owner the right to cancel, forfeit or terminate this Amended Lease, unless Owner shall notify Lessee in writing specifying the exact nature of such default and unless Lessee shall, within ten (10) days from the date of the receipt of such notification by Lessee, fail to make any payment due hereunder or within thirty (30) days fail to proceed diligently to cure any other default.

It is agreed that the filing of a petition in bankruptcy by the Lessee, or the adjudication that the Lessee is bankrupt, or an assignment for the benefit of creditors, or the levy of an execution against the interest of Lessee in said Leased Premises to enforce or satisfy any judgment against Lessee not stayed within thirty (30) days by an appeal bond shall permit the Owner to cancel this Amended Lease, and Lessee shall forfeit all rights to the possession of the Leased Premises and neither this Amended Lease nor any of Lessee's rights hereunder shall

ever be an asset of the estate of the Lessee in the event that Lessee is bankrupt or files a petition in bankruptcy laws of the United States, or makes an assignment for the benefit of creditors.

17. That, except as stated in Section 16 of this Article II above, continuance of this Amended Lease is optional with Lessee and no penalty shall accrue or be asserted against Lessee for failure to perform any undertaking of this Amended Lease. Lessee may terminate this Amended Lease at any time and thereupon all its obligations and liabilities hereunder shall immediately cease and terminate, except liability on account of state, federal and local reclamation and other regulatory requirements pertaining to the Leased Premises and any other obligation incurred and owing at the time of such termination.

18. That, in case of the expiration or termination of this Amended Lease for any cause, within ten (10) days, Lessee shall execute and deliver to Owner a quitclaim deed to the Leased Property and Lessee shall have the right within six (6) months from the date thereof, to remove from the Leased Premises all tools, equipment, machinery, buildings and other property placed therein and thereon by it, excepting ties and timbers in place below the surface; and if during such period inclement weather, storms, difficult roads or other causes beyond the reasonable control of the Lessee make it possible even with reasonable diligence to remove all such property from the Leased Premises, Lessee shall have a reasonable period of time after such condition ceases to remove the property. Any and all water rights, applications or certificates of appropriation which are acquired by the Lessee in connection with the mining operations contemplated herein shall be expressly subject to this provision and become the property of the Owner.

19. That, except for payments due under this Amended Lease, if Lessee is delayed or interrupted in or prevented from performing its obligations as in this Amended Lease provided by acts of God, fires, floods, strikes or labor troubles, breakage of machinery, inability to obtain necessary materials, supplies or labor, interruptions in delivery or transportation, insurrection or mob violence, injunction, regulations or order or requirements of Government, unfavorable market conditions, faults in the coal seam or other disabling cause beyond its reasonable control, then, and in all such cases except for making payments when due under this Amended Lease, Lessee shall, for the time being and without liability, be excused from performance of its obligations as in this Amended Lease provided for the period of such prevention, delay or disability, and this Amended Lease and all provisions hereof shall again come into full force and effect immediately upon termination of the period of prevention, delay or disability resulting from any of the causes aforesaid, and the term of this Amended Lease shall be extended for a period equal to the number of days in any such period of prevention, delay or disability.

ARTICLE III

THE PARTIES FURTHER MUTUALLY AGREE THAT:

1. All notices under this Amended Lease may be given by United States registered or certified mail, and notice by such mail shall be deemed given when deposited in the mail with postage prepaid and addressed as herein provided. Notice by Owner to Lessee shall be addressed to:

Horizon Mining, LLC
P.O. Box 599
Helper, UT 84526
Attention: Larry Jones

with a copy to:

Denise A. Dragoo, Esq.
Snell & Wilmer LLP
111 East Broadway, Suite 900
Salt Lake City, UT 84111

Notice by Lessee to Owner shall be addressed to:

Hidden Splendor Resources, Ltd.
50 West Liberty Street, Suite 880
Reno, NV 89501

with a copy to:

Hidden Splendor Resources, Ltd.
American Plaza II
57 West 200 South, Suite 400
Salt Lake City, UT 84101-1632

Either party may from time to time change an address which it desires to be used and, upon written notice to the other party, such changed address shall be deemed inserted herein in place of the address above stated.

2. In the event any provision of this Amended Lease shall be declared by a court of competent jurisdiction to be invalid or counter to the laws of the State of Utah, or rendered invalid or inoperative by any ruling of the Federal Government or agency thereof, such holding shall not prejudice the intent and spirit of this Amended Lease and the other provisions hereof shall continue in full force and effect.

3. All the terms, covenants, agreements and conditions embodied in, and all rights and liabilities arising by virtue of any and all agreements, whether oral or written, covering

the Leased Premises, heretofore entered into between the parties hereto, are superseded by this Amended Lease.

4. That Lessee will not assign this Amended Lease or grant a sublease on any of the Leased Premises, except to an entity related to and controlled by Lessee, without the written consent of Owner, which consent shall not be unreasonably withheld.

5. The parties hereto shall execute and record a Memorandum of Amended Mining Lease on the form attached as Attachment IV hereto, so that there will be constructive notice of this Amended Lease.

6. Time is the essence of this Amended Lease and each and every clause, condition, covenant and agreement of this instrument shall inure to the benefit of and be binding upon the parties hereto and their successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Amended Lease effective the day and year first above written.

OWNER:

HIDDEN SPLENDOR RESOURCES, LTD.

By: _____
Alexander H. Walker, Jr.
Chairman of the Board

LESSEE:

HORIZON MINING, LLC

By: _____

STATE OF Nevada

COUNTY OF Washoe ss.

The foregoing instrument was acknowledged before me this 28th day of June, 1999, by Alexander H. Walker, Jr., the Chairman of the Board of Hidden Splendor Resources, Ltd., a Nevada corporation.

MARGARET A. OLIVER
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 94-5123-2 - EXPIRES OCT. 10, 2002

Margaret A. Oliver
NOTARY PUBLIC
Residing at: Reno, NV

My Commission expires:

STATE OF Utah)

COUNTY OF Salt Lake ss.

The foregoing instrument was acknowledged before me this 19th day of May, 1999, by Scott Kiscaden, the Manager of Horizon Mining LLC, a Utah limited liability company.

Julie S. McKenzie
NOTARY PUBLIC
Residing at: Davis County, Utah

My Commission Expires:

NOTARY PUBLIC
JULIE S. MCKENZIE
111 E. Broadway, Ste. 900
Salt Lake City, Utah 84111
Commission Expires
May 23, 2001
STATE OF UTAH

1671.04
1671\forms\mining.bl2

ATTACHMENT I
Attached to and made a part of Amended Lease by and between
Hidden Splendor Resources, Ltd. and Horizon Mining LLC,
dated as of November 1, 1998

AMENDMENT OF MINING LEASE

THIS AMENDMENT OF MINING LEASE ("Amendment") is made and entered into this 30rh day of June, 1997, by and between HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation ("Hidden Splendor") hereinafter referred to as "Owner," and HORIZON COAL CORPORATION, a Virginia corporation ("Horizon"), hereinafter referred to as "Lessee."

WITNESSETH:

WHEREAS, Owner and Lessee entered into a Mining Lease dated February 1, 1995 ("Lease"); and

WHEREAS, as a result of a stock purchase as of March 27, 1997, Lessee has appointed new officers, directors and has a new corporate address; and

WHEREAS, as a result of a Reciprocal Grant made and executed the 30th day of June, 1997 (the "Grant"), by and between Owner, Lessee and Carbon County, Utah (the "County"), property originally subject to the leasehold was conveyed to the County to realign a portion of the Consumer's Canyon Road (the "Road") on property more particularly described in Exhibit "A" hereto, referred to as the "Realigned Parcel"; and

WHEREAS, by the terms of the Grant, the County vacated a portion of the Road, more particularly described at Exhibit "B" hereto, referred to as the "Vacated Parcel," and granted the Vacated Parcel to Hidden Splendor subject to the terms of the Lease.

NOW, THEREFORE, the Lease of February 1, 1995, is amended as follows:

ARTICLE I
Leased Property

The description of the lands defined as Leased Property is amended to delete the Realigned Parcel described at Exhibit "A" and add the "Vacated Parcel" described at Exhibit "B," attached hereto and made a part hereof.

ARTICLE III
Notice to Owner

Notice by Owner to Lessee shall be addressed to:

Horizon Coal Corporation
P.O. Box 599
Helper, Utah 84526
Attention: Larry Jones

With the exception of the above-stated provisions, the Lease is ratified and confirmed in its entirety by Lessee and Owner.

SO AGREED the day and year first written above.

OWNER: HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation

BY _____

ITS Secretary

LESSEE: HORIZON COAL CORPORATION, a Virginia corporation

BY _____

ITS VICE President of Mining

STATE OF NEVADA)
: ss.
COUNTY OF WASHOE)

The foregoing instrument was acknowledged before me this 30 day of June, 1997, by Alexander H. Walker, Jr., the Secretary of HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation.

MARK MILLER
Notary Public - State of Nevada
Appointment Recorded in Washoe County
MY APPOINTMENT EXPIRES OCT. 7, 1996

NOTARY PUBLIC

STATE OF UTAH)
: ss.
COUNTY OF CARBON)

The foregoing instrument was acknowledged before me this 1 day of ~~June~~ July, 1997, by Larry Jones, the Vice President of Mining of HORIZON COAL CORPORATION, a Virginia corporation.

NOTARY PUBLIC
STEPHEN TUTTLE
50 So. Main St., Ste. 1600
Salt Lake City, Utah 84144
My Commission Expires
May 20, 2000
STATE OF UTAH

NOTARY PUBLIC

EXHIBIT "A"

REALIGNED PARCEL

A 66 foot wide right of way located 33 feet on either side of the following described Center Line located within the E1/2SW1/4, Section 17, Township 13 South, Range 8 East, Carbon County, Utah, more particularly described as follows:

BEGINNING AT A POINT ON THE CENTER LINE OF AN EXISTING COUNTY ROAD, SAID POINT BEING 4,755.5 FEET SOUTH AND 2,825.4 FEET WEST OF THE NORTHEAST CORNER OF SECTION 17, TOWNSHIP 13 SOUTH, RANGE 8 EAST, SALT LAKE BASE & MERIDIAN; RUNNING THENCE NORTH 21°35' WEST, 144.8 FEET; THENCE NORTH 30°04' WEST, 158.0 FEET; THENCE NORTH 34°06' WEST, 57.1 FEET; THENCE NORTH 33°36' WEST, 99.0 FEET; THENCE NORTH 34°24' WEST, 71.6 FEET; THENCE NORTH 33°59'WEST, 106.4 FEET; THENCE NORTH 33°33' WEST, 130.8 FEET; THENCE NORTH 22°03'WEST, 136.1 FEET; THENCE NORTH 22°05' WEST, 530.6 FEET; THENCE NORTH 29°01'WEST, 68.4 FEET, MORE OR LESS, TO A POINT ON THE CENTER LINE OF AN EXISTING COUNTY ROAD.

EXHIBIT "B"

VACATED PARCEL

The following portion of a sixty-six (66) foot wide roadway located in Carbon County, Utah, more particularly described as follows:

BEGINNING AT A POINT ON THE EAST RIGHT OF WAY LINE OF AN EXISTING COUNTY ROAD, SAID POINT BEING 4748.2 FEET SOUTH AND 2793.2 FEET WEST OF THE NORTHEAST CORNER OF SECTION 17, TOWNSHIP 13 SOUTH, RANGE 8 EAST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE NORTH 21°35' WEST, 154.92 FEET; THENCE NORTH 30°04' WEST, 158.53 FEET TO A POINT ON THE WEST RIGHT OF WAY LINE OF SAID ROAD; THENCE FOLLOWING SAID RIGHT-OF-WAY NORTH 02°27' WEST, 130.80 FEET; THENCE NORTH 02°23' WEST, 76.12 FEET; THENCE NORTH 16°22' WEST, 82.10 FEET; THENCE NORTH 35°46'WEST, 28.52 FEET; THENCE NORTH 68°00' WEST, 21.68 FEET; THENCE NORTH 79°49' WEST, 82.24 FEET; THENCE NORTH 66°05' WEST, 115.77 FEET; THENCE DEPARTING SAID RIGHT-OF-WAY NORTH 22°03' WEST, 139.04 FEET; THENCE NORTH 22°05' WEST, 522.79 FEET; THENCE NORTH 20°01'WEST, 88.92 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF SAID ROAD; THENCE ALONG SAID RIGHT-OF-WAY SOUTH 44°25' EAST, 95.79 FEET; THENCE SOUTH 20°30' EAST, 81.62 FEET; THENCE SOUTH 21°50' EAST, 126.45 FEET; THENCE SOUTH 16°08' EAST, 79,99 FEET; THENCE SOUTH 09°22' EAST, 66.18 FEET; THENCE SOUTH 22°05' EAST, 139.83 FEET; THENCE SOUTH 44°44' EAST, 70.04 FEET; THENCE SOUTH 44°50' EAST, 73°29 FEET; THENCE SOUTH 66°05' EAST, 100.51 FEET; THENCE SOUTH 79°49' EAST, 81.79 FEET; THENCE SOUTH 68°00' EAST, 42.84 FEET; THENCE SOUTH 35°46' EAST, 58.88 FEET; THENCE SOUTH 16°22' EAST, 101.49 FEET; THENCE SOUTH 02°23' EAST, 86.88 FEET; THENCE SOUTH 02°27' EAST, 135.96 FEET; THENCE SOUTH 01°58' EAST, 57.86 FEET; THENCE SOUTH 22°06' EAST, 112.30 FEET; THENCE SOUTH 12°46' EAST, 117.20 FEET, MORE OR LESS, TO THE POINT OF BEGINNING. (CONTAINING 1.31 ACRES, MORE OR LESS.)

ATTACHMENT II

Attached to and made a part of Amended Lease by and between Hidden Splendor Resources, Ltd. and Horizon Mining LLC, dated as of November 1, 1998

FEDERAL COAL LEASE UTU-74804

Township 13 South, Range 8 East, SLM

Section 6:	SE¼SW¼, S½SE¼, NW¼SE¼
Section 7:	Lots 1-3, E½, E½W½
Section 8:	SW¼NE¼, NW¼NW¼, S½NW¼, N½SW¼, SW¼SW¼, W½SE¼
Section 17:	N½NW¼, SW¼NE¼
Section 18:	NE¼NE¼

(containing 1,288.49 acres)

ATTACHMENT III

Attached to and made a part of Amended Lease by and between
Hidden Splendor Resources, Ltd. and Horizon Mining LLC,
dated as of November 1, 1998

ARTICLE II, SECTION 14
Third Party Rental and Royalty Obligations

Royalty reserved in Quitclaim Deed from Wasatch Coal Company to Utah Coal and Chemicals Corp. dated December 30, 1986, recorded in Book 269 at Page 120 and reiterated in Assignment from Wasatch Coal Company to Utah Coal and Chemicals Corp. dated December 30, 1986, recorded in Book 269 at Page 122, records of Carbon County, Utah:

> "It is understood and agreed that in addition to the payment of $120,000.00 purchase price, the Purchasers agree to pay a royalty of $.15 per ton on all coal mined on the property, provided, however, said $.15 per ton royalty shall be credited with the $120,000.00 payment until the royalty is equal to said amount and provided further that so long as the property is operated by the Purchasers or their assigns a minimum royalty of $1,000.00 per year shall be paid. Said $1,000.00 payment shall likewise be considered an advance royalty and shall be offset against any actual royalty of $.15 per ton."

ATTACHMENT IV

Attached to and made a part of Amended Lease by and between
Hidden Splendor Resources, Ltd. and Horizon Mining LLC,
dated as of November 1, 1998

MEMORANDUM OF SECOND AMENDMENT OF MINING LEASE

HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation, hereinafter called "Owner," and HORIZON MINING, LLC, a Utah limited liability company, hereinafter called "Lessee," have entered into Second Amendment of Mining Lease dated as of November 1, 1998, which amends a Mining Lease dated February 1, 1995 (Memorandum of Mining Lease was recorded February 28, 1995 in Book 354, Page 699 of the records of Carbon County, Utah), as first amended by Amendment of Mining Lease dated June 30, 1997 (collectively referred to herein as the "Amended Lease"), by the terms of which the parties agree as follows:

1. **LEASE.**

Owner leased and does hereby lease all of its right, title and interest in the following described lands in Carbon County, Utah, collectively referred to as the "Leased Premises" or the "Leased Property":

Township 13 South, Range 8 East, SLM

Section 8:	SE¼SW¼
Section 16:	W½SE¼
Section 17:	NW¼NE¼, W½SE¼, SE¼SE¼, S½NW¼, N½SW¼, SE¼SW¼, excluding a 66 foot right-of-way within the E½SW¼ referred to as the "Realigned Parcel" and more particularly described in Exhibit A to Attachment I hereto
Section 20:	NE¼NW¼, NW¼NE¼, SE¼NE¼
Section 21:	NW¼NE¼

including a 66 foot wide roadway containing approximately 1.31 acres referred to as the "Vacated Parcel" and more particularly described in Exhibit B to Attachment I hereto

(containing in total 640.00 acres, more or less)

2. TERM OF AMENDED LEASE.

The Amended Lease is held by production for a period as long as any mining, production and/or development operation is being conducted on a continuous basis.

3. SUCCESSORS AND ASSIGNS.

Each and every clause, condition, covenant and agreement of the said Amended Lease shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

4. REFERENCE TO MINING LEASE.

The said Amended Lease contains terms and provisions other than those herein stated. An executed copy of said Amended Lease which sets forth the precise terms thereof, is in the possession of Owner who may be contacted at 50 West Liberty Street, Suite 880, Reno, NV 89501, and an executed copy is in the possession of Lessee, who may be contacted at P.O. Box 599, Helper, UT 84526.

IN WITNESS WHEREOF, OWNER AND LESSEE have executed this Memorandum of Second Amendment of Mining Lease as of the 1st day of November, 1998.

OWNER:

HIDDEN SPLENDOR RESOURCES, LTD.

By:_____
Alexander H. Walker, Jr.
Chairman of the Board

LESSEE:

HORIZON MINING, LLC

By:_____
Its:_____

STATE OF _____)
ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 1998, by Alexander H. Walker, Jr., the Chairman of the Board of Hidden Splendor Resources, Ltd., a Nevada corporation.

_____
NOTARY PUBLIC
My Commission expires:_____

STATE OF _____)
ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 1998, by _____, the _____ of Horizon Mining LLC, a Utah limited liability company.

_____
NOTARY PUBLIC
My Commission expires:_____

MEMORANDUM OF SECOND AMENDMENT OF MINING LEASE

HIDDEN SPLENDOR RESOURCES, LTD., a Nevada corporation, hereinafter called "Owner," and HORIZON MINING, LLC, a Utah limited liability company, hereinafter called "Lessee," have entered into Second Amendment of Mining Lease dated as of November 1, 1998, which amends a Mining Lease dated February 1, 1995 (Memorandum of Mining Lease was recorded February 28, 1995 in Book 354, Page 699 of the records of Carbon County, Utah), as first amended by Amendment of Mining Lease dated June 30, 1997 (collectively referred to herein as the "Amended Lease"), by the terms of which the parties agree as follows:

1. **LEASE.**

Owner leased and does hereby lease all of its right, title and interest in the following described lands in Carbon County, Utah, collectively referred to as the "Leased Premises" or the "Leased Property":

Township 13 South, Range 8 East, SLM

Section 8:	SE¼SW¼
Section 16:	W½SE¼
Section 17:	NW¼NE¼, W½SE¼, SE¼SE¼, S½NW¼, N½SW¼, SE¼SW¼, excluding a 66 foot right-of-way within the E½SW¼ referred to as the "Realigned Parcel" and more particularly described in Exhibit A to Attachment I hereto
Section 20:	NE¼NW¼, NW¼NE¼, SE¼NE¼
Section 21:	NW¼NE¼

including a 66 foot wide roadway containing approximately 1.31 acres referred to as the "Vacated Parcel" and more particularly described in Exhibit B to Attachment I hereto

(containing in total 640.00 acres, more or less)

2. TERM OF AMENDED LEASE.

The Amended Lease is held by production for a period as long as any mining, production and/or development operation is being conducted on a continuous basis.

3. SUCCESSORS AND ASSIGNS.

Each and every clause, condition, covenant and agreement of the said Amended Lease shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

4. REFERENCE TO MINING LEASE.

The said Amended Lease contains terms and provisions other than those herein stated. An executed copy of said Amended Lease which sets forth the precise terms thereof, is in the possession of Owner who may be contacted at 50 West Liberty Street, Suite 880, Reno, NV 89501, and an executed copy is in the possession of Lessee, who may be contacted at P.O. Box 599, Helper, UT 84526.

IN WITNESS WHEREOF, OWNER AND LESSEE have executed this Memorandum of Second Amendment of Mining Lease as of the 1st day of November, 1998.

OWNER:

HIDDEN SPLENDOR RESOURCES, LTD.

By:_____
Alexander H. Walker, Jr.
Chairman of the Board

LESSEE:

HORIZON MINING, LLC

By:_____
Its:_____

STATE OF _____)
ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 1998, by Alexander H. Walker, Jr., the Chairman of the Board of Hidden Splendor Resources, Ltd., a Nevada corporation.

_____
NOTARY PUBLIC
My Commission expires:_____

STATE OF _____)
ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 1998, by _____, the _____ of Horizon Mining LLC, a Utah limited liability company.

_____
NOTARY PUBLIC
My Commission expires:_____

APPENDIX 2-2

Insert Affidavit of Publication

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Carbon,)

I, Kevin Ashby, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and that the first publication was on the 31st day of October, 2000 and that the last publication of such notice was in the issue of such newspaper dated the 21st day of November, 2000.

Kevin Ashby

Kevin Ashby - Publisher

Subscribed and sworn to before me this 21st day of November 2000.

Linda Thayn

Notary Public My commission expires January 10, 2003 Residing at Price, Utah

Publication fee, $ 493.00

L[illegible] THAYN
NOTARY [illegible] STATE of UTAH
84[illegible] EAST MAIN
PRICE, UTAH 84501
COMM. EXP. 1-10-2003

PUBLIC NOTICE
APPLICATION FOR PERMIT EXPANSION
LODESTAR ENERGY, INC.
HORIZON NO. 1 MINE

Notice is hereby given that Lodestar Energy, Inc., on or about August 21, 2000 submitted a permit application to extend the Permit Area for Permit ACT/007/020 covering operations for the Horizon No. 1 Mine, to the State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining.

Approval by the Division of Oil, Gas and Mining, will allow coal mining operations to expand into a part of the Beaver Creek Coal Lease UTU-74804 held by Lodestar Energy, Inc. The lands involving activities are located in Carbon County. The mine portals are located 14 miles west of Price, Utah in the Gordon Creek - Consumers Canyon area. The permit area lies within the USGS Jump Creek, Utah 7.5 minute quadrangle.

The permit area includes land in the following:

Township 13 South, Range 8 East, SLM

Section 8: W1/2SE1/4, SE1/4SW1/4, S1/2SW1/4NE1/4, S1/2NE1/4SW1/4, NE1/4NE1/4SW1/4NE1/4, S1/2SW1/4SW1/4, NE1/4SW1/4SW1/4, S1/2NW1/4SW1/4SW1/4, S1/2NE1/4SW1/4NE1/4, NE1/4NE1/4SW1/4, SE1/4NW1/4NE1/4SW1/4, SE1/4SE1/4SE1/4NW1/4,SE1/4SE1/4NW1/4SW1/4

Portion NW1/4NE1/4SW1/4NE1/4	Portion NE1/4NW1/4SW1/4NE1/4
Portion SE1/4NW1/4SW1/4NE1/4	Portion SW1/4NW1/4SW1/4NE1/4
Portion SW1/4NW1/4NE1/4SW1/4	Portion NW1/4NW1/4NE1/4SW1/4
Portion NE1/4NW1/4NE1/4SW1/4	Portion SE1/4SW1/4SE1/4NW1/4
Portion SW1/4SE1/4SE1/4NW1/4	Portion NW1/4SE1/4SE1/4NW1/4
Portion NE1/4SE1/4SE1/4NW1/4	Portion SE1/4NE1/4NW1/4SW1/4
Portion NE1/4SE1/4NW1/4SW1/4	Portion NW1/4SE1/4NW1/4SW1/4
Portion SW1/4SE1/4NW1/4SW1/4	Portion SE1/4SW1/4NW1/4SW1/4
Portion NE1/4NW1/4SW1/4SW1/4	Portion NW1/4NW1/4SW1/4SW1/4

Section 17:NW1/4NE1/4, N1/2NW1/4SW1/4, NE1/4SW1/4, NW1/4SE1/4, N1/2SE1/4SW1/4, N1/2SW1/4SE1/4, SW1/4NE1/4, NW1/4

Section 18:NE1/4NE1/4

Section 7: SE1/4SE1/4SE1/4, S1/2SW1/4SE1/4SE1/4, NE1/4SW1/4SE1/4SE1/4, S1/2SE1/4SW1/4SE1/4

Portion NE1/4NE1/4SE1/4SE1/4	Portion SE1/4NE1/4SE1/4SE1/4
Portion SW1/4NE1/4SE1/4SE1/4	Portion SE1/4NW1/4SE1/4SE1/4
Portion NW1/4SW1/4SE1/4SE1/4	Portion NE1/4SE1/4SW1/4SE1/4
Portion NW1/4SE1/4SW1/4SE1/4	Portion SW1/4NW1/4SE1/4SE1/4

Containing 711 acres more or less.

Copies of the complete permit application are available for public inspection at Utah Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

Written comments, objections, and requests for informal conferences regarding the Permit Application must be submitted, within 30 days of the date of the publication of this notice, to the Utah Coal Regulatory Program, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

Published in the Sun Advocate October 31, November 7, 14 and 21, 2000.

APPENDIX 2-2

Proposed Newspaper Public Notice for this Permit Application

APPENDIX 2-2

INSURANCE AND NEWSPAPER ACKNOWLEDGMENTS

Public Notice
Application for Permit Expansion
Lodestar Energy, Inc.
Horizon No. 1 Mine

Notice is hereby given that Lodestar Energy, Inc., on or about ??Date?? submitted a permit application to extend the Permit Area for Permit ACT/007/020 covering operations for the Horizon No. 1 Mine, to the Star of Utah, Department of Natural Resources, Division of Oil, Gas and Mining.

Approval by the Division of Oil, Gas and Mining, will allow coal mining operations to expand into a part of the Beaver Creek Coal Lease UTU-74804 held by Lodestar Energy, Inc. The lands involving activities are located in Carbon County. The mine portals are located 14 miles west of Price, Utah in the Gordon Creek - Consumers Canyon area. The permit area lies within the USGS Jump Creek, Utah 7.5 minute quadrangle.

The permit area includes land in the following:

Township 13 South, Range 8 East, SLM

Section 8: W1/2SE1/4, SE1/4SW1/4, S1/2SW1/4NE1/4, S1/2NE1/4SW1/4, NE1/4NE1/4SW1/4NE1/4, S1/2SW1/4SW1/4, NE1/4SW1/4SW1/4, S1/2NW1/4SW1/4SW1/4, S1/2NE1/4SW1/4NE1/4, NE1/4NE1/4SW1/4, SE1/4NW1/4NE1/4SW1/4, SE1/4SE1/4SE1/4NW1/4,SE1/4SE1/4NW1/4SW1/4

Portion NW1/4NE1/4SW1/4NE1/4	Portion NE1/4NW1/4SW1/4NE1/4
Portion SE1/4NW1/4SW1/4NE1/4	Portion SW1/4NW1/4SW1/4NE1/4
Portion SW1/4NW1/4NE1/4SW1/4	Portion NW1/4NW1/4NE1/4SW1/4
Portion NE1/4NW1/4NE1/4SW1/4	Portion SE1/4SW1/4SE1/4NW1/4
Portion SW1/4SE1/4SE1/4NW1/4	Portion NW1/4SE1/4SE1/4NW1/4
Portion NE1/4SE1/4SE1/4NW1/4	Portion SE1/4NE1/4NW1/4SW1/4
Portion NE1/4SE1/4NW1/4SW1/4	Portion NW1/4SE1/4NW1/4SW1/4
Portion SW1/4SE1/4NW1/4SW1/4	Portion SE1/4SW1/4NW1/4SW1/4
Portion NE1/4NW1/4SW1/4SW1/4	Portion NW1/4NW1/4SW1/4SW1/4

Section 17: NW1/4NE1/4, N1/2NW1/4SW1/4, NE1/4SW1/4, NW1/4SE1/4, N1/2SE1/4SW1/4, N1/2SW1/4SE1/4, SW1/4NE1/4, NW1/4

Section 18: NE1/4NE1/4

Section 7: SE1/4SE1/4SE1/4, S1/2SW1/4SE1/4SE1/4, NE1/4SW1/4SE1/4SE1/4, S1/2SE1/4SW1/4SE1/4

Portion NE1/4NE1/4SE1/4SE1/4	Portion SE1/4NE1/4SE1/4SE1/4
Portion SW1/4NE1/4SE1/4SE1/4	Portion SE1/4NW1/4SE1/4SE1/4
Portion NW1/4SW1/4SE1/4SE1/4	Portion NE1/4SE1/4SW1/4SE1/4
Portion NW1/4SE1/4SW1/4SE1/4	Portion SW1/4NW1/4SE1/4SE1/4

Containing 711 acres more or less.

Copies of the complete permit application are available for public inspection at Utah Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

Written comments, objections, and requests for informal conferences regarding the Permit Application must be submitted, within 30 days of the date of the publication of this notice, to the Utah Coal Regulatory Program, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

APPENDIX 2-3

Insert updated BLM letter on the Assignment of the Federal Lease

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

In Reply Refer To:
3474
U-017354
U-044076
U-067498
U-073120
U-47974
U-47975
UTU-70018
UTU-74804
(UT-932)

OCT 1 2 1999

CERTIFIED MAIL–Return Receipt Requested

DECISION

Lodestar Energy, Inc. c/o Parsons Behle & Latimer Attn: Elizabeth Jones 201 South Main Street, Suite 1800 Salt Lake City, UT 84111-2218	: : : : :	Coal Leases U-017354, U-044076, U-067498, U-073120, U-47974, U-47975, UTU-70018, UTU-74804

Evidence Required
Status of Leases Reviewed

On August 31, 1999, record title assignments for Federal coal leases U-017354, U-067498, U-073120, U-47974, and U-47975, entered into on July 14, 1999, between Lodestar Energy, Inc., as assignee, and White Oak Mining & Construction Co., Inc., as assignor, were filed in this office. On the same date, sublease transfers for Federal coal leases U-044076 and UTU-70018, entered into on July 14, 1999, between Lodestar Energy, Inc., as transferee, and White Oak Mining & Construction Co., Inc., as transferor, were filed in this office. In addition, a record title assignment for Federal coal lease UTU-74804, entered into on July 14, 1999, between Lodestar Energy, Inc., as assignee, and Horizon Mining LLC, as assignor, was filed in this office on August 31, 1999.

In order to complete the approval of the assignments, bond coverage for each lease must be submitted as follows:

Lease	Bond Required
U-017354	$193,000
U-067498	$5,000
U-47974	$10,000
U-47975	$15,000
UTU-70018	$5,000
UTU-74804	$194,000

The bond amounts cover the rental for one year plus royalty on three months of production, except for UTU-74804, which is for rental and the remaining bonus bid due of $189,000. Lease bonds for U-044076 and U-073120 are covered by bonds provided by Canyon Fuel Company LLC.

Copies of bond form 3504-3 are enclosed for use if surety bonds are submitted and copies of bond form 3404-1 are enclosed if cash or personal bonds are submitted. Also enclosed are the instructions for submitting a U. S. Treasury security as a personal bond. In accordance with 43 CFR 3474.2(a), each lease is covered by its own individual bond.

Leases U-017354, U-067498, U-47974, U-47975 and UTU-70018 comprised the Federal coal leases in the rejected White Oak Logical Mining Unit. The rejection of the LMU was subsequently appealed to the Interior Board of Land Appeals (IBLA). If the rejection of the LMU is affirmed by IBLA, the following leases terminated for failure to meet diligent development requirements: U-067498, U-47974 and U-47975. U-067498 terminated effective January 1, 1994. U-47974 and U-47975 terminated effective December 1, 1991. U-017354 and UTU-70018 have met their diligent development requirements.

A period of 30 days from receipt of this decision is allowed to comply with its requirements. During the compliance period, there is no right of appeal to the IBLA and an appeal filed within the compliance period is subject to dismissal as being premature. The 30-day appeal period commences upon expiration of the 30-day compliance period.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4, and the enclosed form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (pursuant to regulation 43 CFR 4.21) (58 FR 4939, January 19, 1993) (request) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay **must** also be submitted to each party named in the decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed in this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success of the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

/s/ Robert Lopez

Robert Lopez
Chief, Branch of
Minerals Adjudication

Enclosures

1. Form 1842-1
2. Bond Form 3504-3 (6 ea)
3. Bond Form 3404-1 (6 ea)
4. Instructions for Treasury Securities (3 pps)

cc: Lodestar Energy, Inc.
Attn: David B. Miller
HC 35 Box 370
Helper, UT 84526

Lodestar Energy, Inc.
Attn: Eberley Davis
333 West Vine Street, Suite 1700
Lexington, KY 40507

APPENDIX 2-4

Entity Reference File

Insert a Corporate Structure Diagram

Replace Permittee Information and Changes of Corporate Owners, Officers or Directors

Update for insertion of Violations from September 2000 back to December 1998

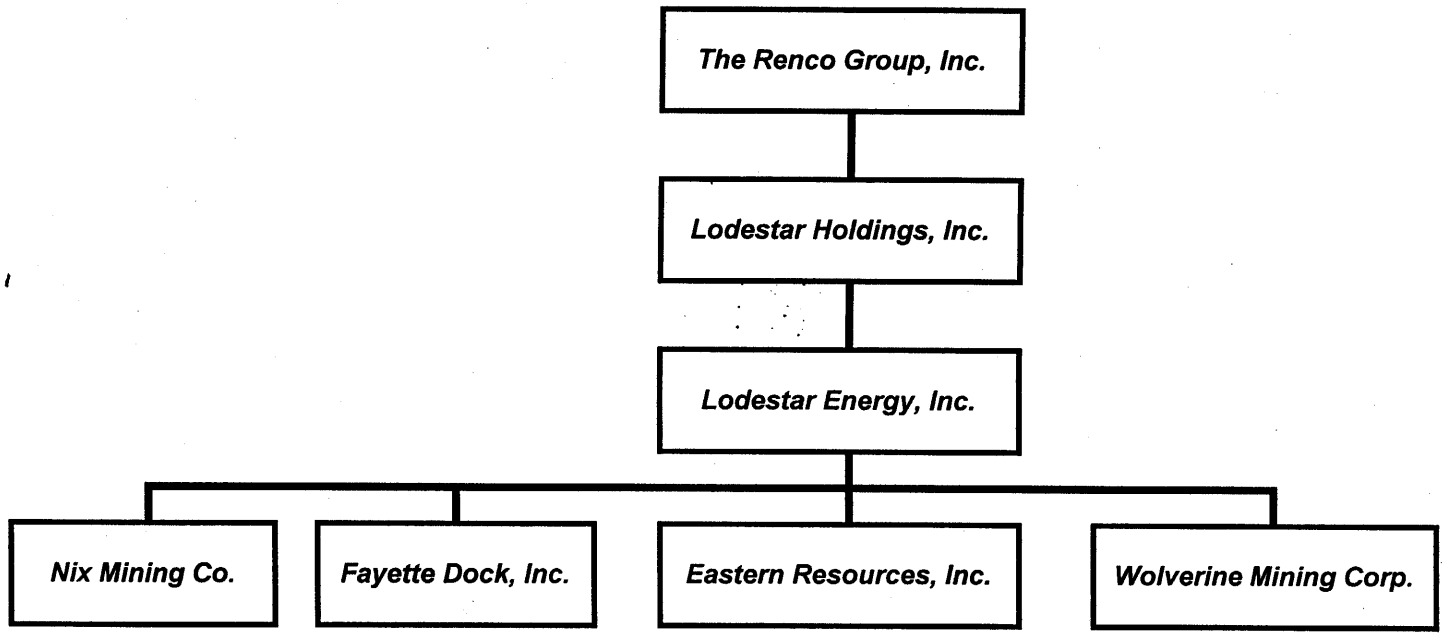
RECEIVED
OCT 18 2000
DIV. OF OIL, GAS & MINING

APPENDIX 2-4

ENTITY REFERENCE FILE

RECEIVED
OCT 18 2000
DIV. OF OIL, GAS & MINING

Lodestar Energy, Inc.
Corporate Structure Diagram



PERMITTEE INFORMATION FOR A MINING PERMIT

This form clearly identifies the applicant for a mining permit. This form must be filed in conjunction with MPA-03 for all Original and Amendment permit applications.	PERMIT NUMBER ENTITY DSMRE ID NUMBER 012777

1. Identification of Applicant and Owners' Interests

1.1 Applicant Name LODESTAR ENERGY, INC.
Mailing Address 251 Tollage Creek
If P.O. Box, indicate Street Address N/A
City Pikeville State KENTUCKY Zip 41501
Telephone No. (606) 432-9071
Employer ID No. 95-2623858
Coal Severance Tax No. 62513

1.2 Identify resident agent, in Kentucky, for service of process:

Name C. T. CORPORATION SYSTEM
Mailing Address KY HOME LIFE BLDG., ROOM 1102
If P.O. Box, indicate Street Address N/A
City LOUISVILLE State KENTUCKY Zip 40202
Telephone No. (513) 621-3697
Employer ID No. 51-0006522 Social Security No. N/A

1.3 Identify individual who will pay the federal abandoned mine land reclamation fees:

Name MARILYN ADAMSON
Mailing Address 333 WEST MAIN STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006
Employer ID No. N/A Social Security No. 400-96-5514

1.4 Type of Application: [ ] Original [ ] Amendment No. _____
[x] Entity

1.5 Indicate legal structure of applicant:

[ ] Single Proprietorship (I)
[ ] Partnership (P)
Is applicant a Limited Partnership? [ ] YES [ ] NO
[X] Corporation List State of Incorporation Delaware
[ ] Association (A) _____
[ ] Other (O) _____

1.6 Attach notarized copies of the documents which establish the legal structure of the applicant and check below the type of documents submitted.

[ ] Notarized copy of "Certificate of Existence Domestic Corporation" or other appropriate document from the Secretary of State. Also attach a notarized copy of the most recently filed annual report (In-State Corporation).

[x] Notarized copy of "Certificate of Authorization Foreign Corporation" and a notarized copy of most recently filed annual report (out of State Corporation).

[ ] Notarized copy of Partnership Agreement (Partnership).

[ ] Notarized copy of "Certificate of Limited Partnership" (Limited partnership).

1.7 If business is to be conducted under an assumed name, attach a copy of the "Certificate of Assumed Name" and list the county where that name is registered. N/A Identify attached certificate as "Attachment 1.7A".

1.8 If applicant is a single proprietorship, list owner:

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Beginning date of ownership

1.9 If applicant is a partnership, list all partners. If any partner listed below is a business entity and not an individual, also complete item 1.13 for that entity.

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Location in organizational structure
Percent of ownership
Official title within partnership
Beginning date of ownership

IN THE NAME AND BY THE AUTHORITY OF THE

COMMONWEALTH OF KENTUCKY

JOHN Y. BROWN III
SECRETARY OF STATE

CERTIFICATE

I, JOHN Y. BROWN III, Secretary of State for the Commonwealth of Kentucky, do certify that the foregoing writing has been carefully compared by me with the original record thereof, now in my official custody as Secretary of State and remaining on file in my office, and found to be a true and correct copy of APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY OF COSTAIN COAL INC. CHANGING NAME TO LODESTAR ENERGY, INC. FILED JULY 24, 1997.

I, the undersigned, hereby certify this document is a true and exact copy of the original.

Connie D. Shanks 5-7-99
Notary Date
My Commission Expires: June 29, 2002

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Done at Frankfort this 24TH day of JULY, 19 97.

John Y. Brown III
Secretary of State, Commonwealth of Kentucky

SSC-208

PMM

9116/97

COMMONWEALTH OF KENTUCKY

RECEIVED & FILED
JUL 24 11 50 AM '97
JOHN Y. BROWN III
SECRETARY OF STATE
BY ____ KENTUCKY

JOHN Y. BROWN III

SECRETARY OF STATE

APPLICATION FOR AMENDED CERTIFICATE
OF AUTHORITY OF

Costain Coal Inc.

(Exact Corporate Name)

Pursuant to the provisions of Chapters 271B and 273 of the Kentucky Revised Statutes, the undersigned hereby applies, on behalf of said corporation, for an Amended Certificate of Authority to transact business in Kentucky and for that purpose submits the following statement:

A Certificate of Authority was issued to the above named corporation by the Secretary of State of Kentucky on November 20, 19 91, authorizing said corporation to transact business in the State of Kentucky under the name of Costain Coal Inc.

The corporation's name in its state or country of incorporation has been changed to Lodestar Energy, Inc.

The name of the corporation to be used in Kentucky is Lodestar Energy, Inc.

(if "real name" is unavailable for use)

The corporation's period of duration has been changed to NA

The corporation's state or country of incorporation has been change to NA

This application is accompanied by a Certificate of Existence (or document of similar import) *Duly Authenticated* by the Secretary of State or other official having custody of corporate records in the state or country under whose law it is incorporated.

Dated July 21, 19 97

R. Eberley Davis

Signature and Title

R. Eberley Davis, Assistant Secretary

Type or Print Name & Title

SSC-102 (8/92)

(See Reverse side for Instructions)

State of Delaware

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "LODESTAR ENERGY, INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-THIRD DAY OF JULY, A.D. 1997.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.

Edward J. Freel, Secretary of State

AUTHENTICATION: 8571056

DATE: 07-23-97

0797184 8300

971244106

COMMONWEALTH OF KENTUCKY
JOHN Y. BROWN III, SECRETARY OF STATE
ANNUAL REPORT
(See Reverse Side for Filing Instructions)

RECORD # 0293324

DUE JUNE 30, 1999

(4) FILING FEE
$15.00

(1) EXACT CORPORATE NAME AND CURRENT PRINCIPAL OFFICE ADDRESS

LODESTAR ENERGY, INC.

333 W VINE ST
SUITE 1700
LEXINGTON KY 40507

I, the undersigned, hereby certify this document is a true and exact copy of the original.
Connie L. Shanks 8/12/99
Notary Date
My Commission Expires: June 29, 2002

(5) STATE OR COUNTRY OF INCORPORATION
DE

(2) THE PRINCIPAL OFFICE ADDRESS IS HEREBY CHANGED TO

(6) DATE OF INCORPORATION OR DATE AUTHORIZED TO TRANSACT BUSINESS
11/20/1991

(3) CURRENT REGISTERED AGENT AND REGISTERED OFFICE ADDRESS
Changes made to the registered agent or registered office cannot be made on this form.
Complete (7) to request a form to be mailed or download form from web site.

C. T. CORP. SYSTEM
KY. HOME LIFE BLDG., RM. 1102
LOUISVILLE KY 40202

(7) MAIL A STATEMENT OF CHANGE OF AGENT OR OFFICE TO

(8) PRINCIPAL OFFICERS If the corporation has previously filed an annual report, verify the names & titles of officers listed below. Please note any additions to or changes in the principal officers and give the address for each person listed. If (8) is blank, type or print the names & business addresses of the currer principal officers. If sole officer, please note.

President	John W Hughes	
Vice President	Eugene C Holdaway	Address
Secretary	Justin W Datri	Address
Treasurer		Address
	(SEE ATTACHMENT)	Address
		Address

(9) DIRECTORS Type or print the names and business addresses of the corporation's directors. No listing of directors is verification that the corporation has dispensed with directors. Nonprofit corporations must list three (3) or more directors.

Name Ira Leon Rennert	Address 30 Rockefeller Plaza, Ste. 4225, NY, NY 10112
Name	Address
Name	Address
Name	Address

I VERIFY THAT INFORMATION IN THIS ANNUAL REPORT IS CURRENT AS OF THE DATE THIS REPORT IS EXECUTED.

AUTHORIZED SIGNATURE R. Eberley TITLE Vice President DATED 4/13/99

Attachment to Record #0293324

LODESTAR ENERGY, INC.

(8) PRINCIPAL OFFICERS	ADDRESS
John W. Hughes - President and COO	333 W. Vine St., Ste. 1700, Lexington, KY 40507
Eugene C. Holdaway - Senior Vice President	333 W. Vine St., Ste. 1700, Lexington, KY 40507
John A. Siegel, Jr. - Vice President	30 Rockefeller Plaza, Ste. 4225, NY, NY 10112
Roger L. Fay - Vice President	30 Rockefeller Plaza, Ste. 4225, NY, NY 10112
Michael E. Donohue - Vice President and CFO	333 W. Vine St., Ste. 1700, Lexington, KY 40507
R. Eberley Davis - Vice President and Assistant Secretary	333 W. Vine St., Ste. 1700, Lexington, KY 40507
Justin W. D'Atri - Secretary	30 Rockefeller Plaza, Ste. 4225, NY, NY 10112
Dennis A. Sadlowski - Assistant Secretary	30 Rockefeller Plaza, Ste. 4225, NY, NY 10112
Michael C. Ryan - Assistant Secretary	100 Maiden Lane, New York, NY 10038

1.9 (continued)

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Location in organizational structure
Percent of ownership
Official title within partnership
Beginning date of ownership

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Location in organizational structure
Percent of ownership
Official title within partnership
Beginning date of ownership

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Location in organizational structure
Percent of ownership
Official title within partnership
Beginning date of ownership

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Location in organizational structure
Percent of ownership
Official title within partnership
Beginning date of ownership

1.10 (continued)

Name DENNIS A. SADLOWSKI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 317-38-5988
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 03/14/97

Name MICHAEL C. RYAN
Mailing Address 100 MAIDEN LANE
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10038
Telephone No. (212) 504-6000 Social Security No. 061-38-1877
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 03/14/97

Name R. EBERLEY DAVIS
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 402-88-1655
Employer ID No. N/A
Ownership/Control relationship to applicant VICE PRESIDENT; ASSISTANT SECRETARY
Location in organizational structure VICE PRESIDENT; ASSISTANT SECRETARY
Official title within corporation VICE PRESIDENT; ASSISTANT SECRETARY
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 09/02/95

Name JOHN W. HUGHES
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 516-40-0571
Employer ID No. N/A
Ownership/Control relationship to applicant PRESIDENT; CHIEF OPERATING OFFICER
Location in organizational structure PRESIDENT; CHIEF OPERATING OFFICER
Official title within corporation PRESIDENT; CHIEF OPERATING OFFICER
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 07/17/95

1.10 (continued)

Name MICHAEL E. DONOHUE
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 498-58-6637
Employer ID No. N/A
Ownership/Control relationship to applicant VICE PRESIDENT - CFO
Location in organizational structure VICE PRESIDENT - CFO
Official title within corporation VICE PRESIDENT - CFO
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 04/15/98

Name TROY L. FRANCISCO
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 402-66-4729
Employer ID No.
Ownership/Control relationship to applicant VP OF MARKETING & BUSINESS DEVELOPMENT
Location in organizational structure VP OF MARKETING & BUSINESS DEVELOPMENT
Official title within corporation VP OF MARKETING & BUSINESS DEVELOPMENT
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/16/99

Name WILLIAM M. POTTER
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 401-76-6644
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT OF OPERATIONS
Location in organizational structure VICE PRESIDENT OF OPERATIONS
Official title within corporation VICE PRESIDENT OF OPERATIONS
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 10/1/99

Name DENNIS W. BRYANT
Mailing Address P. O. BOX 38
If P.O. Box, indicate Street Address 301 HIGHWAY 670
City PROVIDENCE State KENTUCKY Zip 42450
Telephone No. (502) 667-7025 Social Security No. 404-66-6975
Employer ID No.
Ownership/Control relationship to applicant VP - WESTERN KENTUCKY OPERATIONS
Location in organizational structure VP - WESTERN KENTUCKY OPERATIONS
Official title within corporation VP - WESTERN KENTUCKY OPERATIONS
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 10/1/99

1.10 (continued)

Name R. BLAKE HALL
Mailing Address 251 TOLLAGE CREEK
If P.O. Box, indicate Street Address
City PIKEVILLE State KENTUCKY Zip 41501
Telephone No. (606) 432-9071 Social Security No. 359-60-1334
Employer ID No.
Ownership/Control relationship to applicant VP - EASTERN KENTUCKY OPERATIONS
Location in organizational structure VP - EASTERN KENTUCKY OPERATIONS
Official title within corporation VP - EASTERN KENTUCKY OPERATIONS
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/16/99

Name IRA LEON RENNERT
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 122-26-3075
Employer ID No.
Ownership/Control relationship to applicant DIRECTOR
Location in organizational structure DIRECTOR
Official title within corporation DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 03/14/97

Name LODESTAR HOLDINGS, INC.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No.
Employer ID No. 13-3903875
Ownership/Control relationship to applicant STOCKHOLDER
Location in organizational structure STOCKHOLDER
Official title within corporation N/A
Percent of ownership 100%
Beginning date of ownership 01/31/97
Beginning date of affiliation 01/31/97

1.11 Identify every person owning or controlling the coal to be mined under a lease, sublease, or other contract, and having the right to receive the coal after mining. Also, identify every person owning or controlling the coal to be mined under lease, sublease, or other contract and having authority to determine the manner in which the surface coal mining operation is conducted. If none, check box: [X] . If any person listed below is a business entity and not an individual, also complete item 1.13 for that entity.

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A

Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

1.12 Identify below all persons who have the authority or ability to commit the fin
[X]. If any person listed below is a business entity and not an individual, also complete item 1.13 for that entity.

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Name N/A
Mailing Address
If P.O. Box, indicate Street Address
City State Zip
Telephone No. ( ) Social Security No.
Employer ID No.
Ownership/Control relationship to applicant
Beginning date of affiliation

Item 1.13

Complete this item whenever a business entity (rather than an individual) is listed in items 1.9, 1.10, 1.11, 1.12, or 1.13. Check the box below which corresponds to the item number in which the entity is found.

Check appropriate box [ ] 1.9 [X] 1.10 [ ] 1.11 [ ] 1.12 [ ] 1.13

Name of entity LODESTAR HOLDINGS, INC.

List below the owners and controllers of parent entity. If any person listed is a business entity and not an individual, also complete an item 1.13 for that entity.

Name THE RENCO GROUP, INC.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address N/A
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No.
Employer ID No. 13-3370264
Ownership/Control relationship to parent entity Stockholder
Location in organizational structure Stockholder
Percent of ownership 100%
Official title within organization N/A
Beginning date of ownership 08/15/96
Beginning date of affiliation 08/15/96

Name JOHN A. SIEGEL, JR.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 084-40-0870
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT
Location in organizational structure VICE PRESIDENT
Official title within corporation VICE PRESIDENT
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

Name ROGER L. FAY
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 056-36-6402
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT & TREASURER
Location in organizational structure VICE PRESIDENT & TREASURER
Official title within corporation VICE PRESIDENT & TREASURER
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

1.13 (continued)

Name JUSTIN W. D'ATRI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 054-22-0273
Employer ID No.
Ownership/Control relationship to applicant SECRETARY
Location in organizational structure SECRETARY
Official title within corporation SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

Name DENNIS A. SADLOWSKI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 317-38-5988
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

Name MICHAEL C. RYAN
Mailing Address 100 MAIDEN LANE
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10038
Telephone No. (212) 504-6000 Social Security No. 061-38-1877
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

Name IRA LEON RENNERT
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 122-26-3075
Employer ID No.
Ownership/Control relationship to applicant PRESIDENT; DIRECTOR
Location in organizational structure PRESIDENT; DIRECTOR
Official title within corporation PRESIDENT; DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/15/96

1.13 (continued)

Name JOHN W. HUGHES
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 516-40-0571
Employer ID No. N/A
Ownership/Control relationship to applicant PRESIDENT; CHIEF OPERATING OFFICER
Location in organizational structure PRESIDENT; CHIEF OPERATING OFFICER
Official title within corporation PRESIDENT; CHIEF OPERATING OFFICER
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 04/24/98

Name MICHAEL E. DONOHUE
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address N/A
City LEXINGTON State KENTUCKY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 498-58-6637
Employer ID No. N/A
Ownership/Control relationship to applicant .CHIEF FINANCIAL OFFICER
Location in organizational structure CHIEF FINANCIAL OFFICER
Official title within corporation CHIEF FINANCIAL OFFICER
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 04/24/98

1.13 (continued)

Complete this item whenever a business entity (rather than an individual) is listed in items 1.9, 1.10, 1.11, 1.12, or 1.13. Check the box below which corresponds to the item number in which the entity is found.

Check appropriate box [ ] 1.9 [ ] 1.10 [ ] 1.11 [ ] 1.12 [X] 1.13

Name of entity THE RENCO GROUP, INC.

List below the owners and controllers of parent entity. If any person listed is a business entity and not an individual, also complete an item 1.13 for that entity.

Name IRA LEON RENNERT
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 122-26-3075
Employer ID No.
Ownership/Control relationship to applicant PRESIDENT; DIRECTOR
Location in organizational structure PRESIDENT; DIRECTOR
Official title within corporation PRESIDENT; DIRECTOR
Percent of ownership 95.9%
Beginning date of ownership 08/12/86
Beginning date of affiliation 08/12/86

Name ROGER L. FAY
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 056-36-6402
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT; DIRECTOR
Location in organizational structure VICE PRESIDENT; DIRECTOR
Official title within corporation VICE PRESIDENT; DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/12/86

1.13 (continued)

Name MARVIN M. KOENIG
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 128-26-7668
Employer ID No.
Ownership/Control relationship to applicant EXECUTIVE VICE PRES.; DIRECTOR
Location in organizational structure EXECUTIVE VICE PRESIDENT; DIRECTOR
Official title within corporation EXECUTIVE VICE PRESIDENT; DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/12/86

Name JUSTIN W. D'ATRI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 054-22-0273
Employer ID No.
Ownership/Control relationship to applicant SECRETARY; DIRECTOR
Location in organizational structure SECRETARY; DIRECTOR
Official title within corporation SECRETARY; DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/12/86

Name JOHN A. SIEGEL, JR.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 084-40-0870
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT
Location in organizational structure VICE PRESIDENT
Official title within corporation VICE PRESIDENT
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 09/01/89

Name DENNIS A. SADLOWSKI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 317-38-5988
Employer ID No.
Ownership/Control relationship to applicant VICE PRES.; ASSIST. SECRETARY
Location in organizational structure VICE PRES.; ASSIST. SECRETARY
Official title within corporation VICE PRES.; ASSIST. SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 03/04/96

1.13 (continued)

Name MICHAEL C. RYAN
Mailing Address 100 MAIDEN LANE
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10038
Telephone No. (212) 504-6000 Social Security No. 061-38-1877
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 12/23/96

Name JOHN A. BINKO
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 062-46-8923
Employer ID No.
Ownership/Control relationship to applicant Vice President
Location in organizational structure Vice President
Official title within corporation Vice President
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 12/1/97

1.14 List all permits issued within the five (5) years preceding the date of this application for surface coal mining operations in the United States owned or controlled by the applicant and/or any person identified in items 1.8, 1.9, 1.10, 1.11, 1.12, or 1.13.

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee * LODESTAR ENERGY, INC. Employer ID No. 95-2623858
Address P O BOX 448
City CLAY State KENTUCKY Zip 42404

*f.k.a. Costain Coal Inc. (Name change effective July 21, 1997)

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
		SEE ATTACHMENT 1.14.1		

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee NIX MINING COMPANY Employer ID No. 55-0689669
Address P. O. BOX 69
City PAX State WEST VIRGINIA Zip 25904

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
		SEE ATTACHMENT 1.14.2		

Attachment 1.14.1

BUSINESS ENTITY: LODESTAR ENERGY, INC.
EIN: 95-2623858

Permit No.	State	Regulatory Agency	MSHA No.	Date Issued
AL: *				
P-3227	AL	ALSMC	01-02867	1990
P-3331	AL	ALSMC	01-02616	1991
P-3332	AL	ALSMC	01-02657	1985
P-3465	AL	ALSMC	01-02707	1986
P-3501	AL	ALSMC	01-02867	1990
P-3512	AL	ALSMC	01-02706	1986
P-3517	AL	ALSMC	01-02621	1985
P-3535	AL	ALSMC	01-02673	1986
P-3539	AL	ALSMC	01-02658	1985
P-3546	AL	ALSMC	01-02760	1988
P-3579	AL	ALSMC	01-02765	----
P-3597	AL	ALSMC	01-02748	1987
P-3607	AL	ALSMC	01-02616	1991
P-3627	AL	ALSMC	01-02868	1990
P-3717	AL	ALSMC	01-02868	1993
P-3378	AL	ALSMC	01-01921	1978
P-3645	AL	ALSMC	Withdrew	02/05/93
P-3678	AL	ALSMC	01-02953	1995

ALSMC = Alabama Surface Mining Commission

*Lodestar Energy, Inc. no longer holds any Alabama permits. All active permits were transferred to Mid-South Resources Corp. or Alabama Land and Mineral Corporation effective December 19, 1995.

WKY:				
854-0142	KY	DSMRE	15-12622	8-1-89
913-0010	KY	DSMRE	15-17036	1-1-91
917-5001	KY	DSMRE	15-11935	7-21-97
917-0019	KY	DSMRE	15-11935	7-21-97
917-0022	KY	DSMRE	15-11935	7-21-97
917-0017	KY	DSMRE	15-11935	7-21-97
917-8002	KY	DSMRE	15-11935	7-21-97
854-0131	KY	DSMRE	15-12622	8-1-89
854-0133	KY	DSMRE	15-12622	8-1-89
854-0134	KY	DSMRE	15-12622	8-1-89

LEI (Con't)

WKY: (Con't)

854-0135	KY	DSMRE	15-12622	8-1-89
854-0136	KY	DSMRE	15-12622	8-1-89
517-5004	KY	DSMRE	15-13920	7-21-97
913-5003	KY	DSMRE	15-11704	7-21-97
" "	KY	DSMRE	15-11702	1-25-82
913-6000	KY	DSMRE	15-11887	7-21-97
517-8008	KY	DSMRE	15-11408	6-22-81
717-5002	KY	DSMRE	15-13920	7-21-97
913-0006	KY	DSMRE	15-17036	1-1-91
917-0028	KY	DSMRE	15-14492	7-21-97
917-5012	KY	DSMRE	15-16020	7-21-97

EKY:

436-0044	KY	DSMRE	15-05491	3-1-74
836-9013	KY	DSMRE	15-13258	7-21-97
498-5149	KY	DSMRE	15-12427	4-18-83
498-5429	KY	DSMRE	15-08256	10-5-78
898-5060	KY	DSMRE	15-17128	9-1-91
898-5061	KY	DSMRE	15-08256	10-5-78
			15-08257	7-12-78
836-0198	KY	DSMRE	15-05491	3-1-74
836-0208	KY	DSMRE	15-05491	3-1-74
836-5052	KY	DSMRE	15-05491	3-1-74
836-8017	KY	DSMRE	15-13258	7-21-97
436-0084	KY	DSMRE	15-13258	7-21-97
836-0216	KY	DSMRE	15-05491	3-1-74
836-5047	KY	DSMRE	15-13678	9-1-82
898-5003	KY	DSMRE	15-13258	7-21-97
898-0346	KY	DSMRE	15-17101	7-1-91
898-0370	KY	DSMRE	15-17064	7-21-97
836-0249	KY	DSMRE	15-17504	2-1-94
898-0357	KY	DSMRE	15-09965	12-31-91
636-8005	KY	DSMRE	15-13258	7-21-97
898-5254	KY	DSMRE	15-16181	7-10-92
898-8012	KY	DSMRE	15-05406	7-21-97
898-5093	KY	DSMRE	15-08257	7-12-78
898-5535	KY	DSMRE	15-16855	7-21-97
498-5428	KY	DSMRE	15-08256	10-5-78
698-8061	KY	DSMRE	15-05406	7-21-97
898-0324	KY	DSMRE	15-17064	7-21-97
898-0310	KY	DSMRE	15-17215	3-1-92

LEI (Con't)

EKY: (Con't)

898-0248	KY	DSMRE	15-16363	4-1-88
898-0284	KY	DSMRE	15-16830	3-1-90
498-8024	KY	DSMRE	15-13306	7-21-97
898-0356	KY	DSMRE	15-09965	12-31-91
898-5816	KY	DSMRE	--------	----
836-0231	KY	DSMRE	15-17660	7-21-97
836-0261	KY	DSMRE	15-17327	7-21-97
898-0457	KY	DSMRE	15-18100	9-1-98
836-5348	KY	DSMRE	15-16784	8-10-94
836-5349	KY	DSMRE	(no coal removal)	
836-5350	KY	DSMRE	(no coal removal)	
836-5351	KY	DSMRE	(no coal removal)	
836-5352	KY	DSMRE	(no coal removal)	
836-0273	KY	DSMRE	N/A	N/A
836-5353	KY	DSMRE	N/A	N/A
836-5354	KY	DSMRE	N/A	N/A
898-4006	KY	DSMRE	N/A	N/A

DSMRE = Kentucky Department for Surface Mining Reclamation and Enforcement

OH: *

D-0190	OH	ODNR DOR	33-02055	1975
D-0199	OH	ODNR DOR	33-02055	1975
D-0217	OH	ODNR DOR	33-02055	1975
D-0398	OH	ODNR DOR	33-02055	1975
D-0533	OH	ODNR DOR	33-02055	1975
D-0715	OH	ODNR DOR	33-02055	1975
D-0866	OH	ODNR DOR	33-02055	1975
D-0986	OH	ODNR DOR	33-02055	1975
D-1065	OH	ODNR DOR	33-04342	1994

ODNR = Ohio Department of Natural Resources - Division of Reclamation

* Lodestar Energy, Inc. holds no permits in Ohio. All active permits were transferred to Costain Mining Services Inc. effective December 31, 1996.

LEI (Con't)

WV:

166-78	WV	WVDEP	46-07922	10-18-90
O-172-83	WV	WVDEP	46-06735	1-31-97
R-5-84	WV	WVDEP	46-06230	10-1-80
S-3003-91	WV	WVDEP	46-06877	1-31-97
O-3014-89	WV	WVDEP	46-06877	1-31-97
S-3015-89	WV	WVDEP	46-06877	1-31-97
S-3023-91	WV	WVDEP	46-06877	1-31-97
S-3016-92	WV	WVDEP	46-06877	1-31-97
O-3029-92	WV	WVDEP	46-06877	1-31-97
S-3016-93	WV	WVDEP	46-06877	1-31-97
O-3025-93	WV	WVDEP	46-06877	1-31-97
O-3012-94	WV	WVDEP	46-06877	1-31-97
S-3021-95	WV	WVDEP	46-08574	1-31-97

WVDEP = West Virginia Division of Environmental Protection

BUSINESS ENTITY: NIX MINING COMPANY
EIN: 55-0689669

Permit No. Issued	State	Regulatory Agency	MSHA No.	Date
179-77	WV	WVDEP	46-06992	10-18-90
S-3-85	WV	WVDEP	46-06875	1-1-85
S-19-85	WV	WVDEP	46-06875	1-1-85
S-13-85	WV	WVDEP	46-06992	10-18-90
S-3006-89	WV	WVDEP	46-06992	10-18-90
S-3083-86	WV	WVDEP	46-06992	10-18-90
S-118-82*	WV	WVDEP	N/A	N/A

* Costain does not hold this permit, but is responsible for maintenance to Phase 3 bond release by agreement with WVDEP dated April 30, 1996.

** Transfer to Nix Mining Company from G&W Equipment Leasing Pending.

WVDEP = West Virginia Division of Environmental Protection

1.14 (continued) page 2 of 5

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee *FAYETTE DOCK, INC. Employer ID No. 55-0668150
Address P. O. BOX 69
City PAX State WEST VIRGINIA Zip 25904

*f.k.a. Costain Mining, Inc. (name change effective July 21 1997)

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
D-3053-87	WV	WVDEP	----------	----------

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee EASTERN RESOURCES, INC. Employer ID No. 61-1140112
Address P.O. BOX 38
City PROVIDENCE State KENTUCKY Zip 42450

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
854-0137	KY	DSMRE	15-13167	5/1982

1.14 (continued) page 3 of 5

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee WOLVERINE MINING CORPORATION Employer ID No. 38-1993369
Address 251 TOLLAGE CREEK
City PIKEVILLE State KENTUCKY Zip 41501

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
813-0034	KY	DSMRE	15-06285	1984
836-0068	KY	DSMRE	15-06285	1984
877-0057	KY	DSMRE	15-06285	1984

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee ALABAMA LAND AND MINERAL CORPORATION Employer ID No. 63-0733361
Address 309 PLANT STREET
City OAKMAN State ALABAMA Zip 35579

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
		SEE ATTACHMENT 1.14.3		

BUSINESS ENTITY: ALABAMA LAND AND MINERAL CORPORATION *
EIN: 63-0733361

Permit No. Issued	State	Regulatory Agency	MSHA No.	Date
P-2527	AL	ALSMC	01-01923	----
P-2896	AL	ALSMC	01-01923	----
P-3208	AL	ALSMC	01-01422	1975
P-3224	AL	ALSMC	01-00722	1991
P-3226	AL	ALSMC	01-00722	1991
P-3230	AL	ALSMC	01-01894	1978
P-3311	AL	ALSMC	01-02208	----
P-3313	AL	ALSMC	01-02438	----
P-3314	AL	ALSMC	01-02161	1980
P-3316	AL	ALSMC	01-02489	----
P-3320	AL	ALSMC	01-02076	1983
P-3321	AL	ALSMC	01-02161	1980
P-3378	AL	ALSMC	01-02489	----
P-3384	AL	ALSMC	01-02221	1982
P-3406	AL	ALSMC	01-01894	1978
P-3410	AL	ALSMC	01-02208	----
P-3411	AL	ALSMC	01-02076	1984
P-3413	AL	ALSMC	01-01422	1975
P-3416	AL	ALSMC	01-02489	----
P-3418	AL	ALSMC	01-02438	----
P-3423	AL	ALSMC	01-00722	1991
P-3438	AL	ALSMC	01-00722	1991
P-3489	AL	ALSMC	01-02746	----
P-3499	AL	ALSMC	01-02489	----
P-3534	AL	ALSMC	01-00722	1991
P-3560	AL	ALSMC	01-00722	1991
P-3578	AL	ALSMC	01-00722	1991
P-3619	AL	ALSMC	01-02746	1990
P-3620	AL	ALSMC	01-00722	1991
P-3630	AL	ALSMC	01-00722	1991
P-3676	AL	ALSMC	01-02880	1991
P-3699	AL	ALSMC	01-02880	1991
P-3403	AL	ALSMC	01-01903	----

* Transferred to Drummond Company in 1993
ALSMC = Alabama Surface Mining Commission

*This company was sold to Mid-South Resources Corp. on December 29, 1995. Lodestar Energy, Inc. has neither owned nor controlled Alabama Land and Mineral Corporation since that date.

1.14 (continued) page 4 of 5

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee DOLET HILLS MINING VENTURE * Employer ID No. 36-3173535
Address ROUTE 2, BOX 291-C
City MANSFIELD State LOUISIANA Zip 71052

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
LSM-3	LA	LOC	16-01031	1983
		*THIS COMPANY WAS SOLD TO MANSFIELD MINING COMPANY AND MINING BETEILIGUNGS - GMBH & CO. KG ON 03/24/95. LODESTAR ENERGY, INC. HAS NEITHER OWNED NOR CONTROLLED DOLET HILLS MINING VENTURE SINCE THAT DATE.		

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee SUNLAND MINING CORPORATION* Employer ID No. 84-0713394
Address P.O. BOX 55
City OAK CREEK State COLORADO Zip 80467

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
C-81-0011	CO	CMLRD	N/A	N/A
		* THE STOCK OF THIS CORPORATION WAS TRANSFERRED TO COSTAIN AMERICA INC. (THE FORMER PARENT OF LODESTAR ENERGY, INC.) EFFECTIVE JANUARY 31, 1997. LODESTAR ENERGY, INC. HAS NEITHER OWNED NOR CONTROLLED SUNLAND MINING CORPORATION SINCE THAT DATE.		

1.14 (continued) page 5 of 5

Name of Applicant or Person: LODESTAR ENERGY, INC.
Permittee COSTAIN MINING SERVICES INC. Employer ID No. N/A
Address 249 EAST MAIN STREET
City LEXINGTON State KENTUCKY Zip 40507

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED
		SEE ATTACHMENT 1.14.4		

Name of Applicant or Person: _____
Permittee _____ Employer ID No. _____
Address _____
City _____ State _____ Zip _____

PERMIT NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED

BUSINESS ENTITY: COSTAIN MINING SERVICES INC. *
EIN: 61-1307662

Permit No. Issued	State	Regulatory Agency	MSHA No.	Date
D-0190	OH	ODNR DOR	33-02055	1975
D-0199	OH	ODNR DOR	33-02055	1975
D-0217	OH	ODNR DOR	33-02055	1975
D-0398	OH	ODNR DOR	33-02055	1975
D-0533	OH	ODNR DOR	33-02055	1975
D-0715	OH	ODNR DOR	33-02055	1975
D-0866	OH	ODNR DOR	33-02055	1975
D-0986	OH	ODNR DOR	33-02055	1975

ODNR = Ohio Department of Natural Resources - Division of Reclamation

These permits were transferred from Costain Coal Inc. to Costain Mining Services Inc. effective 12/30/96.

*The stock of Costain Mining Services Inc. was transferred to Costain America Inc. (the former parent of Lodestar Energy, Inc.) effective January 31, 1997. Lodestar Energy, Inc. has neither owned nor controlled Costain Mining Services Inc. since that date.

1.15 List all permit applications pending for surface coal mining operations in the United States owned or controlled by the applicant and/or any person identified in items 1.8, 1.9, 1.10, 1.11, 1.12, or 1.13.

Name of Applicant or Person: LODESTAR ENERGY, INC.

Applicant LODESTAR ENERGY, INC. Employer ID No. 95-2623858
Address P.O. BOX 448
City CLAY State KENTUCKY Zip 42404

APPLICATION NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	NO. ISSUED
		See Attach. 1.15.1		

Name of Applicant or Person: _____
Applicant _____ Employer ID No. _____
Address _____
City _____ State _____ Zip _____

APPLICATION NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	NO. ISSUED

PENDING PERMITS: LODESTAR ENERGY, INC.
EID: 95-2623858

Permit No.	State	Agency	MSHA No.	Date Issued
EKY				
898-0370	KY	DSMRE	N/A	N/A
898-0284	KY	DSMRE	N/A	N/A
836-0231	KY	DSMRE	N/A	N/A
898-5003	KY	DSMRE	N/A	N/A
436-0084	KY	DSMRE	N/A	N/A
836-0261	KY	DSMRE	N/A	N/A
836-0198	KY	DSMRE	N/A	N/A
836-0267 *	KY	DSMRE	N/A	N/A
898-0499	KY	DSMRE	N/A	N/A
860-0369	KY	DSMRE	N/A	N/A
498-5428 RN-1	KY	DSMRE	N/A	N/A

* Lodestar is Operator.

WKY				
717-5002	KY	DSMRE	N/A	N/A
913-5003	KY	DSMRE	N/A	N/A
913-6000	KY	DSMRE	N/A	N/A
854-0135	KY	DSMRE	N/A	N/A
917-5012	KY	DSMRE	N/A	N/A

1.15 (continued)

Name of Applicant or Person: N/A
Applicant _____ Employer ID No. _____
Address _____
City _____ State _____ Zip _____

APPLICATION NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED

Name of Applicant or Person: N/A
Applicant _____ Employer ID No. _____
Address _____
City _____ State _____ Zip _____

APPLICATION NUMBER	STATE	REGULATORY AUTHORITY	MSHA NUMBER	DATE MSHA NO. ISSUED

1.16 Violation Information

(a) Has the applicant or any person listed in items 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, or any subsidiary, affiliate, or person controlled by or under common control with the applicant:

(1) Had a federal or state coal mining permit suspended or revoked in the five (5) years preceding the date of this application?
[ ] YES [X] NO. If "YES" complete the following:

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority suspending or revoking the permit
State
Stated reason for action
Current status of permit
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority suspending or revoking the permit
State
Stated reason for action
Current status of permit
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority suspending or revoking the permit
State
Stated reason for action
Current status of permit
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

1.16(a) (continued)

(2) Forfeited a reclamation performance bond or a security deposited in lieu of a bond? [ ] YES [X] NO.
If "YES", complete the following:

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority forfeiting bond or security
State
Stated reason for action
Current status of bond or security
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority forfeiting bond or security
State
Stated reason for action
Current status of bond or security
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

Name of Applicant or Person N/A
Permittee
Permit No. Date of Issuance
Regulatory authority forfeiting bond or security
State
Stated reason for action
Current status of bond or security
(If administrative or judicial proceedings initiated, provide the following:)
Date Location
Type
Current status of proceedings

1.16 (continued)

(b) Has the applicant been issued a notice of violation in connection with any surface coal mining and reclamation operation during the three (3) years preceding the date of this application for violation of SMCRA, KRS Chapter 350, any federal law, rule or regulation pertaining to air or water environmental protection, or any state law, rule or regulation enacted pursuant to federal law, rule or regulation pertaining to air or water environmental protection?
[X] YES [ ] NO. If YES, provide the following information:

SEE ATTACHMENT 1.16(b).1

Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (Administrative or Judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (Administrative or Judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

1.16(b) (continued) (See Attachment 1.16(b).1)

Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (Administrative or Judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (Administrative or Judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (Administrative or Judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

1.16(c)

List all unabated cessation orders, and all unabated air and water quality notices of violation, received prior to the date of this application by any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person identified in items 1.8, 1.9, 1.10, 1.11, 1.12, or 1.13. If none, check box: [X].

Name of Applicant or Person N/A
Name to whom violation was issued
Permit (or other identifying) No.
MSHA No. Date MSHA No. Issued
Violation ID No.
Issuing regulatory authority
Date violation issued
Description of alleged violation

Abatement actions taken

Date of abatement actions
Type of proceedings (Administrative or Judicial)

Date of proceedings
Status of proceedings
Location of proceedings

Name of Applicant or Person N/A
Name to whom violation was issued
Permit (or other identifying) No.
MSHA No. Date MSHA No. Issued
Violation ID No.
Issuing regulatory authority
Date violation issued
Description of alleged violation

Abatement actions taken

Date of abatement actions
Type of proceedings (Administrative or Judicial)
Date of proceedings
Status of proceedings
Location of proceedings

1.16(c) (continued)

Name of Applicant or Person N/A
Name to whom violation was issued
Permit (or other identifying) No.
MSHA No. Date MSHA No. Issued
Violation ID No.
Issuing regulatory authority
Date violation issued
Description of alleged violation

Abatement actions taken

Date of abatement actions
Type of proceedings (Administrative or Judicial)
Date of proceedings
Status of proceedings
Location of proceedings

Name of Applicant or Person N/A
Name to whom violation was issued
Permit (or other identifying) No.
MSHA No. Date MSHA No. Issued
Violation ID No.
Issuing regulatory authority
Date violation issued
Description of alleged violation

Abatement actions taken

Date of abatement actions
Type of proceedings (Administrative or Judicial)
Date of proceedings
Status of proceedings
Location of proceedings

Name of Applicant or Person N/A
Name to whom violation was issued
Permit (or other identifying) No.
MSHA No. Date MSHA No. Issued
Violation ID No.
Issuing regulatory authority
Date violation issued
Description of alleged violation

Abatement actions taken

Date of abatement actions
Type of proceedings (Administrative or Judicial)
Date of proceedings
Status of proceedings
Location of proceedings

1.17 List all other licenses, permits, or approvals needed to conduct the proposed coal mining operation.

NOTE: The Cabinet is not responsible for informing applicants of other required licenses, permits, or approvals.

(a) Mine Safety and Health Administration (MSHA)

Name N/A
MSHA ID No. _____
Date of Issuance/Denial _____

(b) Kentucky Department of Mines and Minerals

Name N/A

SEAM NAME	STATE FILE NO.	LICENSE NO.	DATE OF ISSUANCE/DENIAL

(c) Kentucky Division of Water (KPDES)

Name N/A
Is Application Pending [ ] Yes [ ] No
If No, ID No. _____
and Date of Issuance/Denial _____

(d) Other

Type of Authorization N/A
Name of Agency _____
Agency Address _____
Name _____
ID No. _____
Date of Issuance/Denial _____

Type of Authorization _____
Name of Agency _____
Agency Address _____
Name _____
ID No. _____
Date of Issuance/Denial _____

1.18 List names and complete addresses of all surface owners within the proposed permit Area. Include all legal and equitable owners of record, holders of record of any leasehold interest, and any purchaser of record under a real estate contract. If additional pages are needed, identify as "Item 1.18 Continued".

N/A

1.19 List the names and complete addresses of all mineral owners of the proposed permit area. Include all legal and equitable owners, holders of record of any leasehold interest and any purchaser of record under a real estate contract. If additional pages are needed, identify as "Item 1.19 Continued".

N/A

1.20 If any surface or mineral owner listed above has a legal structure other than a single proprietorship (individual), list the names of principals, officers and resident agent for each. If additional pages are needed, identify as "Item 1.20 Continued".

N/A

1.21 List names and complete addresses of owners of record of all surface area contiguous to any part of proposed permit area. If additional pages are needed, identify as "Item 1.21 Continued".

N/A

1.22 List names and complete addresses of owners of record of all mineral rights contiguous to any part of proposed permit area. If additional pages are needed, identify as "Item 1.22 Continued".

N/A

1.23 Will the mine operator(s) of the proposed permit be different from the applicant? [ ] YES [X] NO. If YES, identify the operator(s) below and also submit Form MPA-02, "Operator Information," completed by the operator(s). A separate form MPA-02 must be completed by each operator, other than the applicant, that will conduct surface coal mining operations on this permit.

Name of Operator N/A

Employer ID No. _____

Name of Operator N/A

Employer ID No. _____

Name of Operator N/A

Employer ID No. _____

1.24 Signature of Applicant or Authorized Agent

The undersigned, being first duly sworn, states that he/she has read all the information provided in Form MPA-01, Permittee Information for a Mining Permit, of this application and has found it to be true and correct. The undersigned further acknowledges that any information provided or omitted herein for the purpose of defrauding or misleading the Natural Resources and Environmental Protection Cabinet may result in criminal charges being instituted pursuant to applicable state laws.

Applicant Company Name LODESTAR ENERGY, INC.

Name of Applicant or Agent
Whose Signature Appears Below JOHN W. HUGHES

Title PRESIDENT; CHIEF OPERATING OFFICER Telephone (606) 255-4006

Signature of Applicant or Agent* John W Hughes

Date of signature 12/30/98

Subscribed and sworn to before me by JOHN W. HUGHES

This the 30th Day of December, 19 98.

Notary Public Connie D. Shanks

My Commission Expires 6-29-2002 State in which Commissioned KENTUCKY

*NOTE: If signer is other than president or secretary of a corporation, attach a notarized copy of power of attorney, or resolution of board of directors which grants signer the legal authority to represent the applicant in this application. (Does not apply to a single proprietorship or partnership.)

DSMRE ID NUMBER 012777

CHANGE OF CORPORATION OWNERS, OFFICERS OR DIRECTORS

This form is used to report new owners, officers, or directors within a corporation. Similar changes on a Single Proprietorship or Partnership must be reported on MPA-07 (Application to Transfer a Mining Permit).	DSMRE ID NUMBER 012777

1. Applicant Name Lodestar Energy, Inc.
Mailing Address 251 Tollage Creek
If P.O. Box, indicate street address N/A
City Pikeville State Kentucky Zip 41501
Telephone No. (606) 432-9071
Employer ID No. 95-2623858
Coal Severance Tax No. 62513

2. List below the name and ending date of all individuals or business entities no longer affiliated with the corporation.

NAME	ENDING DATE
David M. Suchniak	04/10/98
Marvin M. Koenig	06/30/97
Rencoal, Inc.	4/15/98
Eugene C. Holdaway	8/16/99

3. Complete this item for any new person, not previously listed in the most recent item 1.10 of MPA-01 who are: Stockholders (SH) owning ten (10) percent or more of any class of voting stock; Officers [President (PRS), Vice President (VP), Secretary (SEC), Treasurer (TRS)], Directors (DIR), and any other person performing a function similar to a Director. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

Name Michael E. Donohue
Mailing Address 333 West Vine Street, Suite 1700
If P.O. Box, indicate Street Address
City Lexington State Kentucky Zip 40507
Telephone No. (606) 255-4006 Social Security No. 498-58-6637
Employer ID No.
Ownership/Control relationship to applicant Vice President, CFO
Location in organizational structure Vice President, CFO
Official title within corporation Vice President, CFO
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 04/15/98

DSMRE ID NUMBER 012777

Item 3. (continued)

Name Troy L. Francisco
Mailing Address 333 West Vine Street, Suite 1700
If P.O. Box, indicate Street Address
City Lexington State Kentucky Zip 40507
Telephone No. (606) 255-4006 Social Security No. 402-66-4729
Employer ID No.
Ownership/Control relationship to applicant VP of Marketing & Business Development
Location in organizational structure VP of Marketing & Business Development
Official title within corporation VP of Marketing & Business Development
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/16/99

Name William M. Potter
Mailing Address 333 West Vine Street, Suite 1700
If P.O. Box, indicate Street Address
City Lexington State Kentucky Zip 40507
Telephone No. (606) 255-4006 Social Security No. 401-76-6644
Employer ID No.
Ownership/Control relationship to applicant Vice President of Operations
Location in organizational structure Vice President of Operations
Official title within corporation Vice President of Operations
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 10/1/99

Name Dennis W. Bryant
Mailing Address P. O. Box 38
If P.O. Box, indicate Street Address 301 Highway 670
City Providence State Kentucky Zip 42450
Telephone No. (502) 667-7025 Social Security No. 404-66-6975
Employer ID No.
Ownership/Control relationship to applicant VP - Western Kentucky Operations
Location in organizational structure VP - Western Kentucky Operations
Official title within corporation VP - Western Kentucky Operations
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 10/1/99

DSMRE ID NUMBER 012777

Item 3. (continued)

Name R. Blake Hall
Mailing Address 251 Tollage Creek
If P.O. Box, indicate Street Address
City Pikeville State Kentucky Zip 41501
Telephone No. (606) 432-9071 Social Security No. 359-60-1334
Employer ID No.
Ownership/Control relationship to applicant VP - Eastern Kentucky Operations
Location in organizational structure VP - Eastern Kentucky Operations
Official title within corporation VP - Eastern Kentucky Operations
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 08/16/99

Name Lodestar Holdings, Inc.
Mailing Address 30 Rockefeller Center, Suite 4225
If P.O. Box, indicate Street Address
City New York State New York Zip 10112
Telephone No. (212) 541-6000 Social Security No.
Employer ID No. 13-3903875
Ownership/Control relationship to applicant Stockholder
Location in organizational structure Stockholder
Official title within corporation N/A
Percent of ownership 100%
Beginning date of ownership 1/31/97
Beginning date of affiliation 1/31/97

DSMRE ID NUMBER 012777

4. Identify each new person, not listed in the most recent item 1.11 of MPA-01, owning or controlling the coal to be mined under a lease, sublease, or other contract, and having the right to receive the coal after mining or having authority to determine the manner in which the surface coal mining operation is conducted. If none, check box: [X]. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

DSMRE ID NUMBER 012777

5. This item is completed whenever a new business entity (rather than an individual) is listed in items 3, 4, or 5.

Check appropriate box [ ] 3 [ ] 4 [ ] 5

Name of parent entity Lodestar Holdings, Inc.
List below the owners and controllers of parent entity. If any person listed is a business entity and not an individual, also complete an item 1.13 for that entity.

Name THE RENCO GROUP, INC.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address N/A
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No.
Employer ID No. 13-3370264
Ownership/Control relationship to applicant STOCKHOLDER
Location in organizational structure STOCKHOLDER
Official title within corporation N/A
Percent of ownership 100%
Beginning date of ownership 8/15/96
Beginning date of affiliation 8/15/96

Name JOHN A. SIEGEL, JR.
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 084-40-0870
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT
Location in organizational structure VICE PRESIDENT
Official title within corporation VICE PRESIDENT
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

Name ROGER L. FAY
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 056-36-6402
Employer ID No.
Ownership/Control relationship to applicant VICE PRESIDENT & TREASURER
Location in organizational structure VICE PRESIDENT & TREASURER
Official title within corporation VICE PRESIDENT & TREASURER
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

DSMRE ID NUMBER 012777

5. (continued)

Name JUSTIN W. D'ATRI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 054-22-0273
Employer ID No.
Ownership/Control relationship to applicant SECRETARY
Location in organizational structure SECRETARY
Official title within corporation SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

Name DENNIS A. SADLOWSKI
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 317-38-5988
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

Name MICHAEL C. RYAN
Mailing Address 100 MAIDEN LANE
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10138
Telephone No. (212) 504-6000 Social Security No. 061-38-1877
Employer ID No.
Ownership/Control relationship to applicant ASSISTANT SECRETARY
Location in organizational structure ASSISTANT SECRETARY
Official title within corporation ASSISTANT SECRETARY
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

Name IRA LEON RENNERT
Mailing Address 30 ROCKEFELLER CENTER, SUITE 4225
If P.O. Box, indicate Street Address
City NEW YORK State NEW YORK Zip 10112
Telephone No. (212) 541-6000 Social Security No. 122-26-3075
Employer ID No.
Ownership/Control relationship to applicant DIRECTOR
Location in organizational structure DIRECTOR
Official title within corporation DIRECTOR
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 8/15/96

DSMRE ID NUMBER 012777

5. (continued)

Name JOHN W. HUGHES
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address
City LEXINGTON State KY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 516-40-0571
Employer ID No. N/A
Ownership/Control relationship to applicant PRESIDENT;CHIEF OPERATING OFFICER
Location in organizational structure PRESIDENT;CHIEF OPERATING OFFICER
Official title within corporation PRESIDENT;CHIEF OPERATING OFFICER
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 4/24/98

Name MICHAEL E. DONOHUE
Mailing Address 333 WEST VINE STREET, SUITE 1700
If P.O. Box, indicate Street Address
City LEXINGTON State KY Zip 40507
Telephone No. (606) 255-4006 Social Security No. 498-58-6637
Employer ID No. N/A
Ownership/Control relationship to applicant CHIEF FINANCIAL OFFICER
Location in organizational structure CHIEF FINANCIAL OFFICER
Official title within corporation CHIEF FINANCIAL OFFICER
Percent of ownership NONE
Beginning date of ownership N/A
Beginning date of affiliation 4/24/98

DSMRE ID NUMBER 012777

6. Violation Information

(a) Has the applicant or any person listed in items 3, 4, or 5, and including any subsidiary, affiliate, or person controlled by or under common control with the applicant:

(1) Had a federal or state coal mining permit suspended or revoked in the five (5) years preceding the date of this application?
[ ] YES [X] NO. If "YES" complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

DSMRE ID NUMBER 012777

6. (a) (continued)

(2) Forfeited a reclamation performance bond or a security deposited in lieu of a bond? [ ] YES [X] NO.
If YES, complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

DSMRE ID NUMBER 012777

6. (continued)

(b) List all unabated cessation orders, and all unabated air and water quality notice of violation, received prior to the date of this application by any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person identified in items 3, 4, or 5. If none, check box: [X].

Name of Applicant or Person_____
Name to whom violation was issued_____
Permit (or other identifying) No._____
MSHA No. _____ Date MSHA No. Issued_____
Violation ID No._____State_____
Issuing regulatory authority_____
Date violation issued_____
Description of alleged violation_____
_____
Abatement actions taken_____
_____
Date of abatement actions_____
Type of proceedings (administrative or judicial)_____
Date of proceedings_____
Status of proceedings_____
Location of proceedings_____

Name of Applicant or Person_____
Name to whom violation was issued_____
Permit (or other identify). No._____
MSHA No. _____ Date MSHA No. Issued_____
Violation ID No._____State_____
Issuing regulatory authority_____
Date violation issued_____
Description of alleged violation_____
_____
Abatement actions taken_____
_____
Date of abatement actions_____
Type of proceedings (administrative or judicial)_____
Date of proceedings_____
Status of proceedings_____
Location of proceedings_____

DSMRE ID NUMBER 012777

7. If any individual previously reported in the most recent MPA-01, has changed their title, relationship, or position in the corporate structure, complete the item below:

Ira Leon Rennert, who was previously reported on MPA-01 as holding the title President; Director of Lodestar Holdings, Inc., now holds the new title of Director of Lodestar Holdings, Inc., This change was effective on the date of 4/15/98.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

8. List below the permit number of all issued permits held by this corporation and all permits for which the corporation is an Operator. Permit Numbers on which the applicant is only an operator, and not the permittee, should be enclosed within parenthesis ( ).

See Attachment 8.

DSMRE ID NUMBER 012777

9. Signature of Applicant or Authorized Agent

The undersigned, being first duly sworn, states that he/she has read all the information provided in Form MPA-06, Change of Corporate Owners, Officers, or Directors, of this application and has found it to be true and correct. The undersigned further acknowledges that any information provided or omitted herein for the purpose of defrauding or misleading the Natural Resources and Environmental Protection Cabinet may result in criminal charges being instituted pursuant to applicable state laws.

Applicant Company Name LODESTAR ENERGY, INC.

Name of Applicant or Agent Whose Signature Appears Below JOHN W. HUGHES

Title PRESIDENT; CHIEF OPERATING OFFICER Telephone (606) 255-4006

Signature of Applicant or Agent* John W Hughes

Date of signature 12/30/98

Subscribed and sworn to before me by John W. Hughes,

This the 30th Day of December, 19 98

Notary Public Connie G. Shanks

My Commission Expires 6-29-2002 State in which Commissioned KENTUCKY

*NOTE: If signer is other than president or secretary of a corporation, attach a notarized copy of power of attorney, or resolution of board of directors which grants signer the legal authority to represent the applicant in this application. (Does not apply to a single proprietorship or partnership.)

Attachment 8

BUSINESS ENTITY: LODESTAR ENERGY, INC.
EIN: 95-2623858

Permit No.	State	Regulatory Agency	MSHA No.	Date Issued
WKY:				
854-0142	KY	DSMRE	15-12622	1986
913-0010	KY	DSMRE	15-17036	1991
917-5001	KY	DSMRE	15-11935	1986
917-0019	KY	DSMRE	15-11935	1986
917-0022	KY	DSMRE	15-11935	1986
917-0017	KY	DSMRE	15-11935	1986
854-0133	KY	DSMRE	15-12622	1986
854-0134	KY	DSMRE	15-12622	1986
854-0135	KY	DSMRE	15-12622	1986
854-0136	KY	DSMRE	15-12622	1986
517-5004	KY	DSMRE	15-13920	1984
913-5003	KY	DSMRE	15-11704	1978
" "	KY	DSMRE	15-11702	1978
913-6000	KY	DSMRE	15-11887	1975
517-8008	KY	DSMRE	15-11408	1985
717-5002	KY	DSMRE	15-13920	1984
913-0006	KY	DSMRE	15-17036	1991
917-0028	KY	DSMRE	15-14492	1984
917-5012	KY	DSMRE	15-16020	1987

LEI (Con't)
EKY:

436-0044	KY	DSMRE	15-05491	1981
836-9013	KY	DSMRE	15-13258	1983
498-5149	KY	DSMRE	15-12427	1980
498-5429	KY	DSMRE	15-08256	1975
898-5060	KY	DSMRE	15-17128	1991
898-5061	KY	DSMRE	15-08256	1975
			15-08257	1975
836-0198	KY	DSMRE	15-05491	1981
836-0208	KY	DSMRE	15-05491	1981
836-5052	KY	DSMRE	15-05491	1981
836-8017	KY	DSMRE	15-13258	1983
436-0084	KY	DSMRE	15-13258	1981
836-0216	KY	DSMRE	15-05491	1981
836-5047	KY	DSMRE	15-13678	1985
898-5003	KY	DSMRE	15-13258	1981
898-0346	KY	DSMRE	15-17101	1991
898-0370	KY	DSMRE	15-17064	1991
836-0249	KY	DSMRE	15-17504	1994
898-0357	KY	DSMRE	15-09965	1992
636-8005	KY	DSMRE	15-13258	1981
898-5254	KY	DSMRE	15-16181	1987
898-8012	KY	DSMRE	15-05406	1974
898-5093	KY	DSMRE	15-08257	1975
898-5535	KY	DSMRE	15-16855	1990
498-5428	KY	DSMRE	15-08256	1975
698-8061	KY	DSMRE	15-05406	1974
898-0324	KY	DSMRE	15-17064	1991
898-0310	KY	DSMRE	15-17215	1992
898-0248	KY	DSMRE	15-16363	1988
898-0284	KY	DSMRE	15-16830	1990
498-8024	KY	DSMRE	15-13306	1982
898-0356	KY	DSMRE	15-09965	1992
898-5816	KY	DSMRE	--------	----
836-0231	KY	DSMRE	15-17660	1995
836-0261	KY	DSMRE	15-17327	1994
898-0457	KY	DSMRE	15-18100	1998
836-5348	KY	DSMRE	--------	--
836-5350	KY	DSMRE	(no coal removal)	
836-5351	KY	DSMRE	(no coal removal)	
836-5352	KY	DSMRE	(no coal removal)	
836-0273	KY	DSMRE	--------	--
836-5349	KY	DSMRE	(no coal removal)	
836-5353	KY	DSMRE	--------	--
836-5354	KY	DSMRE	--------	--
(836-0281)	KY	DSMRE	--------	--
(898-0499)	KY	DSMRE	15-18045	1998

DSMRE = Kentucky Department for Surface Mining Reclamation and Enforcement

LEI (Con't)

WV				
166-78	WV	WVDEP	46-07922	1990
O-172-83	WV	WVDEP	46-06735	1984
R-5-84	WV	WVDEP	46-06230	1982
S-16-85	WV	WVDEP	46-06877	1985
S-3003-91	WV	WVDEP	46-06877	1985
O-3014-89	WV	WVDEP	46-06877	1985
S-3015-89	WV	WVDEP	46-06877	1985
S-3021-86	WV	WVDEP	46-06877	1985
S-3023-91	WV	WVDEP	46-06877	1985
S-3016-92	WV	WVDEP	46-06877	1985
O-3029-92	WV	WVDEP	46-06877	1985
S-3016-93	WV	WVDEP	46-06877	1985
O-3025-93	WV	WVDEP	46-06877	1985
O-3012-94	WV	WVDEP	46-06877	1985
S-118-82*	WV	WVDEP	N/A	N/A
S-3021-95	WV	WVDEP	46-08574	1997

WVDEP = West Virginia Division of Environmental Protection

* Costain does not hold this permit, but is responsible for maintenance to Phase 3 bond release by agreement with WVDEP dated April 30, 1996.

DSMRE ID NUMBER 012950

CHANGE OF CORPORATION OWNERS, OFFICERS OR DIRECTORS

This form is used to report new owners, officers, or directors within a corporation. Similar changes on a Single Proprietorship or Partnership must be reported on MPA-07 (Application to Transfer a Mining Permit).	DSMRE ID NUMBER 012950

1. Applicant Name Lodestar Holdings, Inc.
Mailing Address 30 Rockefeller Center, Suite 4225
If P.O. Box, indicate street address N/A
City New York State New York Zip 10112
Telephone No. (212) 541-6000
Employer ID No. 13-3903875
Coal Severance Tax No. N/A

2. List below the name and ending date of all individuals or business entities no longer affiliated with the corporation.

NAME	ENDING DATE
Marvin M. Koenig	12/15/98

3. Complete this item for any new person, not previously listed in the most recent item 1.10 of MPA-01 who are: Stockholders (SH) owning ten (10) percent or more of any class of voting stock; Officers [President (PRS), Vice President (VP), Secretary (SEC), Treasurer (TRS)], Directors (DIR), and any other person performing a function similar to a Director. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

Name John W. Hughes
Mailing Address 333 West Vine Street, Suite 1700
If P.O. Box, indicate Street Address
City Lexington State Kentucky Zip 40507
Telephone No. (606) 255-4006 Social Security No. 516-40-0571
Employer ID No.
Ownership/Control relationship to applicant President, Chief Operating Officer
Location in organizational structure President, Chief Operating Officer
Official title within corporation President, Chief Operating Officer
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 04/24/98

DSMRE ID NUMBER 012950

Name Michael E. Donohue
Mailing Address 333 West Vine Street, Suite 1700
If P.O. Box, indicate Street Address
City Lexington State Kentucky Zip 40507
Telephone No. (606) 255-4006 Social Security No. 498-58-6637
Employer ID No.
Ownership/Control relationship to applicant Chief Financial Officer
Location in organizational structure Chief Financial Officer
Official title within corporation Chief Financial Officer
Percent of ownership N/A
Beginning date of ownership N/A
Beginning date of affiliation 04/24/98

DSMRE ID NUMBER 012950

4. Identify each new person, not listed in the most recent item 1.11 of MPA-01, owning or controlling the coal to be mined under a lease, sublease, or other contract, and having the right to receive the coal after mining or having authority to determine the manner in which the surface coal mining operation is conducted. If none, check box: [X]. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

DSMRE ID NUMBER 012950

5. This item is completed whenever a new business entity (rather than an individual) is listed in items 3, 4, or 5. **N/A**

Check appropriate box [ ] 3 [ ] 4 [ ] 5

Name of parent entity _____

List below the owners and controllers of parent entity. If any person listed is a business entity and not an individual, also complete an item 1.13 for that entity.

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

DSMRE ID NUMBER 012950

6. Violation Information

(a) Has the applicant or any person listed in items 3, 4, or 5, and including any subsidiary, affiliate, or person controlled by or under common control with the applicant:

(1) Had a federal or state coal mining permit suspended or revoked in the five (5) years preceding the date of this application?
[ ] YES [X] NO. If "YES" complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

6. (a) (continued)

(2) Forfeited a reclamation performance bond or a security deposited in lieu of a bond? [ ] YES [X] NO.
If YES, complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

6. (continued)

(b) List all unabated cessation orders, and all unabated air and water quality notice of violation, received prior to the date of this application by any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person identified in items 3, 4, or 5. If none, check box: [X].

Name of Applicant or Person _____
Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____ State _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (administrative or judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

Name of Applicant or Person _____
Name to whom violation was issued _____
Permit (or other identify). No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____ State _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (administrative or judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

7. If any individual previously reported in the most recent MPA-01, has changed their title, relationship, or position in the corporate structure, complete the item below: **N/A**

Ira Leon Rennert, who was previously reported on MPA-01 as holding the title President; Director of Lodestar Holdings, Inc., now holds the new title of Director of Lodestar Holdings, Inc., This change was effective on the date of 4/15/98.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

8. List below the permit number of all issued permits held by this corporation and all permits for which the corporation is an Operator. Permit Numbers on which the applicant is only an operator, and not the permittee, should be enclosed within parenthesis ( ).

N/A

DSMRE ID NUMBER 012950

9. Signature of Applicant or Authorized Agent

The undersigned, being first duly sworn, states that he/she has read all the information provided in Form MPA-06, Change of Corporate Owners, Officers, or Directors, of this application and has found it to be true and correct. The undersigned further acknowledges that any information provided or omitted herein for the purpose of defrauding or misleading the Natural Resources and Environmental Protection Cabinet may result in criminal charges being instituted pursuant to applicable state laws.

Applicant Company Name LODESTAR ENERGY, INC.

Name of Applicant or Agent Whose Signature Appears Below JOHN W. HUGHES

Title PRESIDENT; CHIEF OPERATING OFFICER Telephone (606) 255-4006

Signature of Applicant or Agent* John W Hughes

Date of signature 5/21/99

Subscribed and sworn to before me by John W. Hughes,

This the 21st Day of May, 1999

Notary Public Connie L. Sparks

My Commission Expires 6-29-2002 State in which Commissioned KENTUCKY

*NOTE: If signer is other than president or secretary of a corporation, attach a notarized copy of power of attorney, or resolution of board of directors which grants signer the legal authority to represent the applicant in this application. (Does not apply to a single proprietorship or partnership.)

DSMRE ID NUMBER 012690

CHANGE OF CORPORATION OWNERS, OFFICERS OR DIRECTORS

This form is used to report new owners, officers, or directors within a corporation. Similar changes on a Single Proprietorship or Partnership must be reported on MPA-07 (Application to Transfer a Mining Permit).	DSMRE ID NUMBER 012690

1. Applicant Name The Renco Group, Inc.
   Mailing Address 30 Rockefeller Center, Suite 4225
   If P.O. Box, indicate street address N/A
   City New York State New York Zip 10112
   Telephone No. (212) 541-6000
   Employer ID No. 13-3370264
   Coal Severance Tax No. N/A

2. List below the name and ending date of all individuals or business entities no longer affiliated with the corporation.

NAME	ENDING DATE

3. Complete this item for any new person, not previously listed in the most recent item 1.10 of MPA-01 who are: Stockholders (SH) owning ten (10) percent or more of any class of voting stock; Officers [President (PRS), Vice President (VP), Secretary (SEC), Treasurer (TRS)], Directors (DIR), and any other person performing a function similar to a Director. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

   Name John A. Binko
   Mailing Address 30 Rockefeller Center, Suite 4225
   If P.O. Box, indicate street address N/A
   City New York State New York Zip 10112
   Telephone No. (212) 541-6000 Social Security No. 062-46-8923
   Employer ID No.
   Ownership/Control relationship to applicant Vice President
   Location in organizational structure Vice President
   Official title within corporation Vice President
   Percent of ownership N/A
   Beginning date of ownership N/A
   Beginning date of affiliation 12/1/97

DSMRE ID NUMBER 012690

4. Identify each new person, not listed in the most recent item 1.11 of MPA-01, owning or controlling the coal to be mined under a lease, sublease, or other contract, and having the right to receive the coal after mining or having authority to determine the manner in which the surface coal mining operation is conducted. If none, check box: [X]. If any person listed below is a business entity and not an individual, also complete item 5 for that entity.

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Beginning date of affiliation _____

DSMRE ID NUMBER 012690

5. This item is completed whenever a new business entity (rather than an individual) is listed in items 3, 4, or 5. **N/A**

Check appropriate box [ ] 3 [ ] 4 [ ] 5

Name of parent entity _____

List below the owners and controllers of parent entity. If any person listed is a business entity and not an individual, also complete an item 1.13 for that entity.

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

Name _____
Mailing Address _____
If P.O. Box, indicate Street Address _____
City _____ State _____ Zip _____
Telephone No. (___) _____ Social Security No. _____
Employer ID No. _____
Ownership/Control relationship to applicant _____
Location in organizational structure _____
Official title within corporation _____
Percent of ownership _____
Beginning date of ownership _____
Beginning date of affiliation _____

DSMRE ID NUMBER 012690

6. Violation Information

(a) Has the applicant or any person listed in items 3, 4, or 5, and including any subsidiary, affiliate, or person controlled by or under common control with the applicant:

(1) Had a federal or state coal mining permit suspended or revoked in the five (5) years preceding the date of this application?
[ ] YES [X] NO. If "YES" complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority suspending or revoking the permit _____
_____ State _____
Stated reason for action _____
_____
Current status of permit _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

DSMRE ID NUMBER 012690

6. (a) (continued)

(2) Forfeited a reclamation performance bond or a security deposited in lieu of a bond? [ ] YES [X] NO.
If YES, complete the following:

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

Name of Applicant or Person _____
Permittee _____
Permit No. _____ Date of Issuance _____
Regulatory authority forfeiting bond or security _____
_____ State _____
Stated reason for action _____
_____
Current status of bond or security _____
(If administrative or judicial proceedings initiated, provide the following:)
Date _____ Location _____
Type _____
Current status of proceedings: _____

DSMRE ID NUMBER 012690

6. (continued)

(b) List all unabated cessation orders, and all unabated air and water quality notice of violation, received prior to the date of this application by any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person identified in items 3, 4, or 5. If none, check box: [X].

Name of Applicant or Person _____
Name to whom violation was issued _____
Permit (or other identifying) No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____ State _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (administrative or judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

Name of Applicant or Person _____
Name to whom violation was issued _____
Permit (or other identify). No. _____
MSHA No. _____ Date MSHA No. Issued _____
Violation ID No. _____ State _____
Issuing regulatory authority _____
Date violation issued _____
Description of alleged violation _____
_____
Abatement actions taken _____
_____
Date of abatement actions _____
Type of proceedings (administrative or judicial) _____
Date of proceedings _____
Status of proceedings _____
Location of proceedings _____

DSMRE ID NUMBER 012690

7. If any individual previously reported in the most recent MPA-01, has changed their title, relationship, or position in the corporate structure, complete the item below: **N/A**

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

_____, who was previously reported on MPA-01 as holding the title_____, now holds the new title of _____, This change was effective on the date of _____.

8. List below the permit number of all issued permits held by this corporation and all permits for which the corporation is an Operator. Permit Numbers on which the applicant is only an operator, and not the permittee, should be enclosed within parenthesis ( ).

N/A

DSMRE ID NUMBER 012690

9. Signature of Applicant or Authorized Agent

The undersigned, being first duly sworn, states that he/she has read all the information provided in Form MPA-06, Change of Corporate Owners, Officers, or Directors, of this application and has found it to be true and correct. The undersigned further acknowledges that any information provided or omitted herein for the purpose of defrauding or misleading the Natural Resources and Environmental Protection Cabinet may result in criminal charges being instituted pursuant to applicable state laws.

Applicant Company Name LODESTAR ENERGY, INC.

Name of Applicant or Agent Whose Signature Appears Below JOHN W. HUGHES

Title PRESIDENT; CHIEF OPERATING OFFICER Telephone (606) 255-4006

Signature of Applicant or Agent* John W Hughes

Date of signature 5/21/99

Subscribed and sworn to before me by John W. Hughes,

This the 21st Day of May, 19 99

Notary Public Connie G. Shanks

My Commission Expires 6-29-2002 State in which Commissioned KENTUCKY

*NOTE: If signer is other than president or secretary of a corporation, attach a notarized copy of power of attorney, or resolution of board of directors which grants signer the legal authority to represent the applicant in this application. (Does not apply to a single proprietorship or partnership.)

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0248**

MSHA No. **15-16830** Date MSHA No. Issued **3/5/90**

Violation I.D. No. **51-2365**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **9/7/00**

Description of Alleged Violation **Slide off-permit disturbance Inc. 3**

Abatement Actions Taken

Date of Abatement actions **10/7/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0556**

MSHA No. _____ Date MSHA No. Issued _____

Violation I.D. No. **51-2480**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **8/21/00**

Description of Alleged Violation **2; (1)Permittee and operator have Failed to properly show required information on blasting records - Inc.1&2; (2) Permittee has created disturbance within 300' of an Occupied dwelling without first obtaining a waiver.**

Abatement Actions Taken _____

Date of Abatement actions **10/19/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0213**

MSHA No. **15-17660** Date MSHA No. Issued **4/21/95**

Violation I.D. No. **41-2310**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **7/17/00**

Description of Alleged Violation **Two Violations (1) Two slides have occurred below dugouts #14 & #17A. (2) Spillways are washed out of dugouts #14 & 17A.**

Abatement Actions Taken

Date of Abatement actions **10/13/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0503**

MSHA No. **15-18015** Date MSHA No. Issued **11/16/00**

Violation I.D. No. **05-3048**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **7/12/00**

Description of Alleged Violation **Permittee and operator have allowed Pond #18 to become filled to capacity with sediment. Sediment is being washed downstream.**

Abatement Actions Taken

Date of Abatement actions **7/18/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0556**

MSHA No. _____ Date MSHA No. Issued _____

Violation I.D. No. **51-2455**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **7/8/00**

Description of Alleged Violation **Permittee and operator allowed water high in suspended solids to be discharged from pond #3.**

Abatement Actions Taken _____

Date of Abatement actions **7/17/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0503**

MSHA No. **15-18015** Date MSHA No. Issued **11/16/00**

Violation I.D. No. **05-3088**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/27/00**

Description of Alleged Violation **Permittee and operator have allowed Pond #18 to become filled to capacity with sediment. Sediment is being washed downstream.**

Abatement Actions Taken

Date of Abatement actions **7/6/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0503**

MSHA No. **15-18015** Date MSHA No. Issued **11/16/99**

Violation I.D. No. **51-2451**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/21/00**

Description of Alleged Violation **Permittee and operator have allowed pond #18 to become filled to capacity with sediment. Sediment is being washed down stream.**

Abatement Actions Taken

Date of Abatement actions **Extension requested 9/15/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0216**

MSHA No. **15-17661** Date MSHA No. Issued **4/21/95**

Violation I.D. No. **41-2309**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/21/00**

Description of Alleged Violation **Failure to maintain spillway of ss #9 according to approved plan.**

Abatement Actions Taken

Date of Abatement actions **7/19/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0555**

MSHA No. **15-18045** Date MSHA No. Issued **10/26/00**

Violation I.D. No. **51-2489**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/21/00**

Description of Alleged Violation **Company has exceeded the amount of explosives allowed with an eighth millisecond delay during a blast on 5/16/00 and company has failed to maintain complete blasting records on Increment #16.**

Abatement Actions Taken

Date of Abatement actions **Non-Correctable**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0231**

MSHA No. **15-17660** Date MSHA No. Issued **1995**

Violation I.D. No. **41-2307**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **5/5/00**

Description of Alleged Violation **An old slide had reactivated and moved further down the hill off permit.**

Abatement Actions Taken

Date of Abatement actions **6/13/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **917-0022**

MSHA No. **15-11935** Date MSHA No. Issued **6/25/79**

Violation I.D. No. **11-0430**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/27/00**

Description of Alleged Violation **3: (1) Operator has redistributed material not acceptable for Prime farmland 'B' horizon. (2) Operator has not followed the topsoil handling plan regarding Prime farmland. (3) Permitee and Operator have allowed gullies to develop greater than nine inches.**

Abatement Actions Taken

Date of Abatement actions **6/23/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0555**

MSHA No. **15-18045** Date MSHA No. Issued **10/26/99**

Violation I.D. No. **51-0421**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/17/00**

Description of Alleged Violation **Company has failed to maintain Haul road #5 in order to prevent material (mud) from being tracked on Highway #319. Dust is also being generated after mud dries. (Inc.#34).**

Abatement Actions Taken

Date of Abatement actions **3/22/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0556**

MSHA No. _____ Date MSHA No. Issued _____

Violation I.D. No. **51-2383**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/10/00**

Description of Alleged Violation **2: (1) Permitee and operator have failed to show required information on blasting records. Permitee and operator have failed to use seismograph on blast in excess of 40,000 lbs. (2) Permitee has allowed spoil material to be placed below the lowest coal seam being mined.**

Abatement Actions Taken _____

Date of Abatement actions **10/16/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0503**

MSHA No. **15-18015** Date MSHA No. Issued **11/16/99**

Violation I.D. No. **51-2382**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/10/00**

Description of Alleged Violation **Permitee and operator have failed to properly show required information on blasting records. Permitee and operator have failed to use seismograph on all blasts in excess of 40,000 lbs.**

Abatement Actions Taken

Date of Abatement actions **3/30/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0457**

MSHA No. **15-18100** Date MSHA No. Issued **9/18/98**

Violation I.D. No. **51-2363**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **2/25/00**

Description of Alleged Violation **Failure to maintain adequate blast records.**

Abatement Actions Taken

Date of Abatement actions **3/29/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0261**

MSHA No. **15-17327** Date MSHA No. Issued **11/12/92**

Violation I.D. No. **41-1494**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **2/15/00**

Description of Alleged Violation **1.40 acres disturbed off permit.**

Abatement Actions Taken

Date of Abatement actions **Extension requested 9/18/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0503**

MSHA No. **15-18015** Date MSHA No. Issued **11/16/99**

Violation I.D. No. **51-2377**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **1/12/00**

Description of Alleged Violation **Operator has allowed spoil material to be placed on down slope.**

Abatement Actions Taken

Date of Abatement actions **5/9/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0261**

MSHA No. **15-17327** Date MSHA No. Issued **11/12/92**

Violation I.D. No. **41-1492**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **12/8/99**

Description of Alleged Violation **Failure to follow approved backfilling and grading plans on Inc. #3&#13.**

Abatement Actions Taken

Date of Abatement actions **Extension requested 9/18/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0554**

MSHA No. **15-17889** Date MSHA No. Issued **1/23/97**

Violation I.D. No. **51-1761**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **11/29/99**

Description of Alleged Violation **5;(1) Company has allowed rills and gullies, erosion to occur in backfill on Inc. #2&7. Highwall in excess of 3' has occurred on increment #8. (2) Company has allowed erosion to occur on face lifts of HF #2.(3) Company has allowed spoil material to be placed/mixed on top of window in the lower areas of backfill between HF #1 and #6. (4) Company has constructed roads that are not part of the approved permit plan on Inc. 2,6&7. (5) Company has created an off permit disturbance adjacent and along both sides of rains of HF#1.**

Abatement Actions Taken

Date of Abatement actions **No 1 thru 3 2/1/00; No 4&5 3/22/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **860-0369**

MSHA No. _____ Date MSHA No. Issued _____

Violation I.D. No. **41-2121**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **11/01/99**

Description of Alleged Violation **An area approximately 20'x1,500' has been disturbed that dose not drain thru sediment control.**

Abatement Actions Taken _____

Date of Abatement actions **12/17/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0555**

MSHA No. **15-18045** Date MSHA No. Issued **10/26/99**

Violation I.D. No. **51-1734**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **10/28/99**

Description of Alleged Violation **Company has allowed spoil material (rocks, dirt) to be placed on downslope in steep slope areas. Hollow Fill #1&#6.**

Abatement Actions Taken

Date of Abatement actions **1/19/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0457**

MSHA No. **15-15100** Date MSHA No. Issued **9/18/98**

Violation I.D. No. **51-2362**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **9/17/99**

Description of Alleged Violation **2 Violations (INC1#):Material on outslope between pond 6&7-four or five rocks rolled into residental area; and failure to maintain sediment control plan - material deposited off permit and out of sediment control.**

Abatement Actions Taken

Date of Abatement actions **5/15/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **913-5003**

MSHA No. **15-11702** Date MSHA No. Issued **12/11/78**

Violation I.D. No. **11-0348**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **9/15/99**

Description of Alleged Violation **Failure to obtain a permit renewal.**

Abatement Actions Taken **Submit renewal**
Date of Abatement actions **11/15/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0457**

MSHA No. **51-18100** Date MSHA No. Issued **9/18/98**

Violation I.D. No. **51-1685**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **8/5/99**

Description of Alleged Violation **Failure to maintain accurate blasting records.**

Abatement Actions Taken

Date of Abatement actions **9/17/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0369**

MSHA No. **Pending** Date MSHA No. Issued _____

Violation I.D. No. **41-2117**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **7/28/99**

Description of Alleged Violation **Disturbance of an area that does not drain thru sediment comtrol.**

Abatement Actions Taken **Provide alternate sediment control.**
Date of Abatement actions **9/22/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0216**

MSHA No. **15-17661** Date MSHA No. Issued **4/21/95**

Violation I.D. No. **41-1705**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/15/99**

Description of Alleged Violation **Blasting has allowed flyrock to be cast beyond the permitted boundary Near Bench Pond #7.**

Abatement Actions Taken

Date of Abatement actions **9/28/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0284**

MSHA No. **15-16830** Date MSHA No. Issued **3/05/90**

Violation I.D. No. **51-1684**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/8/99**

Description of Alleged Violation **Access road construction has destabilized an outslope area and a small slump in the road has resulted (Access road B, Increment #3).**

Abatement Actions Taken

Date of Abatement actions **2/25/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **917-0022**

MSHA No. **15-11935** Date MSHA No. Issued **6/25/79**

Violation I.D. No. **11-0428**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **6/25/99**

Description of Alleged Violation **Contemporaneous Reclamation Backfilling and grading**

Abatement Actions Taken

Date of Abatement actions **2/8/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **860-0396**

MSHA No. _____ Date MSHA No. Issued _____

Violation I.D. No. **41-2112**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **5/26/99**

Description of Alleged Violation **Failure to utilize pond access road #2 according to the approved plan.**

Abatement Actions Taken _____

Date of Abatement actions **3/02/00**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0216**

MSHA No. **15-13258** Date MSHA No. Issued **12/10/81**

Violation I.D. No. **41-1487**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **5/4/99**

Description of Alleged Violation **Failure to control and minimize air pollution by allowing a coal stockpile to slowly burn causing smoke to escape into the air.**

Abatement Actions Taken

Date of Abatement actions **5/21/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **854-0135**

MSHA No. **15-12622** Date MSHA No. Issued **12/31/86**

Violation I.D. No. **11-0422**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **4/27/99**

Description of Alleged Violation **Company failed to seed, fertilize and mulch material removed from basin.**

Abatement Actions Taken **Disk,seed,fertilize and mulch all disturbance**

Date of Abatement actions **5/12/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**/

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0249**

MSHA No. **15-17504** Date MSHA No. Issued **02/18/94**

Violation I.D. No. **41-1486**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **04/14/99**

Description of Alleged Violation **An off-permit slide has occurred near ponds #3 and #4.**

Abatement Actions Taken

Date of Abatement actions **06/15/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0126**

MSHA No. **15-17661** Date MSHA No. Issued **04/21/95**

Violation I.D. No. **41-1465**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **03/29/99**

Description of Alleged Violation **Failure to adhere to approved sediment control plan - pond #8**

Abatement Actions Taken

Date of Abatement actions **06/15/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-0457**

MSHA No. **15-18100** Date MSHA No. Issued **9/18/98**

Violation I.D. No. **51-1683**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/22/99**

Description of Alleged Violation **Failure to properly seal core hole**

Abatement Actions Taken

Date of Abatement actions **4/21/99**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **898-5535**

MSHA No. **15-16855** Date MSHA No. Issued **1991**

Violation I.D. No. **51-1770**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **3/11/99**

Description of Alleged Violation **Failure to provide a pre-subsidence survey prior to mining within 1500' of structure**

Abatement Actions Taken **Non-correctable**

Date of Abatement actions **Non-correctable**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Attachment 1.16(b).1

Name to whom violation was issued **Lodestar Energy, Inc.**

Permit (or other identifying) No. **836-0231**

MSHA No. **15-17660** Date MSHA No. Issued **1995**

Violation I.D. No. **41-2301**

Issuing Regulatory Authority **Kentucky Department of Surface Mining Reclamation and Enforcement**

Date Violation Issued **2/19/1999**

Description of Alleged Violation **Failure to follow approved plan for cleaning out ponds (Inc.#4, Pond #9)**

Abatement Actions Taken **Non-correctable**

Date of Abatement actions **Non-Correctable**

Type of Proceedings (Administrative or Judicial) **N/A**

Date of Proceedings **N/A**

Status of Proceedings **N/A**

Location of Proceedings **N/A**

Utah Notice of Violation/Cessation Order Listing for Horizon (ACT 007/020) and White Oak (ACT 007/001) Mines

Mine Name	NOV No.	Nature of Violation	Date of NOV	Termination Date
Horizon	96-26-4-3 1of 3	Park vehicles in designated area	10/31/96	11/1/96
	96-26-4-3 2of 3	Store material in approved area	10/31/96	11/1/96
	96-26-4-3 3of 3	Store and protect topsoil	10/31/96	11/1/96
White Oak	96-39-7-1	Missing parameters in water sampling 3rd Quarter	12/10/96	12/10/96
	97-39-1-1	Place and store waste in controlled manner	4/1/97	4/11/97
	97-39-2-1	Certify annual impoundment inspection	6/3/97	6/18/97
	97-39-4-1	Minimize erosion of main haul road	6/26/97	8/1/97
	98-39-2-1	4th Quarter water data	6/22/98	7/15/98
	2000-46-1-2 1of 2	Failure to maintain diversion and mininize erosion	4/12/00	6/6/00
	2000-46-1-2 2of 2	Failure to repair damage to surface lands	4/12/00	6/6/00
Horizon	97-26-5-1	Maintain undisturbed diversions/culverts	6/26/97	9/16/97
	97-26-7-1	Receive approval prior to modifying undisturbed diversions	8/21/97	3/4/98
	98-26-1-1	Cessation order - Culvert installation	1/13/98	Vacated 2/25/98
	98-26-1-1	Store mine materials only in designated areas	2/13/98	3/9/98
	98-26-2-1	Receive approval on culvert installation	2/23/98	5/15/98
	98-26-3-1	Maintain coal mine waste	5/29/98	6/10/98
	98-26-4-1	Riparian topsoil placement	8/26/98	11/3/98
	99-26-1-1	Failure to comply with Division Order	4/6/99	12/10/99
	99-26-1-1	Cessation Order - Mining Outside Permit Area	4/8/99	Vacated 6/1/99
	99-26-2-1	Water Monitoring	5/19/99	6/28/99

CHAPTER 3

Redline / Strikeout of the text in this Chapter

Replace Figures 3-1 and 3-2 with Plates 3-9 and 3-10

Revised Plate 3-3 with the Expanded Permit Boundary and Subsidence Monitoring Points

CHAPTER 3

OPERATION AND RECLAMATION PLAN

TABLE OF CONTENTS

Section — Page

3.1 Scope 3-1

3.2 Surface Facilities Construction Plans 3-1

3.2.1 Site Selection and Preparation 3-4
3.2.2 Mine Portals 3-4
3.2.3 Surface Buildings and Structures 3-4

3.2.3.1 Plans and Engineering Designs 3-6
3.2.3.2 Utility Installation and Support Facilities 3-7
3.2.3.3 Road Classification 3-8
3.2.3.4 Description of Transportation Facilities. 3-8
3.2.3.5 Refuse Piles 3-9
3.2.3.6 Coal Mine Waste 3-9
3.2.3.7 Management of Mine Openings 3-11
3.2.3.8 Mine Structures and Facilities 3-11

3.2.4 Coal Handling 3-12
3.2.5 Power System 3-12
3.2.6 Water Supply 3-12
3.2.7 Sewage System 3-12
3.2.8 Water Diversion Structures 3-13
3.2.9 Sedimentation Control Structures and Water Treatment Facilities 3-13
3.2.10 Transportation, Roads, Parking Area, Railroad Spurs 3-13
3.2.11 Total Area for Surface Disturbance During Permit Term 3-13
3.2.12 Additional Areas for Surface Disturbances for Life of Mine 3-13
3.2.13 Detailed Construction Schedule 3-13

3.3 Operation Plan 3-13

3.3.1 Mining Plans 3-14

3.3.1.1 Orientation and Multiple Seam Considerations 3-15
3.3.1.2 Portals, Shafts, and Slopes 3-15
3.3.1.3 Mining Methods, Room and Pillar, Longwall 3-15
3.3.1.4 Projected Mine Development, Mains, Submains, Panels, Etc. 3-16
3.3.1.5 Retreat Mining 3-16
3.3.1.6 Roof Control, Ventilation, Water Systems, Dust Suppression, Dewatering, Electrical 3-16

3.3.2 Barrier Pillars 3-16

3.3.2.1 Protection of Oil and Gas Wells 3-16

TABLE OF CONTENTS (Continued)

Section — Page

3.3.2.2 Protection of Surface Structures and Streams 3-16
3.3.2.3 Property Boundaries 3-17
3.3.2.4 Outcrop Protection 3-17
3.3.2.5 Other 3-17
3.3.2.6 Underground Development Waste 3-17
3.3.2.7 Return of Coal Processing Waste to Underground 3-17

3.3.3 Conservation of Coal Resources 3-17

3.3.3.1 Projected Maximum Recovery 3-18
3.3.3.2 Justification for Non-Recovery 3-18
3.3.3.3 Access for Future Reserves 3-18

3.3.4 Equipment Selection 3-18

3.3.5 Mine Safety, Fire Protection, and Security 3-19

3.3.5.1 Signs 3-19
3.3.5.2 Fences and Gates 3-20
3.3.5.3 Fire Protection 3-20
3.3.5.4 Explosives 3-23
3.3.5.5 Management of Mine Openings 3-23

3.3.6 Operations Schedule 3-24

3.3.6.1 Annual Production Per Year for Permit Term 3-24
3.3.6.2 Operations Schedule - Day - Shifts 3-24
3.3.6.3 Operation Employment 3-24
3.3.6.4 Temporary Cessation 3-24

3.3.7 Mine Permit Area 3-24

3.3.7.1 Acreage and Delineation of Mine Permit Area 3-24
3.3.7.2 Projected Mining by Year 3-24

3.3.8 Mine Plan Area 3-24

3.4 Environmental Protection 3-24

3.4.1 Preservation of Land Use 3-24

3.4.1.1 Projected Impacts of Mining on Current and Future Land-Use 3-25
3.4.1.2 Control Measures to Mitigate Impacts 3-25

TABLE OF CONTENTS (Continued)

Section — Page

3.4.2 Protection of Human Values 3-25

3.4.2.1 Projected Impacts of Mining on Human Values 3-25

3.4.3 Protection of Hydrologic Balance 3-25

3.4.3.1 Trojected Impact of Mining on Hydrologic Balance 3-25
3.4.3.2 Control Measures to Mitigate Impacts and Monitoring Procedures 3-26

3.4.4 Preservation of Soil Resources and Projected Impacts of Mining on Soil Resources 3-26 28

3.4.4.1 Control Measures to Mitigate Impact to Soil Resources 3-26

3.4.5 Protection of Vegetative Resources 3-26

3.4.5.1 Projected Impact of Mining on Vegetative Resources 3-26
3.4.5.2 Mitigation Measures to be Employed to Reduce Impacts on Vegetative Resources 3-27
3.4.5.3 Monitoring Procedures - Reference Areas and Revegetation 3-27

3.4.6 Protection of Fish and Wildlife 3-27

3.4.6.1 Potential Impacts on Fish and Wildlife 3-27 29
3.4.6.2 Mitigation and Management Plans 3-27 29
3.4.6.3 Fish and Wildlife Monitoring 3-27 29

3.4.7 Protection of Air Quality 3-27

3.4.8 Subsidence Control and Monitoring Plan 3-27

3.4.8.1 Structures 3-27
3.4.8.2 Renewable Resources 3-27
3.4.8.3 Geologic Hazards 3-28
3.4.8.4 Subsidence 3-28
3.4.8.5 Subsidence Control and Monitoring Plan 3-29

3.5 Reclamation Plan 3-31

3.5.1 Contemporaneous Reclamation 3-31
3.5.2 Soil Removal and Storage 3-31
3.5.3 Final Abandonment 3-31

TABLE OF CONTENTS (Continued)

Section | Page

3.5.3.1 Sealing of Mine Openings 3-31
3.5.3.2 Removal of Surface Structures 3-32
3.5.3.3 Disposition of Dams, Ponds, and Diversions 3-35

3.5.4 Backfilling and Grading Plans 3-35

3.5.4.1 Removal or Reduction of Highwalls 3-37
3.5.4.2 Recontouring 3-38
3.5.4.3 Fencing and Erosion Control 3-38
3.5.4.4 Soil Redistribution and Stabilization 3-38

3.5.5 Revegetation Plan 3-38

3.5.5.1 Soil Preparation 3-38
3.5.5.2 Seeding 3-38
3.5.5.3 Mulching 3-40
3.5.5.4 Reclamation Management 3-40
3.5.5.5 Revegetation Monitoring 3-40
3.5.5.6 Establishment of Wildlife Habitat . . . . . 3-~~40~~ 42

3.5.6 Reclamation Monitoring 3-47

3.5.7 Schedule of Reclamation for Horizon Mine 3-47

3.5.7.1 Timetable For Completion of Major Reclamation Processes 3-47

3.5.8 Cost Estimate for Final Reclamation 3-47

LIST OF TABLES

TABLE 3-1 CUT AND FILL CALCULATIONS (RECLAMATION PHASE) 3-36
TABLE 3-2 RECLAMATION SEED MIX #1 3-41
TABLE 3-3 RECLAMATION SEED MIX #2 3-42
TABLE 3-4 RECLAMATION TIMETABLE 3-48

LIST OF FIGURES

FIGURE 3-1 OLD MINE WORKINGS CASTLEGATE A SEAM 3-2
FIGURE 3-2 OLD MINE WORKINGS HIAWATHA SEAM 3-3
FIGURE 3-3 MINE IDENTIFICATION SIGN 3-21

LIST OF FIGURES (Continued)

FIGURE 3-4 IDENTIFICATION SIGNS 3-22
FIGURE 3-5 SUBSIDENCE/SEAM THICKNESS RATIOS (FROM DUNRUD, 1980) 3-30
FIGURE 3-6 TYPICAL PORTAL SEALING 3-33
FIGURE 3-7 TYPICAL PORTAL BLOCK SEAL 3-34

LIST OF PLATES

PLATE 3-1 SURFACE FACILITIES
PLATE 3-2 PREMINING AND OPERATIONAL CROSS SECTIONS
PLATE 3-3 FIVE YEAR MINE PLAN
PLATE 3-4 ACCESS AND HAULAGE ROAD DESIGN
PLATE 3-4A ANCILLARY ROAD TYPICAL SECTION
PLATE 3-5 SUBSIDENCE MONITORING PLAN
PLATE 3-6 PREMINING TOPOGRAPHY
PLATE 3-7 RECLAMATION TOPOGRAPHY
PLATE 3-7A POST MINING AND OPERATIONAL CROSS SECTIONS
PLATE 3-8 SWEETS CANYON POND UTILITIES
" 3-9 - OLD WORKINGS CASTLE GATE
" 3-10 - " " HIAWATHA

LIST OF APPENDICES

APPENDIX 3-1 ROAD AND HAULAGE LETTERS
APPENDIX 3-2 PILLAR EXTRACTION
APPENDIX 3-3 STATIC SAFETY FACTOR CALCULATIONS
APPENDIX 3-4 ROCK STRENGTH ANALYSES
APPENDIX 3-5 WATER RIGHTS
APPENDIX 3-6 UPDES PERMIT
APPENDIX 3-7 RECLAMATION BOND ESTIMATE
APPENDIX 3-8 LOCATIONS OF BURIED COAL WASTE
APPENDIX 3-9 UC-3 CULVERT EXTENSION
APPENDIX 3-10 ASTM COAL CLASSIFICATIONS

CHAPTER 3

Redline / Strikeout of the text in this Chapter
Table of Contents

Revised Plate 3-3 with the Expanded Permit Boundary and Subsidence Monitoring Points including Extent of Subsidence Line and Drill Holes

TABLE OF CONTENTS

Section — Page

3.1 Scope 3-1

3.2 Surface Facilities Construction Plans 3-1

3.2.1 Site Selection and Preparation 3-4
3.2.2 Mine Portals 3-4
3.2.3 Surface Buildings and Structures . . . . . ~~3-4~~3-5

3.2.3.1 Plans and Engineering Designs . . . . . ~~3-6~~3-7
3.2.3.2 Utility Installation and Support Facilities 3-7
3.2.3.3 Road Classification 3-8
3.2.3.4 Description of Transportation Facilities. 3-8
3.2.3.5 Refuse Piles 3-9
3.2.3.6 Coal Mine Waste 3-9
3.2.3.7 Management of Mine Openings . . . . . ~~3-11~~3-12
3.2.3.8 Mine Structures and Facilities . . . . . ~~3-11~~3-12

3.2.4 Coal Handling . . . . . ~~3-12~~3-13
3.2.5 Power System . . . . . ~~3-12~~3-13
3.2.6 Water Supply . . . . . ~~3-12~~3-13
3.2.7 Sewage System . . . . . ~~3-12~~3-13
3.2.8 Water Diversion Structures . . . . . ~~3-13~~3-14
3.2.9 Sedimentation Control Structures and Water Treatment Facilities . . . . . ~~3-13~~3-14
3.2.10 Transportation, Roads, Parking Area, Railroad Spurs . . . . . ~~3-13~~3-14
3.2.11 Total Area for Surface Disturbance During Permit Term . . . . . ~~3-13~~3-14
3.2.12 Additional Areas for Surface Disturbances for Life of Mine . . . . . ~~3-13~~3-14
3.2.13 Detailed Construction Schedule . . . . . ~~3-13~~3-14

3.3 Operation Plan . . . . . ~~3-13~~3-14

3.3.1 Mining Plans . . . . . ~~3-14~~3-15

3.3.1.1 Orientation and Multiple Seam Considerations . . . . . ~~3-15~~3-16
3.3.1.2 Portals, Shafts, and Slopes . . . . . ~~3-15~~3-16
3.3.1.3 Mining Methods, Room and Pillar, Longwall . . . . . ~~3-15~~3-16
3.3.1.4 Projected Mine Development, Mains, Submains, Panels, Etc. . . . . ~~3-16~~3-17
3.3.1.5 Retreat Mining . . . . . ~~3-16~~3-17
3.3.1.6 Roof Control, Ventilation, Water Systems, Dust Suppression, Dewatering, Electrical . . . . . ~~3-16~~3-17

3.3.2 Barrier Pillars . . . . . ~~3-16~~3-17

3.3.2.1 Protection of Oil and Gas Wells . . . . . ~~3-16~~3-17

TABLE OF CONTENTS (Continued)

Section — Page

3.3.2.2 Protection of Surface Structures and Streams . . . . . ~~3-16~~3-17
3.3.2.3 Property Boundaries . . . . . ~~3-17~~3-18
3.3.2.4 Outcrop Protection . . . . . ~~3-17~~3-18
3.3.2.5 Other . . . . . ~~3-17~~3-18
3.3.2.6 Underground Development Waste . . . . . ~~3-17~~3-18
3.3.2.7 Return of Coal Processing Waste to Underground . . . . . ~~3-17~~3-18

3.3.3 Conservation of Coal Resources . . . . . ~~3-17~~3-18

3.3.3.1 Projected Maximum Recovery . . . . . ~~3-18~~3-19
3.3.3.2 Justification for Non-Recovery . . . . . ~~3-18~~3-19
3.3.3.3 Access for Future Reserves . . . . . ~~3-18~~3-19

3.3.4 Equipment Selection . . . . . ~~3-18~~3-19

3.3.5 Mine Safety, Fire Protection, and Security . . . . . ~~3-19~~3-20

3.3.5.1 Signs . . . . . ~~3-19~~3-20
3.3.5.2 Fences and Gates . . . . . ~~3-20~~3-21
3.3.5.3 Fire Protection . . . . . ~~3-20~~3-21
3.3.5.4 Explosives . . . . . ~~3-23~~3-24
3.3.5.5 Management of Mine Openings . . . . . ~~3-23~~3-24

3.3.6 Operations Schedule . . . . . ~~3-24~~3-25

3.3.6.1 Annual Production Per Year for Permit Term . . . . . ~~3-24~~3-25
3.3.6.2 Operations Schedule - Day - Shifts . . . . . ~~3-24~~3-25
3.3.6.3 Operation Employment . . . . . ~~3-24~~3-25
3.3.6.4 Temporary Cessation . . . . . ~~3-24~~3-25

3.3.7 Mine Permit Area . . . . . ~~3-24~~3-25

3.3.7.1 Acreage and Delineation of Mine Permit Area . . . . . ~~3-24~~3-25
3.3.7.2 Projected Mining by Year . . . . . ~~3-24~~3-25

3.3.8 Mine Plan Area . . . . . ~~3-24~~3-25

3.4 Environmental Protection . . . . . ~~3-24~~3-25

3.4.1 Preservation of Land Use . . . . . ~~3-24~~3-25

3.4.1.1 Projected Impacts of Mining on Current and Future Land-Use . . . . . ~~3-25~~3-26
3.4.1.2 Control Measures to Mitigate Impacts . . . . . ~~3-25~~3-26

TABLE OF CONTENTS (Continued)

Section — Page

3.4.2 Protection of Human Values 3-25 3-26

3.4.2.1 Projected Impacts of Mining on Human Values 3-25 3-26

3.4.3 Protection of Hydrologic Balance 3-25 3-26

3.4.3.1 Trojected Impact of Mining on Hydrologic Balance 3-25 3-26
3.4.3.2 Control Measures to Mitigate Impacts and Monitoring Procedures 3-26 3-27

3.4.4 Preservation of Soil Resources and Projected Impacts of Mining on Soil Resources 3-26 3-27

3.4.4.1 Control Measures to Mitigate Impact to Soil Resources 3-26 3-27

3.4.5 Protection of Vegetative Resources 3-26 3-27

3.4.5.1 Projected Impact of Mining on Vegetative Resources 3-26 3-27
3.4.5.2 Mitigation Measures to be Employed to Reduce Impacts on Vegetative Resources 3-27 3-28
3.4.5.3 Monitoring Procedures - Reference Areas and Revegetation 3-27 3-28

3.4.6 Protection of Fish and Wildlife 3-27 3-28

3.4.6.1 Potential Impacts on Fish and Wildlife 3-27 3-28
3.4.6.2 Mitigation and Management Plans 3-27 3-28
3.4.6.3 Fish and Wildlife Monitoring 3-27 3-28

3.4.7 Protection of Air Quality 3-27 3-28

3.4.8 Subsidence Control and Monitoring Plan 3-27 3-28

3.4.8.1 Structures 3-27 3-28
3.4.8.2 Renewable Resources 3-27 3-28
3.4.8.3 Geologic Hazards 3-28 3-29
3.4.8.4 Subsidence 3-28 3-29
3.4.8.5 Subsidence Control and Monitoring Plan 3-29 3-30

3.5 Reclamation Plan 3-31 3-32

3.5.1 Contemporaneous Reclamation 3-31 3-32
3.5.2 Soil Removal and Storage 3-31 3-32
3.5.3 Final Abandonment 3-31 3-32

TABLE OF CONTENTS (Continued)

Section — Page

3.5.3.1 Sealing of Mine Openings . . . . . ~~3-31~~3-32
3.5.3.2 Removal of Surface Structures . . . . . ~~3-32~~3-33
3.5.3.3 Disposition of Dams, Ponds, and Diversions . . . . . ~~3-35~~3-36

3.5.4 Backfilling and Grading Plans . . . . . ~~3-35~~3-36

3.5.4.1 Removal or Reduction of Highwalls . . . . . ~~3-37~~3-39
3.5.4.2 Recontouring . . . . . ~~3-38~~3-39
3.5.4.3 Fencing and Erosion Control . . . . . ~~3-38~~3-39
3.5.4.4 Soil Redistribution and Stabilization . . . . . ~~3-38~~3-39

3.5.5 Revegetation Plan . . . . . ~~3-38~~3-39

3.5.5.1 Soil Preparation . . . . . ~~3-38~~3-39
3.5.5.2 Seeding . . . . . ~~3-38~~3-40
3.5.5.3 Mulching . . . . . ~~3-40~~3-41
3.5.5.4 Reclamation Management . . . . . ~~3-40~~3-41
3.5.5.5 Revegetation Monitoring . . . . . ~~3-40~~3-41
3.5.5.6 Establishment of Wildlife Habitat . . . . . ~~3-40~~3-41

3.5.6 Reclamation Monitoring . . . . . ~~3-47~~3-48

3.5.7 Schedule of Reclamation for Horizon Mine . . . . . ~~3-47~~3-48

3.5.7.1 Timetable For Completion of Major Reclamation Processes . . . . . ~~3-47~~3-48

3.5.8 Cost Estimate for Final Reclamation . . . . . ~~3-47~~3-48

LIST OF TABLES

TABLE 3-1 CUT AND FILL CALCULATIONS (RECLAMATION PHASE) . . . . . ~~3-36~~3-37
TABLE 3-2 RECLAMATION SEED MIX #1 . . . . . ~~3-41~~
~~TABLE~~ 3-42
TABLE 3-3 RECLAMATION SEED MIX #2 3-43
TABLE 3-4 RECLAMATION TIMETABLE . . . . . ~~3-48~~3-50

LIST OF FIGURES

FIGURE ~~3-1 OLD MINE WORKINGS CASTLEGATE A SEAM~~ . . . . . ~~3-2~~
~~FIGURE 3-2 OLD MINE WORKINGS HIAWATHA SEAM~~ . . . . . ~~3-3~~
~~FIGURE~~ 3-3 MINE IDENTIFICATION SIGN . . . . . ~~3-21~~
3-22

LIST OF FIGURES (Continued)

FIGURE 3-4 IDENTIFICATION SIGNS 3-23
FIGURE 3-5 SUBSIDENCE/SEAM THICKNESS RATIOS (FROM DUNRUD, 1980) ~~3-30~~3-31
FIGURE 3-6 TYPICAL PORTAL SEALING . . . . . ~~3-33~~
3-34
FIGURE 3-7 TYPICAL PORTAL BLOCK SEAL 3-35

LIST OF PLATES

PLATE 3-1 SURFACE FACILITIES
PLATE 3-2 PREMINING AND OPERATIONAL CROSS SECTIONS
PLATE 3-3 ~~FIVE YEAR MINE PLAN~~MINE PLAN AND SUBSIDENCE MONITORING POINTS
PLATE 3-4 ACCESS AND HAULAGE ROAD DESIGN
PLATE 3-4A ANCILLARY ROAD TYPICAL SECTION
PLATE 3-5 SUBSIDENCE MONITORING PLAN
PLATE 3-6 PREMINING TOPOGRAPHY
PLATE 3-7 RECLAMATION TOPOGRAPHY
PLATE 3-7A POST MINING AND OPERATIONAL CROSS SECTIONS
PLATE 3-8 SWEETS CANYON POND UTILITIES
PLATE 3-9 OLD WORKINGS CASTLEGATE A SEAM
PLATE 3-10 OLD WORKINGS HIAWATHA SEAM

LIST OF APPENDICES

APPENDIX 3-1 ROAD AND HAULAGE LETTERS
APPENDIX 3-2 PILLAR EXTRACTION
APPENDIX 3-3 STATIC SAFETY FACTOR CALCULATIONS
APPENDIX 3-4 ROCK STRENGTH ANALYSES
APPENDIX 3-5 WATER RIGHTS
APPENDIX 3-6 UPDES PERMIT
APPENDIX 3-7 RECLAMATION BOND ESTIMATE
APPENDIX 3-8 LOCATIONS OF BURIED COAL WASTE
APPENDIX 3-9 UC-3 CULVERT EXTENSION
APPENDIX 3-10 ASTM COAL CLASSIFICATIONS
APPENDIX 3-11 BLM APPROVAL OF R2P2

CHAPTER 3

OPERATION AND RECLAMATION PLAN

3.1 Scope

This chapter outlines the scope of operation and reclamation for the Horizon Mine. The proposed coal mining and reclamation activities will be conducted in compliance with the operation and reclamation plans.

3.2 Surface Facilities Construction Plans

The Horizon surface facilities will be located in Jewkes Creek Canyon and Portal Canyon (see Plates 1-1 and 3-1).

Cross Sections and Maps

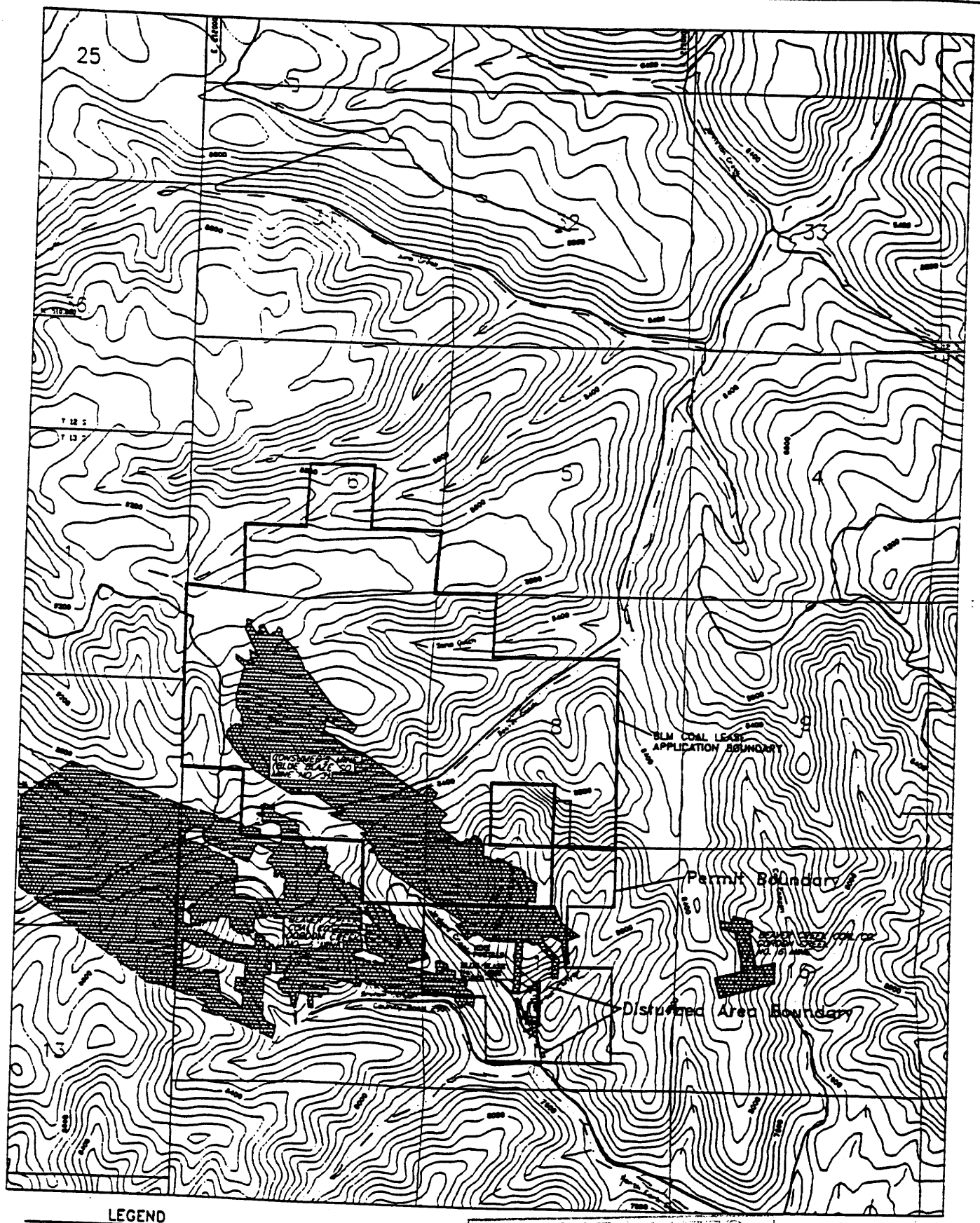
Previously Mined Areas. ~~Figures~~Plates 3-1 and 3-2 show the location and extent of known workings of active, inactive, or abandoned underground workings, including openings to the surface, within the permit and adjacent areas. Also areas within these mines that have been second mined. No previously surface-mined areas are known to exist within the permit area.

The general area in the vicinity of the Horizon Mine has long been used for coal mining. Four underground operations were formerly located on or within a short distance of the permit area. These mines were the Consumers, Sweets, National, and Beaver Creek Mines. Sweets, National, and Consumers were active from the late 1920s to the early 1950s and are presently closed. The Beaver Creek Mine was opened in 1969 and operated originally under the name of the Gordon Creek No. 3 Mine. The mine was purchased by General Exploration Co. in 1973 and then again by Beaver Creek Coal Company in January 1980. Much of the area to be occupied by the surface facilities has been disturbed by previous mining operations, with most of the major disturbances in this area occurring prior to 1950.

Existing Surface and Subsurface Facilities and Features. Other than the surface facilities directly associated with the Horizon Mine, no buildings are located in and within 1000 feet of the permit area. Furthermore, no major electric transmission lines, pipelines, or agricultural drainage tile fields exist within, passing through, or passing over the permit area.

Prior to construction of the Horizon Mine surface facilities, a public road, and some old concrete foundations existed within the current disturbed area. However, no intact buildings were present within the current disturbed area.

Landowner, Right-of-Entry, and Public Interest. ~~Figures~~Plates 4-1 and 4-2 of Chapter 4 show the boundaries of lands and the names of present owners of record of surface lands and subsurface coal, respectively, included in or contiguous to the permit area. Horizon has a legal right to enter and conduct coal mining operations on all of the lands within the permit area, as noted in Chapter 2 of this M&RP and the Appendices 2-1 and 2-3.



LEGEND

Previously Mined Areas

Improved Gravel Roads

Unimproved Roads

Jeep Trails

Streams

INCORPORATED
EFFECTIVE: 9/9/13

Utah Division Oil, Gas And Mining

N

APPROXIMATE SCALE

REVISION	
DATE	BY

FIGURE 3-1

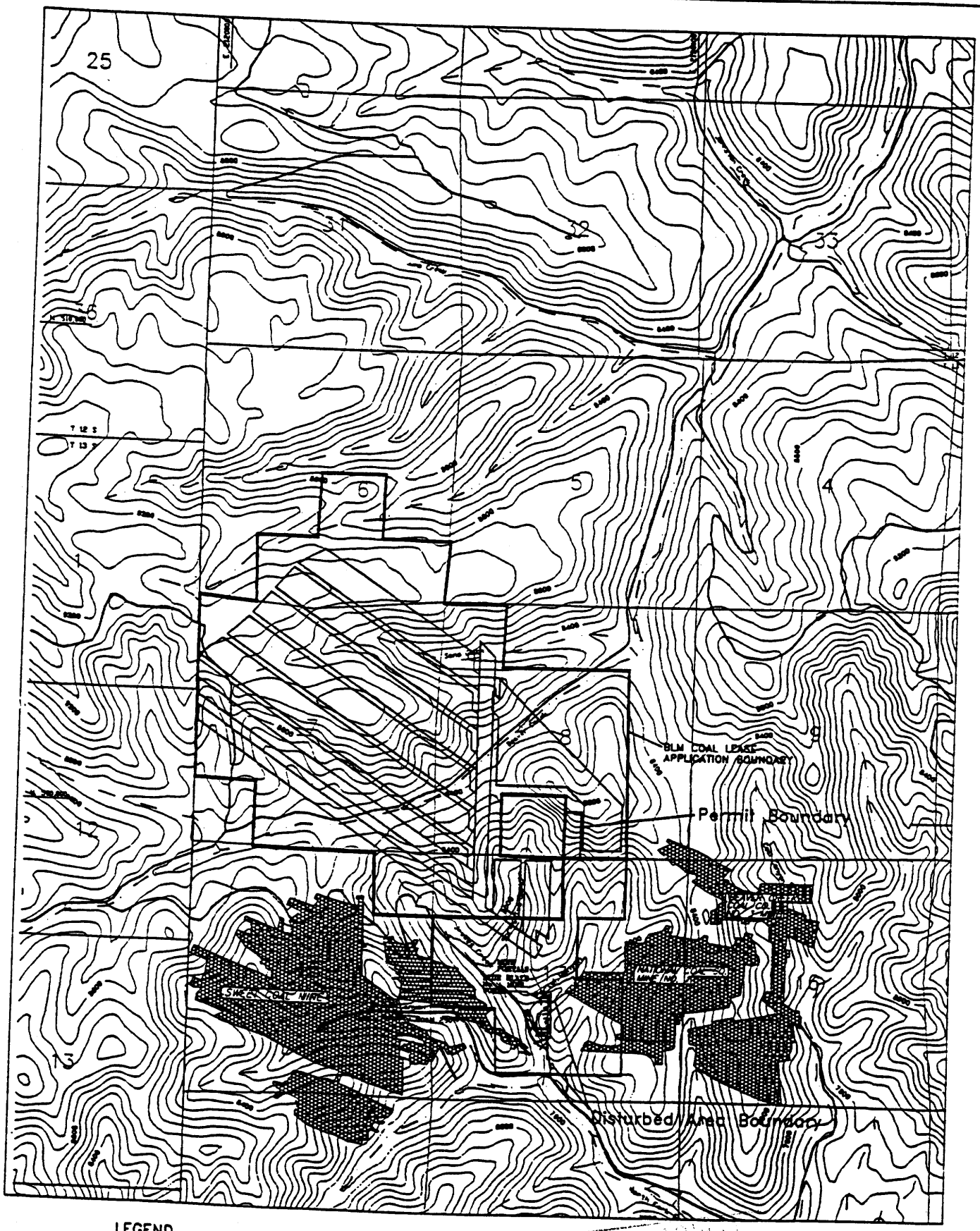
OLD WORKINGS
CASTLEGATE A SEAM

HORIZON No. 1 MINE

HORIZON COAL CORPORATION
P.O. BOX 2560
WISE, VIRGINIA 24273

BOURQUIN MINERAL ENGINEERING
EARTHFAX ENGINEERING, INC.

Replace with Plate 3-9



LEGEND

- Previously Mined Areas
- Improved Gravel Roads
- Unimproved Roads
- Jeep Trails
- Streams

N

APPROXIMATE SCALE

Replace with Plate 3-10

		FIGURE 3-2
		OLD WORKINGS HIAWATHA SEAM
		HORIZON No. 1 MINE
		HORIZON COAL CORPORATION P.O. BOX 2560 WISE, VIRGINIA 24273
		BOURQUIN MINERAL ENGINEERING EARTHVAX ENGINEERING, INC.

Mining Sequence and Planned Subsidence. The mine plan for the Horizon Mine is presented on Plate 3-3. No surface disturbances are currently anticipated within the permit area beyond that presented in this M&RP (i.e., within the disturbed-area boundary noted on Plate 3-1). Planned-subsidence mining methods will be used in all of the underground mine workings shown on Plate 3-3. A buffer zone of one hundred feet is planned along the Beaver Creek where no subsidence is planned. A line delineating the angle of draw from subsidence is shown on Plate 3-3. No subsidence causing mining methods will be practiced in the area between the angle of draw line and the Beaver Creek.

Subsidence Protection. The Beaver Creek is a perennial stream. Subsidence protection is planned for this stream. This protection will be accomplished by developing pillar centers on no less than seventy foot centers (70 foot by 70 foot undeveloped pillar projections) by driving twenty foot wide entries a fifty foot square pillar will remain. This calculates to an extraction ratio of approximately fifty percent by area. The remaining support coal should never be less than 48%.

If support pillars have been developed on larger than seventy foot centers, secondary extraction(i.e. slabbing) may be practiced. In all instances the coal pillar remaining will be at least fifty percent of the developed centers. There will not be any full extraction of coal pillars in the 100 foot buffer zone and the area delineated by the angle of draw line and the Beaver Creek.

Land Surface Configuration. Surface contours of undisturbed areas adjacent to disturbed areas associated with the mine are shown on Plate 3-1. As previously stated, surface disturbances associated with mining have been in existence in the area since the mid-1920s. As a result, pre-mining topographic maps do not exist. However, the surface contours in undisturbed areas shown on Plate 3-1 are considered generally indicative of original land slopes in the vicinity of the mine.

A map showing topographic conditions prior to disturbance by Horizon is provided as Plate 3-6.

Certification. Where required by the regulations, cross sections and maps in this permit application have been prepared by or under the direction of, and certified by, qualified registered professional engineers or land surveyors. As appropriate, these persons were assisted by experts in the fields of hydrology, geology, biology, etc.

Previously Mined Areas. A certified map showing the location of previously mined areas within the permit and adjacent areas is provided as ~~Figures 3-1~~Plates 3-9 and ~~3-2~~3-10.

3.2.1 Site Selection and Preparation

Roads and pads that will be constructed in support of the mine will be constructed with a cut and fill technique. Topsoil resources will be conserved as outlined in Chapter 8. The surface facilities will be on privately owned surface.

3.2.2 Mine Portals

See Section 3.3.1.2 for mine portal descriptions. Portal locations are noted on Plate 3-1.

3.2.3 Surface Buildings and Structures

Locations of proposed surface buildings and structures are shown on Plate 3-1. Upon termination of mining operations, all structures will be removed and the area reclaimed as outlined in Section 3.5.

Surface Facilities. Plate 3-1 shows the locations of the following surface facilities:

- Buildings, utility corridors, and facilities to be used, including:

  Water Tank - one metal tank on concrete pad,
  Fueling Station - metal tank and containment structure with fueling equipment,
  Storage Building - portable building, to be used above ground or underground,
  Transformer - portable, to be used above ground or underground,
  Portals - see Section 3.3.1.2,
  Conveyor - see subsequent portions of this Section,
  Fan - metal structure containing a fan,
  Substation - metal structure sitting on gravel and concrete pad,
  Roads - see Section 3.2.3.300,
  Sedimentation Pond - see Chapter 7,
  Temporary Office Trailer - mobile trailer,
  Proposed Office and Bath House - block and/or metal building on concrete pad,
  Proposed Shop - block and/or metal building on concrete pad,
  Parking Areas - soil pads,
  Storage Areas - soil pads,
  Proposed Crusher and Screen - metal structure on concrete pad/footings,
  Emergency Escapeway - corrugated metal,
  Dumpster(s) - metal, contractor owned,

- The area of disturbance at the mine mouth,

- Coal storage and loading facilities, and

- The explosive storage and handling facility, which includes approved explosive magazine(s).

Drainage facilities are shown on Plate 7-4, including the site sedimentation pond, culverts, and ditches.

Cross sections of the surface facilities are provided on Plate 3-2. The disturbed area shown on Plate 3-1 is the same as the land area for which a performance bond or other guarantee has been posted.

Transportation Facilities. Roads that have been constructed, used, or maintained by Horizon in the permit area for the mining and reclamation operations are shown on Plate 3-1. No rail systems or overland conveyor systems (other than the material-handling conveyors in the mine yard) will

be associated with the permit area. Drainage structures associated with the roads are discussed in Chapter 7 of this M&RP. Typical cross sections of the primary roads are provided on Plate 3-4.

Two material handling conveyors exist on the surface at the mine site. As noted on Plate 3-1, the mine belt will transport coal from the mine to the stacker belt which will convey the coal to the coal stockpile/coal storage area, from which the coal will be loaded into trucks for off-site transport. These conveyors will be of sufficient size to handle the production levels coming from the mine and the anticipated truck loading rates.

The ash analyzer determines the potential quantity of ash content in coal passing through the conveyor. The analyzer relays a signal to a computerized conveyor system. The conveyor system controls three coal drops chutes, either allowing coal to be dropped in one, two, or three stockpile locations within the disturbed area boundary. The location of the drops and analyzer are shown on Plate 3-1.

Surface Facilities. Underground development waste which is generated at the Horizon Mine will be disposed of underground within the Horizon Mine prior to bringing the waste to the surface.

Should it become necessary to bring underground development waste to the surface, a permanent stockpile will be permitted.

A map of the existing topography prior to disturbance by Horizon is provided as Plate 3-6. No areas of pre-Horizon disturbance shown on Plate 3-6 are subject to the requirements of R645-200 through R645-203.

The location of the sedimentation pond is noted on Plate 3-1. No water treatment facilities will exist at the site other than the sedimentation pond.

The following facilities or activities will not exist or occur within the permit area:

- Coal preparation plant,
- Coal cleaning,
- Coal processing waste banks, dams, or embankments,
- Disposal of non-coal (non-waste rock) waste other than durable rock-type construction materials such as cinder block, and
- Air pollution control facilities.

Hence, certified maps or cross sections of these facilities are not provided in this plan. The durable rock-type construction materials will be disposed of in underground workings within the Horizon Mine without bringing this waste to the surface or at a permitted off-site solid-waste landfill.

Surface Configurations. Certified maps and cross sections showing the proposed final (post-reclamation) surface configuration of the Horizon disturbed area are provided on Plates 3-7 and 3-7A, respectively.

3.2.3.100 Plans and Engineering Designs

All plans and engineering designs presented in this M&RP were prepared by or under the direction of and certified by a qualified registered professional engineer.

Excess Spoil. No excess spoil (R645-100-200)will be generated from the permit area.

Durable Rock Fills. No durable rock fills will exist in the permit area.

Coal Mine Waste. No coal mine waste disposal facilities will exist on the surface in the permit area.

Impoundments. The only impoundment to be constructed for the mining and reclamation operation will consist of the sedimentation pond (see Plate 3-1 and Chapter 7). This impoundment has been designed under the direction of a professional engineer using current, prudent, engineering practices. These designs were certified by a qualified registered professional engineer.

Primary Roads. The design and construction of the primary roads associated with the mine have been certified by a professional engineer as meeting the requirements of R645-301-534.200 and R645-301-742.420 (see Plate 3-4).

Variance From Approximate Original Contour. No variance from the approximate original contour requirements of the regulations is being requested in this M&RP.

3.2.3.200 Utility Installation and Support Facilities

Utility Installations. All coal mining and reclamation operations will be conducted to minimize damage, destruction, or disruption of services provided by electric lines, telephone transmission stations, water lines, and sewer lines which pass over, under, or through the permit area. Areas where these utilities will be located are within non-subsidence zones. No other utility installations exist in the permit area. All utility installations associated with the Horizon Mine will be removed following mining in accordance with the reclamation plan discussed in Section 3.5 of this M&RP.

Support Facilities. Support facilities at the Horizon Mine will be operated in accordance with the permit issued for the mine. Support facilities will be located, maintained, and used in a manner that:

- Prevents or controls erosion and siltation, water pollution, and damage to public or private property;
- To the extent possible, using the best technology currently available, minimizes damage to fish, wildlife, and related environmental values; and

- Minimizes additional contributions of suspended solids to stream flow or runoff outside the permit area.

All support facilities will be removed following mining in accordance with the reclamation plan discussed in Section 3.5 of this M&RP.

Water Pollution Control Facilities. Water pollution control facilities at the Horizon Mine consist of the sedimentation pond and the appurtenant structures associated with the sedimentation pond. All water pollution control facilities will be removed following mining in accordance with the reclamation plan discussed in Section 3.5 of this M&RP. The sedimentation pond and appurtenant structures were constructed as discussed in Chapter 7.

3.2.3.300 Road Classification

Primary roads within the disturbed area include the lower haul road loop and the upper pad road. No ancillary roads exist within the disturbed area. The locations of these roads are shown on Plates 3-1 and 3-4. Typical cross sections representing these roads are shown on Plate 3-4.

The unimproved dirt roads outside of the disturbed area but within the permit area will not be classified. They may be used by Horizon for access to the lease area surfaces for the collection of monitoring data (environmental and subsidence data) as well as other uses deemed appropriate by Horizon and as allowed by the associated landowner.

3.2.3.400 Description of Transportation Facilities

No surface conveyors (other than those in the mine yard immediately adjacent to the portals) or rail systems will be constructed, used, or maintained within the permit area. A description of the conveyor systems that will be used in the mine yard is provided in this M&RP.

Road Specifications. Cross sections of roads that will be used or maintained by Horizon are provided on Plate 3-4. This plate provides information regarding road widths, gradients, surfaces, etc. Information regarding road drainage structures is presented in Chapter 7.

The road which will access the mine is the Beaver Creek county road that extends from Consumers Road to the town of Clear Creek. Letters from Carbon County regarding the use of both Beaver Creek Road and Consumers Road are provided in Appendix 3-1. As indicated in this appendix, these roads will be maintained by Carbon. Carbon County has determined that "the interests of the public and affected landowners will be protected" even though mining and reclamation activities are planned within 100 feet of the road.

From the southern boundary of the permit area, the Consumers Road extends eastward approximately 11.5 miles, ending at U.S. Highway 6 south of Helper. The western 8.5 miles of Consumers Road between the permit area and U.S. Highway 6 is gravel surfaced, while the eastern 3 miles is paved.

Drainageway Alterations. Alterations of Jewkes Creek and Portal Canyon creek were installed to accommodate the needs of facility pads and transportation systems. These alterations consisted

of installation of culverts beneath the pad areas along both creeks. Additional information regarding the design of these culverts is presented in Chapter 7 of this M&RP.

Installation of these culverts provided several advantages, including: allowing coal haulage trucks to efficiently enter and leave the surface facilities area, protecting the streams from coal fines and sediment which may be generated on the adjacent disturbed areas, providing space for equipment and material storage, and providing a location for snow to be stacked away from the operations area during winter months. Snow is to be stored in sites that will drain directly to the sedimentation pond.

Carbon County upgraded Beaver Creek County Road during a time that was coincident with the construction of the Horizon Mine surface facilities. The county deemed this upgrade necessary to accommodate not only the anticipated traffic at the mine, but also the logging and ranching operations up the canyon that were not associated with mining. To accommodate this upgrade, the County realigned the lower reach of Jewkes Creek, between the mine and Consumers Road. This alteration of Jewkes Creek was implemented by Carbon County, Hidden Splendor Resources and was not the responsibility of Horizon.

Road Maintenance. Beaver Creek Road which accesses the disturbed area is owned and will be maintained by Carbon County. In the event of a catastrophic event that causes damage to Beaver Creek Road or Consumers Road, Horizon will cooperate with the County to promote rapid repair of the affected road as soon as practical following the catastrophic damage. For all primary roads within the permit area that are not owned by the county, Horizon will itself repair the road (or cause it to be repaired) as soon as practical following the catastrophic damage.

The roads within the surface-facilities area will be maintained by Horizon as necessary to permit access to the respective facilities. The remaining roads in the permit area are unimproved dirt roads. Horizon will cooperate with and assist the respective land or right-of-way owners in the maintenance of these roads as required to permit access for environmental monitoring and subsidence surveying.

3.2.3.500 Refuse Piles

No refuse piles will exist in the permit area.

3.2.3.600 Coal Mine Waste

Coal mine waste resulting from mining activities at the Horizon Mine will be handled as outlined in this section and previously in this M&RP.

Waste Emplacement. Underground Development Waste (UNDW) will be disposed of in underground workings.

Excess Spoil Fills. No excess spoil (R645-100-200) fills will exist in the permit area.

Impounding Structures Constructed of Coal Mine Waste. No impounding structures will be constructed of coal mine waste in the permit area.

Disposal of Coal Mine Waste in Special Areas. As indicated previously, coal mine underground development waste generated at the Horizon Mine will be disposed of in underground workings within the permit area. MSHA inspectors have verified the storage of underground development waste meet safety requirements per 30 CFR 75.304, 305, 329, 330, 400, and 1711 and will inspect future storage. The source of this material will be UNDW resulting from partings and splits in the coal seam. As indicated in Chapter 6, neither acid- nor toxic-forming materials are present in the overburden, underburden, or coal (i.e., the material that will comprise the UNDW that will be generated from the Horizon Mine).
The UNDW which will be stowed underground will be backfilled into dead-end panels primarily near the outer extent of the area to be mined. Backfilling will occur prior to second mining to ensure that adequate roof support exists in the area. No influence on the active mining operation is anticipated from the backfilling process.

The underground development waste to be disposed of underground will be transported to the backfill area by mine haulage equipment and will be in an unsaturated condition. Hence, underground retaining walls to prevent seepage of the material into the mine workings will not be necessary.

After second mining, the roof will collapse, causing the UNDW rock in the mine to compact. Because the UNDW will be emplaced primarily in dead-end panels near the outer extent of the area to be mined, the surface effect of the backfilling operation will be to reduce the surface expression of subsidence in an area where subsidence will already be minimal. Hence, subsidence over the permit area in general will still occur uniformly.

As noted previously, the UNDW will be emplaced in an unsaturated condition using mine haulage equipment. Hydraulic transport media will not be used to emplace the material. As a result, the UNDW will not require dewatering, construction of barriers to retain water underground which might drain from the waste, or treatment of water from the waste which might be discharge to surface streams. Hence, no impacts on the hydrologic regime are anticipated due to disposal of the underground development waste in the underground workings.

Underground Development Waste. No underground development waste will be disposed of on the surface in the permit area.

Coal Processing Waste. No coal processing waste will be generated within the permit area.

Coal Processing Waste Banks, Dams, and Embankments. No coal processing waste banks, dams, or embankments will exist within the permit area.

Refuse Piles. No coal mine waste will be disposed of on the surface in the permit area.

Sediment Pond and Ditch Clean-out Material. Materials removed during the cleaning of both the surface ditches and the sediment pond will be placed in the areas designated on Plate 3-1 or disposed of at a State-approved solid waste disposal area. The materials associated with the clean-out should be clean and not degrade surface or underground water. Collectively the designated areas will store approximately 260 cubic yards. If the need arises, the clean-out

material will be sampled and tested according to R645-301-233 and if found acceptable will be used as substitute topsoil or fill material.

The material stockpile behind the substation will contain 150 cubic yards and the stockpile behind the fan will contain 110 cubic yards. The stockpiles will have 2:1 slopes and the material in the stockpiles will be seeded in the Fall of 2000.

The material will be routinely compacted and a berm will be constructed around the perimeter of the pile to retain the soil within the storage area. Operation of the storage site will be conducted in accordance with all Utah and Federal Regulations

The Sediment Pond has been designed and certified and the pond will be cleaned out as discussed in Chapter 7.

3.2.3.7 Management of Mine Openings

Locations of the Hiawatha seam portals are shown on Plate 3-1. One of these openings serves as primary pathway for ingress and egress of personnel and machinery, one serves as a beltway for removal of coal from the mine, and one is used for mine ventilation.

Each underground mine opening will be protected from deterioration through the installation of steel sets and timbers. Concrete and liner plate steel may also be used.

Any portals which become temporarily inactive in the permit area, but have a further projected useful service, will be protected through the installation of a lockable chain-link gate to prevent unauthorized entry. Warning signs will be posted to identify the hazardous nature of the opening. These protection and warning devices will be periodically inspected and maintained in good operating condition during the period of temporary inactivity.

3.2.3.8 Mine Structures and Facilities

Pre-Existing Structures. No intact buildings existed within the current disturbed area at the mine surface at the time construction was begun on the Horizon Mine.

As indicated on Plate 3-1, the Beaver Creek county road extending from Consumers Road to the town of Clear Creek (i.e., Beaver Creek Road) runs along the west edge of the disturbed area. Those operations to be conducted within 100 feet of this public road include construction and operation of the sedimentation pond, storage and loading of coal for off-site transport, and storage of materials, snow, or equipment. The owners of the land adjacent to the disturbed area is Hidden Splendor Resources (see Figure 4-1). The interests of the public and the landowners will be protected by:

- Complying with the requirements of the surface land lease.
- Conducting the mining and reclamation operations in compliance with the permit issued by the State of Utah.
- Maintaining a berm along the west edge of the sedimentation pond to minimize the potential for inadvertent entry into the pond.

Mine-Related Structures. Generally, all mine surface facilities are located within or in close proximity to the associated operations areas. Future building construction will generally involve grading and preparation of foundation areas, excavation and installation of foundations, building erection, interior and exterior finish work, and connection of utilities. Storage areas will generally be open graded, providing outside storage for large supplies. Both building sites and storage areas will be graded to ensure effective drainage to disturbed-area ditches and culverts as noted on Plate 7-5. Operation and maintenance of support structures and facilities at the Horizon Mine will involve regular grading of facility areas, together with inspection, cleaning, and repairs as required.

General refuse that is generated on site will be stored in a dumpster(s) to be situated at a convenient location within the disturbed area. This waste will consist predominantly of old brattice

cloth, ventilation tubing, broken timbers, wire, broken machinery parts, paper, cardboard, and miscellaneous garbage. This non-hazardous, non-toxic, non-coal, non-waste rock refuse will be disposed of periodically through Carbon County at a state-approved landfill.

During site construction, operation, and reclamation activities, any spilled petroleum products such as grease, hydraulic fluid, fuel, oil, joint coating, or other pollutants will be removed immediately with the associated contaminated soil and disposed of at a state-approved facility that is permitted to receive such waste. Adequate spill collection materials (including absorbents to stop or contain contaminants that may enter a stream) will be readily available at the site during these activities to contain any such spills.

During construction and other activities at the site, wet concrete will not be allowed to enter or come into contact with stream flows. Any water at the site which is contaminated with wet concrete or other contaminants will not be discharged into stream channels. Concrete trucks and other equipment used in the mixing and placement of concrete will be washed in areas well away from stream channels.

3.2.4 Coal Handling

Coal will be brought out of the mine by conveyor. The coal stream passes under an ash analyzer to determine the potential quantity of ash content of the mined coal. The surface conveyor system consists of three (3) drop points. Points #1 and #3 are manual and Point #2 is controlled by a computerized signal from the ash analyzer. The coal flow can be dropped at Points 1, 2 or 3 at the stockpile locations within the disturbed area boundary. The coal discharged into the stockpile will be blended by the use of a front-end loader by bucket loads or by the stacking belt into the trucks. The location of the drops and the ash analyzer are shown on Plate 3-1.

3.2.5 Power System

The power obtained from Utah Power and Light Company will reach Portal Canyon substation by way of a transmission line which runs along County Road 290 then along Jewkes Canyon on the east side to the substation. The location of the power line and substation are shown on Plate 3-1. See Chapter 10 for a discussion of raptor safe power lines.

3.2.6 Water Supply

Water for non-culinary use will be stored in a tank/pond within the disturbed area.

3.2.7 Sewage System

Chemical toilets will be used during initial development, construction, and operation of the mine. A service contract will be entered for maintenance of the chemical toilets and disposal of waste therefrom. Additional sewage facilities required for normal operation of the mine (after development) will be designed in accordance with UDH regulations. Plans for sewage facilities will be submitted for review and approval by UDH prior to construction of said facilities. It is anticipated that sewage facilities will consist of a collection system and holding tank.

3.2.8 Water Diversion Structures

Diversions will be installed to direct disturbed-area runoff to sediment-control structures and/or facilities. Runoff from undisturbed areas will be diverted away from the disturbed areas to the extent practical. Detailed discussions of the design of diversion structures are provided in Chapter 7.

3.2.9 Sedimentation Control Structures and Water Treatment Facilities

All runoff from the disturbed area is directed into the sedimentation pond located directly below the area of disturbance. The pond has been designed to contain runoff resulting from the 10-year, 24-hour precipitation event. The pond spillway has been designed to safely pass the peak flow resulting from a 25-year, 6-hour precipitation event.

The location of the pond is shown on Plate 3-1. Design, construction, maintenance and operation of the pond are discussed in detail in Section 7.2.3.2.

3.2.10 Transportation

Coal will be transported from the mine via a conveyor and discharged onto the coal storage area. Coal handling is discussed in Section 3.2.4. Transportation to and from the mine site (coal, personnel, and materials) is discussed in Sections 3.2.3.300 and 3.2.3.400.

3.2.11 Total Area for Surface Disturbance During Permit Term

See Section ~~2.112~~.117 for the acreage of the proposed surface-disturbance.

3.2.12 Additional Areas for Surface Disturbance for Life of Mine

There are no plans to disturb any additional surface area for the life of the operation beyond that to be initially disturbed.

3.2.13 Detailed Construction Schedule

Much of the area to be included in the surface facilities has been previously disturbed. Construction of the surface facilities is planned to begin when the permit is approved. Details for construction of the sediment pond are found in Chapter 7. A detailed reclamation schedule is presented in Section 3.5.

3.3 Operation Plan

In the Horizon Mine coal will be extracted using continuous miners, loaded into shuttle cars, and hauled to an underground feeder breaker. The feeder breaker will reduce the coal to an appropriate size, after which the coal will be fed onto a conveyor to be carried to the Coal from the storage pile will be loaded onto coal trucks.

Details of the groundwater monitoring program are presented in Chapter 7.

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The coal from the Horizon Mine will be sold on a run-of-mine basis, not washed. Coal of differing degrees of quality will be shipped to the coal terminal and blended to be sold. Coal to be sold by Horizon will comply with the definition in R645-100 of the State of Utah Coal Mining Rules "combutible carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite by ASTM Standard D388-95. Appendix 3-10 includes a table with ASTM classifications and their corresponding characteristics.

Underground development waste and coal mine waste are discussed in Section 3.2.3. No impacts on the hydrologic regime are anticipated due to disposal of the underground development waste in the underground workings.

No underground development waste will be brought to the surface or will haulage occur from the Horizon Mine until the specific on or off-site facility has been approved by the Division to accept the underground development waste from the Horizon Mine.

3.3.1 Mining Plans

All mining and reclamation operations will be conducted in accordance with the approved permit and the requirements of R645-301-510 through R645-301-553.

Mining plans for the term of the proposed permit are shown on Plate 3-3. This map and ~~Figures 3-1~~Plates 3-9 and ~~3-2~~3-10 show the location and extent of known, existing, adjacent workings as well as projections for mining within the Horizon Mine. Cross-sections, drill hole elevations, coal seam and overburden stratigraphy, and other geologic data are addressed in Chapter 6. A mine workings map will be kept current from the time of opening. These updated maps will be supplied to the Division yearly or when requested.

Horizon plans to mine coal from coal lands that are a combination of fee simple and federal coal leases. Horizon controls the fee simple land under a mining lease with Hidden Splendor Resources, Ltd. Two actions have been filed with the U.S. Department of Interior, Bureau of Land Management (BLM) to secure mining rights on federal coal lands within Horizon's projected mine plan. The first action, a BLM right-of-way will enable Horizon to commence mining with approximately 1 year of reserves. The second action, an Application for Coal Lease will enable Horizon to lease coal reserves that will serve for years of mining.

<u>Right-of-Way Application, UPU-73227, Bureau of Land Management</u>

On June 16, 1995 Horizon filed a Right-of-Way application with the BLM. The right-of-way would allow underground access to the segmented fee simple land parcels controlled by Horizon. The BLM was prepared to issue the Right-of-Way on January 22, 1996 when Horizon asked the BLM to hold approval pending an amendment. The amendment filed on January 30, 1996 states "the results of the exploration program conducted by Horizon in the Fall of 1995 under Federal Coal Exploration License UPU-74111 have condemned the economic feasibility of mining the Castlegate seam. However, the exploration confirmed that the Hiawatha coal seam development is a feasible project. The original proposed course of the underground workings portrayed in the application applied to development of the Castlegate seam. The revised application reflects a course for the right-of-way suitable for mining the Hiawatha seam". The lands for the right-of-way are included

within the permit boundary of this Mine Permit Application. The BLM issue the Right-of-Way in April of 1996 Appendix 2-3).

Coal Lease Application UPU-74804, Bureau of Land Management

On August 16, 1995, Horizon Coal Corporation filed a Coal Lease Application at the Utah State Office of the Bureau of Land Management. The application for coal lands containing 1,288.49 acres was approved on September 1, 1998. The Beaver Creek Tract coal lease UTU-74804 is included in Appendix 2-1. The data presented in the Environmental Assessment submitted to the Bureau of Land Management is included as Appendix 2-6.

Horizon was issued a Right-of-Way through BLM lands in 1996 to facilitate mining coal from fee lands. The Right-of-Way was incorporated into the Beaver Creek Tract coal lease UTU-74804 on September 1, 1998. Horizon stipulates that it will mine only fee coal and federal coal within the approved right-of-way lease as included in the legal description in Chapter 2. Horizon projects mining on the lands in years 2 through 5 of this Mine Permit Application.

3.3.1.1 Orientation and Multiple Seam Considerations

Seam separation in the area ranges from approximately 150 feet to 230 feet. With this distance and land structure indicated by drill logs, it is considered neither necessary nor feasible to columnize these workings.

3.3.1.2 Portals, Shafts, and Slopes

There will be four portals in the Hiawatha seam. The return portal (existing rock slope) will be rehabilitated and expanded for use as the primary return. A second and third portal will be faced up and new rock slopes (300 feet long) will be driven to the Hiawatha seam. These two new slopes will serve as the belt/material slope and the fan portal respectively. The fourth portal is a rehabilitated slope used as a secondary escapeway. The secondary escapeway is located at the Castlegate A Seam horizon but connects to the Hiawatha Seam by a steeply inclined rock slope. The locations of the portals can be seen on Plate 3-1.

3.3.1.3 Mining Methods, Room and Pillar, Longwall

All mining will be done with a continuous miner/shuttle car haulage. In second-mining, a standard room-and-pillar method will be used to maximize coal recovery. Recovery within a room-and-pillar panel is estimated to be about 60 percent. Longwall mining is not planned. Pillar extraction plans are found in Appendix 3-2.

3.3.1.4 Projected Mine Development, Mains, Sub-Mains, Panels, Etc.

All entries, mains, and panels, will consist of a multiple system on various centers. Room and pillar panels will be driven off the mains. Additional rooms will be driven to widen the panels during retreat mining. Barrier pillars will be left to separate panels and mains. The mains will be pulled upon final retreat of the mining operation. Safety factors for roof conditions using uniaxial compression data are presented in Appendix 3-3.

3.3.1.5 Retreat Mining

Room and pillars are laid out so that pillar cuts can be extracted with a full cut of a continuous miner using radio remote control. The pillar is extracted with successive cuts by the continuous miner. Timbers will be installed to support the roof and provide roof breaker control. It is estimated that mining will provide a recovery rate of 60 percent.

3.3.1.6 Roof Control, Ventilation, Water Systems, Dust Suppression, Dewatering, Electrical

An approval of the Roof Control, Ventilation, and Dust Control Plans will be obtained from the appropriate regulatory agency.

An assessment of groundwater conditions within the Mine can be found in Chapter 7. Dewatering plans will be developed should it become necessary.

3.3.2 Barrier Pillars

Protective barrier pillars will be utilized where necessary, normally ranging from 100 feet to 300 feet in width, depending on the depth of cover and the purpose of the barrier. Barrier pillars will be left on either side of the main entries. Barrier pillars in the mains will be extracted on final retreat.

3.3.2.1 Protection of Oil and Gas Wells

There are no oil or gas wells in this area.

3.3.2.2 Protection of Surface Structures and Streams

No surface structures exist within the zone of potential subsidence.

Stream buffer zones (100 feet each side of creek) will be maintained beneath Beaver Creek and the North Fork of Gordon Creek should mining proceed beneath either creek. ~~Second mining~~ Full pillar extraction
will not be practiced within these buffer zones or under raptor nests without regulatory agency permission.

3.3.2.3 Property Boundaries

A protective barrier pillar with a width of approximately 80 to 100 feet will be left at all property boundaries.

3.3.2.4 Outcrop Protection

A protective barrier pillar with a width of approximately 100 feet will be left when advancing toward or along an outcrop.

3.3.2.5 Other

At any time a land slide occurs which may have an adverse effect on public property, health, safety, or the environment, the Division will be notified by the fastest available means. Horizon commits to complying with remedial measures required by the Division.

As part of the operations plan, a facilities pad will be constructed from available on-site materials. On-site materials include the embankment located at the mouth of Portal Canyon. Test pits indicate that some of the material contained in the embankment is comprised of coal and coal mine waste. It is estimated that 2500 CY of coal and coal mine waste may be contained in the embankment. This material will be removed from the embankment, placed in the facilities pad area, and covered with at least four feet of appropriate backfill material. To accomplish this task, the pad area will first be stripped of vegetation and topsoil as described in Section 8.7. The appropriate cuts of overburden will be made to achieve the rough grade. The coal and coal mine waste will then be placed in the fill areas and covered with four feet of backfill.

A potential storage volume of approximately 2740 for the coal and coal mine waste was calculated from the cross-sections illustrated on Plates 3-1 and 3-2. Appendix 3-8 contains a plate showing approximate locations of buried coal mine waste.

The Portal Canyon facilities pad will be built with 4 feet of acceptable backfill covering any coal or coal mine waste materials. No coal or coal mine waste will be used as fill in the areas planned for the reclamation stream channels in Portal or Jewkes Canyon.

3.3.2.6 Underground Development Waste

See Section 3.3.

3.3.2.7 Return of Coal Processing Waste to Underground

There is no plan to return coal processing waste to the underground.

3.3.3 Conservation of Coal Resource

The maximum quantity of coal will be extracted that is consistent with safe operation of the mine and the mining methods to be employed. Engineering, production, and supervision of mining activities will be geared toward this end. If plans for resource recovery or abandonment (including

portal sealing) change in the future, the U.S. Bureau of Land Management and the Division will be properly informed.

3.3.3.1 Projected Maximum Recovery

Coal reserves within the permit area are summarized below. Recoverable reserves were estimated using a recovery rate of 60 percent of the mineable reserve base.

Area	Hiawatha Seam (million tons)		
	Total	Mineable	Recoverable
Original Permit Boundary	1.3	1.3	0.8
~~Coal Lease Application~~2000 Revised Permit Boundary	~~12.7~~4.1	~~7.6~~2.1	~~14.0~~1.3
~~8.4~~Remaining Coal Lease UTU-74804	8.45	8.31	4.95
Total	13.85	11.71	7.05

3.3.3.2 Justification for Non-recovery

All coal that can economically and safely be recovered will be recovered. Barrier pillars and buffer zones will be left only where required to protect surface resources, provide safe mining conditions, and as required by law or regulation.

3.3.3.3 Access for Future Reserves

Access to additional reserves will depend upon the results of exploration activities and obtaining leases. However, it is currently anticipated that the mine workings contemplated by this plan will provide access to reserves in Sections 6, 7, 8, and 18, T13S R8E.

3.3.4 Equipment Selection

Major equipment to be used underground will include the following:

2 - Continuous Miner
3 - Roof Bolter RD1-43
6 - Shuttle Cars
2 - Feeder Breaker
3 - Scoop
1 - Compressor
2 - Rock Dusters
5 - Conveyor Drives & Tail Pieces
3 - Drop Chutes
1 - Ash Analyzer
1 - Dust Wagon

1 - Power Center
3 - Transformers
2 - Pumps
1 - Substation

Major equipment to be used on the surface will include the following:

1 - Grader
1 - Loader
1 - Material Tractor
1 - Welder
3 - Flatbed Material Trailers

3.3.5 Mine Safety, Fire Protection, and Security Mine Safety

The mine will be operated in accordance with Mine Safety and Health Administration (MSHA) and applicable State of Utah regulations. Safety training will be taught and policies implemented for a safe operation.

Fire Protection

All surface and underground equipment will be provided with MSHA-required fire protection. In addition, belt drives will be equipped with deluge systems for fire protection. Water lines will also be equipped with outlets and fire hoses at regular intervals. Should a mine waste fire occur, it will be extinguished using water, extinguishers, rock dust, foam, or by sealing off the fire. Mine personnel will be trained in the use of fire-fighting techniques.

There will be no open burning on the surface. All garbage will be contained in dumpsters and hauled to the Carbon County Landfill. If flammable waste materials (oil, etc.) are generated, these will be disposed of in accordance with regulations promulgated by the Utah Division of Solid and Hazardous Waste. Disposal methods and locations will be determined based on the characteristics of the flammable waste.

Impoundment Hazards

Impoundment hazards will be reported promptly to the Division and the emergency procedures formulated for public protection and remedial action.

Security

Mine portals will be signed and covered by locked gates when the mine is in cessation.

3.3.5.1 Signs

Specifications

All signs will be of a standard design that can be seen and read easily. They will be made of a durable material (treated/painted wood or metal) and supported by metal or wooden posts.

Identification Signs

Mine identification signs will be placed at the entrance to the mine yard. Signs will show the mine name, company name, business address, telephone number, ID Number, and Permit Number. These signs will be maintained until bond release following reclamation. Typical mine identification signs are presented as Figures 3-3 And 3-4.

Disturbed Area Perimeter and Buffer Zone Markers

Disturbed area perimeter markers will be steel fence posts. The posts will carry signs at selected points, with the designation "Disturbed Area Perimeter Marker" (see Figure 3-4).

Blasting Signs

When preparing to blast, "Blasting" signs will be placed along the edge of any blasting area that comes within 100 feet of any public road right-of-way, and at the point where any other road provides access to the blasting area. In addition a sign which states "Warning, Explosives in Use" which describes the audible blast warning, all clear signs and markings associated with the blasting area will be placed at the entrance(s) to the permit area from public roads or highways.

Topsoil Markers

Topsoil will be stored on the mine site at the location noted on Plate 3-1. Topsoil storage piles will be marked with signs as shown on Figure 3-4.

3.3.5.2 Fences and Gates

Mine portals will be signed and covered by locked gates when the mine is in cessation.

3.3.5.3 Fire Protection

Facilities

All facilities will be equipped with fire extinguishers. Water outlets and fire hoses will be available at specific locations.

Coal Stockpiles

The coal stockpile will be temporary and will be loaded out at frequent intervals, thus reducing the potential for spontaneous combustion.

Coal Seam

No open burning will be allowed at the mine. All coal outcrops resulting from mining will be covered with incombustible material upon cessation of operations, as discussed in Section 3.5.

HORIZON MINE
LODESTAR ENERGY, INC.
HC 35, P.O. BOX 370
HELPER, UT 84526
(435) 472-3994

PERMIT NO.

FIGURE 3-3. MINE IDENTIFICATION SIGN.

HORIZON MINE
STREAM BUFFER ZONE

18" X 12"

HORIZON MINE
BUFFER ZONE
DO NOT DISTURB

18" X 12"

HORIZON MINE
TOPSOIL STORAGE
DO NOT DISTURB

18" X 12"

HORIZON MINE
DISTURBED AREA
PERIMETER
MARKER

8" X 12"

FIGURE 3-4. IDENTIFICATION SIGNS.

3.3.5.4 Explosives

Any explosives utilized in underground operations will be used in compliance with applicable State and Federal laws. Explosives will be handled and used only by persons trained, examined, and certified as required by 30 CFR 850 and the Utah State Industrial Commission. Explosives will be stored in a facility designed for their containment and safety.

Mining and reclamation activities at the Mine may require the use of blasting or explosives on the surface during construction or destruction of the surface facilities. Horizon will comply with all local, State, and Federal laws in the use of explosives at times when blasting is required at the Mine. A certified blaster will direct all blasting operations with the help of at least one other person who has been trained (R645-301-524.140). Blasting records will be maintained per R645-301-524.700 and kept on file at the Mine for the required period of time.

A preblasting design/survey will be submitted to UDOGM when blasting activities meet the following criteria:

- Blast requires the use of more than five pounds of blasting agent or explosive,
- Residents, dwellings or structures exist within a ½ mile radius of the area of potential blasting and owners of structures request a preblasting survey.

A schedule of blasting will be made in instances when the UDOGM regulations and conditions at the Mine require a schedule.

All explosives containers used at the mine will be constructed to meet or exceed the requirements of the Mine Safety and Health Administration. The locked surface storage containers (one for caps and one for powder) will be placed in a location that will ensure the protection of the environment and personnel (see Plate 3-1).

All underground blasting activities at the Mine will be conducted under the direction of a MSHA certified blaster.

3.3.5.5 Management of Mine Openings

Four portals will serve the Hiawatha seam. Two portals exist from previous mining. Two additional rock slopes will be driven to open the new mine. For each of these portals the faceup will be secured and canopies will be installed to meet MSHA standards.

During operation of the Horizon Mine, access to all mine openings are controlled by the operator during working and nonworking hours.

Permanent sealing of underground openings is discussed in Section 3.5.3.1.

3.3.6 Operations Schedule

3.3.6.1 Annual Production Per Year for Permit Term

Coal will be produced from the mine at an anticipated rate of approximately 700,000 tons per year. The production could increase to 1.5 million tons per year when federal coal leases are secured and if the market dictates.

3.3.6.2 Operations Schedule - Days - Shifts

Production will occur in two production shifts per day and a small crew will perform maintenance work and other non-production jobs on the off production shift.

3.3.6.4 Temporary Cessation

If operations are to be temporarily ceased for more than 30 days, Horizon will submit to the Division a notice of intention to cease or abandon the operations. In accordance with R645-301-529.210, each mine entry that has further projected useful service will be protected by barricades or other covering devices, fenced, and posted with signs to prevent access into the entry and to identify the hazardous nature of the opening. These devices will be periodically inspected and maintained by Horizon.

3.3.7 Mine Permit Area

3.3.7.1 Acreage and Delineation of Mine Permit Area

See Chapter 2 for the total acreage contained within the mine permit boundary.

3.3.7.2 Projected Mining by Year

The projected mining by year is shown on Plate 3-3.

3.3.8 Mine Plan Area

Horizon plans to mine within the mine permit boundary as shown on Plate 1-1 until it ~~obtains~~permits the remaining area of coal ~~leases for additional adjacent lands~~lease UTU-74804. The ~~potential~~remaining lease area is shown on Plate 3-3~~ as future mining~~. The permit boundary will be modified to include this area when~~the lease~~ additional baseline ground water data is~~acquired~~ available. Plans for mining beyond the permit term will be developed as additional ~~leases are~~information is acquired. No new areas will be mined until appropriate permits have been obtained from their corresponding regulatory agencies.

3.4 Environmental Protection

3.4.1 Preservation of Land Use

Upon completion of mining operations, final reclamation work will commence. Reclamation efforts will be directed to recreating the pre-mining land use. This will be achieved by use of acceptable seed mixtures. Refer to Chapter 4 for pre-mining land use information.

3.4.1.1 Projected Impacts of Mining on Current and Future Land-Use

Current and future land uses are discussed in Sections 4.4 and 4.5.

3.4.1.2 Control Measures to Mitigate Impacts

~~Second mining~~Full pillar extraction will not occur beneath the stream channels and raptor nests indicated on Plates 3-3 and 10-1 respectively. Based on the boundaries of the present surface disturbance, no public parks or historic sites will be impacted by mining operations. A further discussion of Cultural Resources may be found in Chapter 5.

3.4.2 Protection of Human Values

3.4.2.1 Projected Impacts of Mining on Human Values

As discussed in Chapter 5, no historical sites listed on the National Register of Historical Places are known to exist within the proposed disturbed areas. In addition, no known archaeological sites exist within the proposed disturbed area.

3.4.3 Protection of Hydrologic Balance

Horizon will employ various control measures to protect the hydrologic balance of the permit area and sedimentation controls will be provided for all disturbed areas.

Water rights on file with the Utah Division of Water Rights and located in the vicinity of the permit area are noted in Appendix 3-5. Should Horizon's mining activities cause an adverse impact on the area's water supply, the applicant intends to mitigate the effects (see Sections 3.4.8.2 and 7.1.6).

Diversions will be established to direct flow from disturbed areas to the sedimentation pond. If water is encountered during mining operations, this water will be used for underground operations when possible. An UPDES permit has been obtained for the mine (see Appendix 3-6). If the quantity of underground water encountered by mining exceeds the amount required for mining operations, discharges of water from underground workings will be monitored to ensure that effluent limitations are met.

3.4.3.1 Projected Impacts of Mining on Hydrologic Balance

The probable impacts of mining on surface or groundwater resources in the area are discussed in Chapter 7. Runoff-and sediment-control facilities within the disturbed area, together with coal buffer zones beneath Beaver Creek and North Fork of Gordon Creek, will preclude significant impacts to surface water in the area. Groundwater investigation and monitoring activities associated with the Hiawatha seam and its adjacent strata will continue, thus allowing a determination of the potential groundwater impacts of mining in the Hiawatha seam. A subsidence

monitoring program (see Section 3.4.8) will provide a basis for determining possible impacts due to subsidence.

3.4.3.2 Control Measures to Mitigate Impacts and Monitoring Procedures

Horizon will maintain sedimentation control structures to prevent impacts to the surface waters in Jewkes Creek and the North Fork of Gordon Creek. In the event that the quantity of groundwater encountered during mining is in excess of underground requirements, the water will be settled first in underground sumps and then discharged to the surface. Any such discharges will be monitored in accordance with the UPDES permit.

Surface and groundwater monitoring programs have been or will be implemented to assess the impacts of mining operations at the Mine on hydrologic resources in the area. Details of these monitoring programs are presented in Chapter 7.

3.4.4 Preservation of Soil Resources and Projected Impacts of Mining on Soil Resources

Soil resource information for the mine area is presented in Chapter 8. Soil surveys were performed in the area in May 1980 and in January 1990. Naturally-occurring and presently-disturbed soils were delineated. The purposes of the surveys were to identify soils and their stripping depths for salvaging suitable natural soil prior to additional disturbance and to determine the amount of topsoil available for final reclamation.

Most of the existing disturbance at the mine occurred prior to enactment of P. L. 95-87 or the Utah Interim Program that set forth regulations for salvaging topsoil (i.e., pre-1950's disturbance). However, some topsoil exists along the shoulders of cut areas where it was not disturbed during previous construction activities.

During construction of surface facilities, available topsoil resources will be segregated and stockpiled as indicated in Chapter 8. In addition, presently-disturbed soils will be carefully handled to salvage as much soil as possible for potential future use as substitute topsoil materials.

3.4.4.1 Control Measures to Mitigate Impacts to Soil Resources

Surface disturbances will be limited to the disturbed area boundary noted on Plate 1-1. Topsoil that is stockpiled for future reclamation efforts will be vegetated with an interim cover to reduce erosion of the stockpile. All areas disturbed during mining activities will be reclaimed in accordance with the approved reclamation plan (see Section 3.5).

3.4.5 Protection of Vegetative Resources

3.4.5.1 Projected Impact of Mining on Vegetative Resources

Previous mining activities have resulted in alteration of natural vegetation at the site area. The majority of this area has been disturbed previously by mining operations.

3.4.5.2 Mitigation Measures to be Employed to Reduce Impacts on Vegetative Resources

All mining activities will be conducted within the proposed disturbed area. Traffic will be confined to established roadways and pads. Upon completion of mining, all areas which are disturbed by Horizon will be reclaimed as described in Section 3.5.3.

3.4.5.3 Monitoring Procedures - Reference Areas and Revegetation

Sections 3.5.5, 3.5.6 and 9.8 discuss the monitoring procedures and revegetation to be undertaken during mining and reclamation operations.

3.4.6 Protection of Fish and Wildlife

3.4.6.1 Potential Impacts on Fish and Wildlife

Potential impacts on fish and wildlife are discussed in Section 10.4.

3.4.6.2 Mitigation and Management Plans

Refer to Section 10.5 for mitigation and management plans.

3.4.6.3 Fish and Wildlife Monitoring

Monitoring is discussed in Section 10.5.

3.4.7 Protection of Air Quality

Air quality information for the area is presented in Chapter 11.

3.4.8 Subsidence Control and Monitoring Plan

3.4.8.1 Structures

A search of the site files at the Utah Division of State History turned up no recorded sites in, or near, the project area. Since the identified sites are abandoned homestead cabins or mining camp dwellings and are not recorded as warranting preservation efforts, no special mining techniques are deemed necessary for their protection. The archaeologic survey is described in detail under Chapter 5 of this plan.

At least 6 months prior to mining beneath an area, Horizon will notify all owners of overlying surface property (see Section 4.3.1).

3.4.8.2 Renewable Resources

Hydrologic and vegetative renewable resources exist within the permit area. One perennial stream, Beaver Creek, and various springs are known to exist above the area to be mined. Based on past

experience and monitoring results from this area, it is not expected that mining will affect any surface hydrologic resource through subsidence.

~~Should a substantial inflow of groundwater occur, mitigation measures may include: attempts to seal off the inflow, increased monitoring efforts, lining of the stream bed through the affected area, and replacement of lost water if indicated by monitoring.~~

Protection will be provided for the perennial stream in Section 3.2.

A depression of the groundwater table is expected around the active mine workings. A rebound of this water table will occur after active mining ceases and pumping activities have also ceased. This is witnessed in the water level in the Blue Blaze mine prior to the start of the Horizon Mine. Should a substantial inflow of groundwater occur, mitigation measures may include: attempts to seal off the inflow, increased monitoring efforts, lining of the stream bed through the affected areaif it is determined to be surface water, and replacement of lost water if the groundwater does not rebound after mining is completed as indicated by monitoring.

An extended mitigation plan will be enacted should a measurable impact occur to surface water due to mining activity. The mitigation plan will be correlated with Water Rights and UDOGM.

The vegetation resource above the mining area consists of rangeland for stock and wildlife grazing and a limited timber resource. If subsidence should occur, the effects would be minimal, possibly resulting in some fractures or slight depressions. Thus, the effect upon vegetation resource would also be minimal. Should impacts to vegetation occur due to subsidence, mitigation measures may include: filling of fractures, regrading of broken areas, replanting degraded areas, and intensified monitoring.

3.4.8.3 Geologic Hazards

Geologic hazards in the mine area exist in the form of steep slopes and numerous inactive normal faults. Roof conditions will typically worsen in these areas due to fracturing and slickensides; however, no surface movement or new effects have been noted to date from mining through fault zones in this area.

Movement could result in rock falls from exposed outcrops; however, no evidence of such falls or movement has been noted in this area from past mining. There are no potential landslide or slump areas known to exist that were caused by previous mining activities in the area.

3.4.8.4 Subsidence

Subsidence can normally be expected to occur over areas where second mining (pillaring -removal of greater than 50% of the coal) has taken place. Maximum potential subsidence from pillar extraction in the Mine (the Hiawatha seam) has been estimated from Figure 3-5 using the following criteria:

Panel Width = 600 ft
Average Depth = 800 ft
Width/Depth Ratio = 0.75
Seam Thickness = 7.0 ft

Using these data, subsidence due to pillar extraction in the Hiawatha seam could reach 2.33 feet directly over a pillared panel. The cumulative potential subsidence for areas where both seams are pillared is 6.18 feet (3.85 + 2.33). Again, past experience in this area suggests that subsidence would be of a lesser magnitude.

The following observations and conclusions regarding subsidence have been made from past mining activities in the vicinity of the proposed mine:

(1) Pillaring in the upper (Castlegate "A") seam has previously occurred place beneath Beaver Creek (Plate 3-9). Specifically, the northernmost west panel was pillared beneath Beaver Creek by Swisher Coal Company in January 1978 in an areas where the overburden thickness was about 650 feet. In addition, in September 1981, Beaver Creek Coal Company pillared the "A" Panel area beneath Beaver Creek in an area with an overburden thickness of approximately 425 feet. Neither of these areas show any measurable effect on Beaver Creek.

(2) The Gordon Creek No. 2 Mine overlies areas pillared up to 40 years ago in the lower seam (Sweet's Mine) with no noticeable subsidence effects. The Consumers No. 3 Mine also pillared areas in the permit area which show no noticeable subsidence effects.

(3) The overburden in the permit area above the Castlegate "A" seam (with a thickness of 600 to 800 feet) contains massive sandstone units which are unlikely to allow caving effects to reach the surface. In addition, the seams are separated by over 150 feet of similar interburden with no noticeable effects from past pillaring.

(4) Subsidence, should it occur, is not likely to affect the Beaver Creek flow due to the numerous beds of swelling shales within the overburden and interburden. Fractures within these sedimentary deposits have a strong tendency to heal due to the swelling of the shales and sandy shales contained therein.

Refer to Sections 3.4.8.2 and 7.1.6 for a discussion of water resource mitigation measures.

3.4.8.5 Subsidence Control and Monitoring Plan

The subsidence monitoring network will consist of permanent survey monuments located outside of the anticipated area of subsidence and a series of monitoring stations within the potential subsidence zone (Plate ~~3-53~~-3). The monitoring stations will be steel re-bar/rod with aluminum caps or other permanent metal or steel structures set so that weather, frost heave, or livestock will not disturb them. Stations will be installed above the active mining area.

Multiple readings will be taken where necessary to ensure accuracy. Monitoring of the subsidence stations noted on Plate ~~3-53~~-3 will be performed on an annual basis for a period of two years following final cessation of mining operations. Reports of monitoring will be sent to the UDOGM on a yearly basis.

The extent of the adjacent area outside of the permit area was determined based on a maximum overburden thickness of 1500 feet (from data presented by Hansen, 1988) and an angle of draw

of 35 degrees as measured from the vertical (the maximum angle of draw recommended by Dunrud [1976]). This angle of draw is significantly in excess of the 20-degree value used by Beaver Creek Coal Company for adjacent mining operations (Guy, 1985), but will result in a conservative estimate of the extent of the adjacent area. Based on the 35-degree angle of draw and a maximum overburden thickness of 1500 feet, subsidence impacts will extend a maximum of 1050 feet (0.2 mile) from the edge of the permit area. Hence, for the purpose of this application, the adjacent area for potential is defined as that area within 0.2 mile of the permit area.
Figure 3-5

Figure 3-5

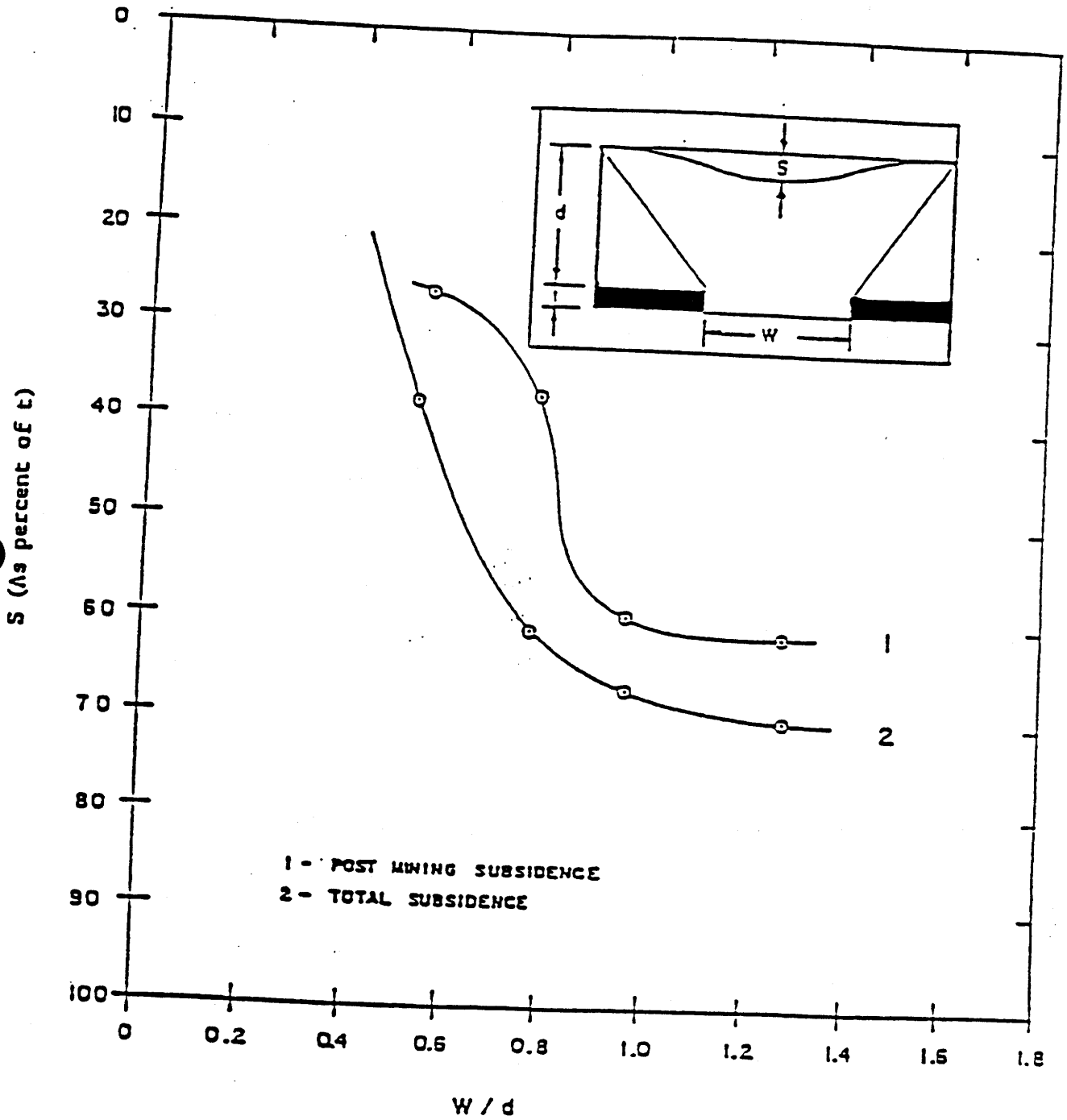


FIGURE 3-5. SUBSIDENCE/SEAM THICKNESS RATIOS (From Dunrud, 1980)

3.5 Reclamation Plan

3.5.1 Contemporaneous Reclamation

Disturbed area's when no longer needed, will be backfilled, graded, retopsoiled, and revegetated. Seeding, fertilizing, and mulching will be performed as soon as practical following redistribution of topsoil. Seed Mix #2 presented in Table 3-3 will be planted, and erosion-control matting will be installed in specific areas as described in Section 3.5.5.3. Reclamation techniques are described below. Seed Mix #1 will be used in areas requiring soil stabilization during the operational period of mining. These areas will likely be redisturbed either during the operation or reclamation of the mine site.

During October 1997, the areas designated on Plate A within Appendix 8-1 are scheduled for stabilization seeding using Seed Mix No. 1. Refer to Section 8.8 for additional information.

3.5.2 Soil Removal and Storage

Soil surveys conducted at the mine site have distinguished disturbed lands from undisturbed soil mapping units (see Chapter 8, Plate 8-1). Areas mapped as disturbed land are areas where the soils, vegetation, or both were affected by previous mining operations. Disturbance of the roads and pads occurred prior to regulatory requirements to salvage topsoil from those areas.

All topsoil/growth medium to be generated during future disturbances will be stockpiled. The stockpiles will be contoured, fertilized, vegetated with Seed Mix #1 outlined in Section 3.5.5.2, and mulched as outlined in Section 3.5.5.3. Markers will be placed indicating that the piles contain topsoil. Berms and/or strawbales will be placed around the stockpile to minimize off-pile transport of sediment.

Refer to Section 8.8 for the methods being used in the redistribution of soils.

3.5.3 Final Abandonment

Upon permanent cessation of operations, permanent reclamation will be performed. All surface equipment, structures and facilities (other than sedimentation control) associated with the operation will be removed during reclamation of the affected area.

3.5.3.1 Sealing of Mine Openings

Abandonment of Openings. When no longer needed for mining operations, all portals will be sealed and backfilled. Prior to the sealing of the mine openings, all combustible materials will be removed from the portal area. All structures that would interfere with sealing of the mine openings will also be removed. The permanent closures will be constructed to prevent access to mine workings by people, livestock, and wildlife. Potential surface drainage will also be kept from entering the sealed entries.

All mine openings will be sealed at least 20 feet inside the mine opening. Prior to installation of the seal, all loose material will be removed from the roof, floor, and rib of the mine within the seal area. The seal will then be constructed using solid concrete blocks with nominal dimensions of 8 inches

high, 8 inches wide, and 16 inches long. Mortar will consist of one part cement, three parts sand, and no more than 7 gallons of water per sack of cement.

In the bottom course, each block will be laid with its long axis parallel to the rib. The long axis in succeedingly higher courses will be perpendicular to the long axis of the blocks in the preceding course. The seal will be recessed at least 8 inches deep into each rib and 8 inches deep into the floor. No recess will be made into the roof.

The seals will have a thickness of approximately 16 inches. Following seal construction, the entries will be backfilled from the seal to the outside surface with soil that is sloped at the surface to match the final slope at the entry.

Casing and Sealing of Underground Openings. Each underground opening to the mine will be sealed and backfilled when no longer needed for monitoring or other use approved by the Division upon a finding of no adverse environmental or health and safety effects. This closure method has been designed to prevent access to the mine workings by people, livestock, fish and wildlife, and machinery. The closures have also been designed to keep water from flowing from the mine workings to prevent acid or other toxic drainage from entering ground and surface waters.

Monitoring wells associated with the Horizon Mine will be sealed when no longer needed for monitoring groundwater. Sealing of these wells will occur in accordance with the requirements of the Utah Division of Water Rights (R655-4-12).

Details of the seals are shown on Figures 3-6 and 3-7.

3.5.3.2 Removal of Surface Structures

Following sealing of the portals, all surface structures and facilities associated with the mining operation will be removed. The schedule and cost of removal is detailed in Section 3.5.6 and 3.5.7, respectively.

Building Demolition. Prior to significant regrading activities at the Horizon facility, existing buildings, retaining walls, utilities, coal-handling facilities, and other above-ground structures will be removed from the area. To the extent possible, these structures and facilities will be salvaged. Nonhazardous and nonflammable materials, such as concrete and steel, may be used as backfill in areas such as the sediment pond, highwalls, and cut slopes. If thus disposed of, these materials will be incorporated into the backfill under at least 4 feet of soil cover in a manner that will not create voids within the backfill or reduce the effective compaction necessary for backfilling. If foundations will not interfere with regrading activities, they will be left in place for on-site burial under at least 4 feet of soil cover.

Non-coal wastes found during reclamation, such as garbage, lumber, and other combustible materials generated during previous mining activities, will be segregated and stored in a controlled manner in a temporary storage area in appropriate containers.

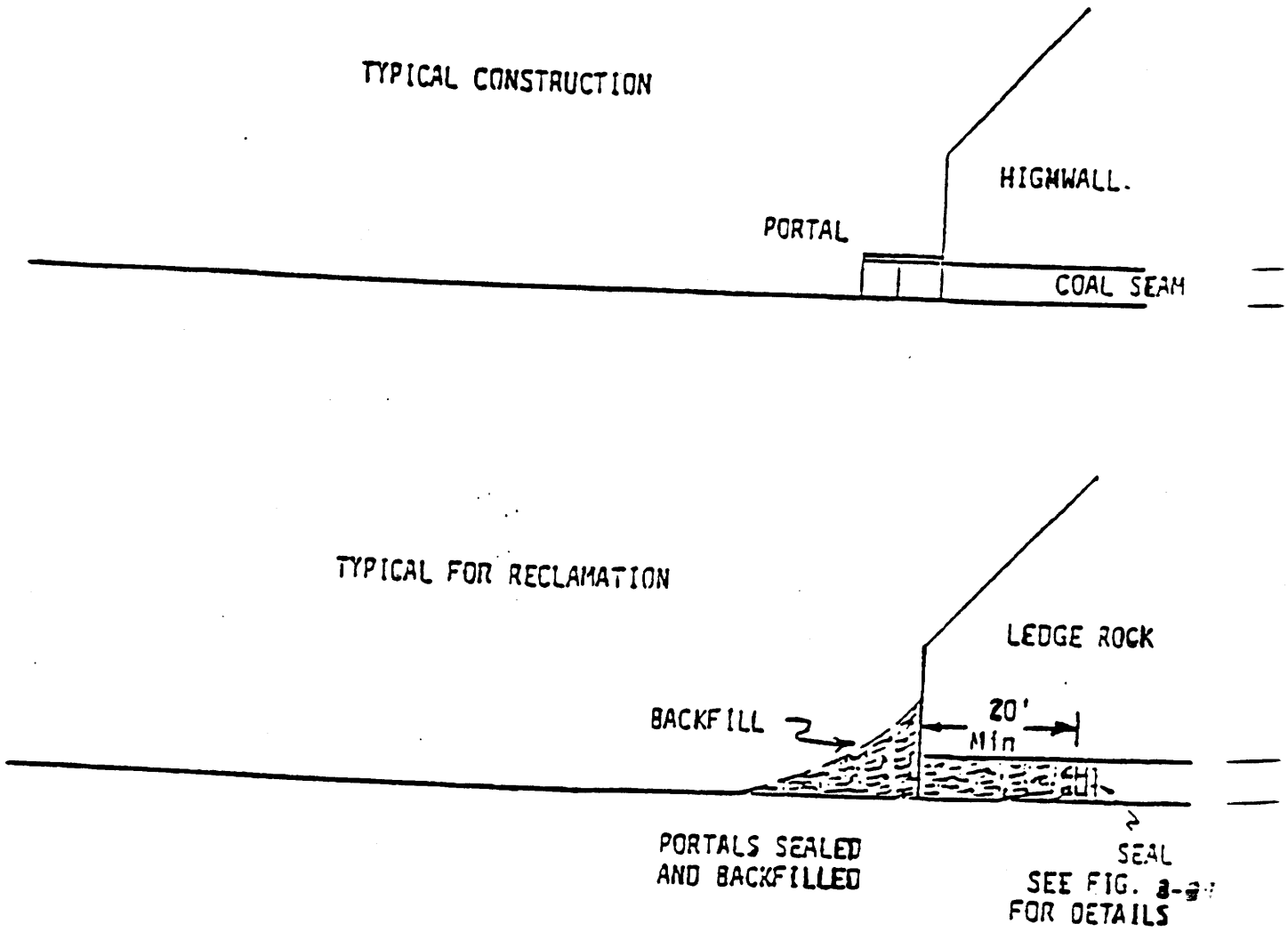


FIGURE 3-6. TYPICAL PORTAL SEALING.

Coal Division Oil, Gas And Mines

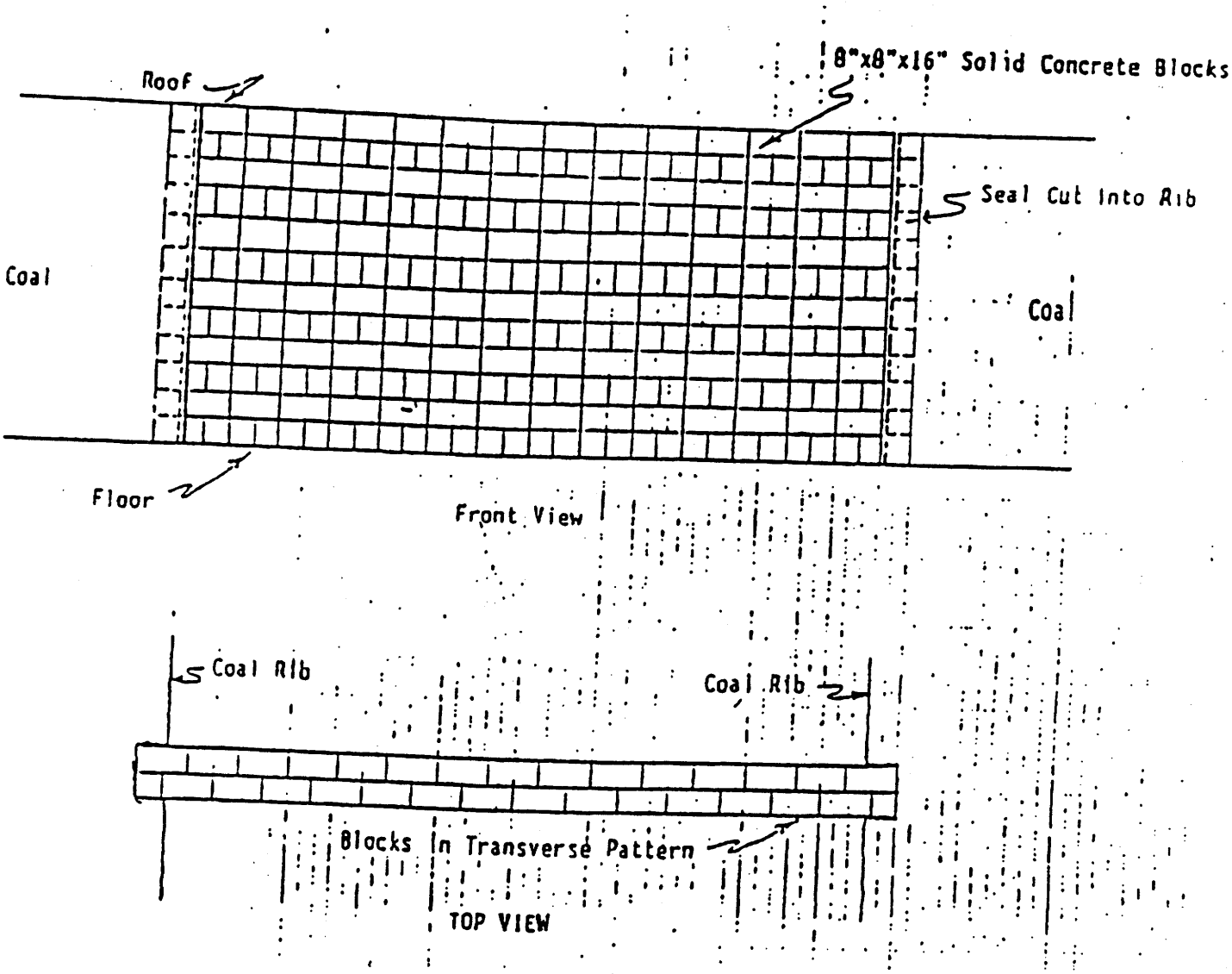


FIGURE 3-7. TYPICAL PORTAL BLOCK SEAL.

INCORPORATED
Utah Division Oil, Gas And Mining

Final disposal of all such waste will be in the backfill (as indicated above) or at a State-approved solid waste disposal facility, as appropriate. Notwithstanding any other provision of the R645 Rules, any non-coal mine waste defined as "hazardous" will be handled in accordance with the requirements of Subtitle C of RCRA and any implementing agency.

Mining equipment too large for a container will be placed in a designated temporary storage area as determined at the time of reclamation activities. Final decisions regarding salvage or disposal of structures and equipment will be made just prior to reclamation following an assessment of the salvageability of the structures and equipment.

3.5.3.3 Disposition of Dams, Ponds, and Diversions

Diversions that are not planned for permanent use following reclamation will be removed during the backfilling and regrading operations. The area will be recontoured to drain to the final reclamation channel (Section 7.2.3.2, Reclamation Hydrology Design).

Sediment control following removal of the sedimentation pond will be provided as outlined in Sections 3.5.4.3 and 7.2.3.2.

3.5.4 Backfilling and Grading Plans

The surface area was originally disturbed between 1928 and the 1950's by previous owners. The owners made no effort to save/store any topsoil or other soil material; therefore restoration to a contour that approximates pre-mining conditions (Plate 3-6) is neither practical nor required by the regulations. However, it is the intent of Horizon to restore the area to a topography that is compatible with the post-mining land use, using materials that are available at the site (Plates 3-7 and 3-7A). Cut and fill calculations are provided in Table 3-1, for the for the operational to post-mining (i.e., reclamation) phase. Table 3-1 shows a difference between the cut and fill volumes of 4,240 cubic yards. This fill deficit will be compensated for by adjusting the fill surface down by 5 inches over the site. The final recontoured surface will be achieved by the placement of a 20" layer of topsoil on top of the recontoured fill material. The 20 " layer of topsoil constitutes approximately 14,417 cubic yards (see Appendix 8-1).

In general, the backfilling and regrading will proceed as follows:

(a) After sealing of the portals and removal of all structures, a backhoe (Cat 235 or larger) will be brought to the upper portal terrace (Portal Canyon). The road on the north side of Portal Canyon will be backfilled, regraded, recontoured, fertilized, seeded and mulched (See Sections 3.5.5 for additional method details).

(b) The backhoe will begin by reaching down over the fill bank and retrieving as much material as can be reached to be placed on the terrace. A dozer (Cat D-7 or larger) will work with the backhoe, taking the retrieved material and spreading and compacting it from the faceup outward.

(c) The mine yard will then be recontoured using backhoes and dozers to drain to the center of the canyons. The reclamation slopes will be achieved during this backfilling and grading operation. In general, fill material for reclamation will be

TABLE 3-1

RECLAMATION CUT AND FILL CALCULATIONS

Total inclusion area: 9.15 acres

Cut to Fill ratio: 0.73

Cut volume: 11,695 cubic yards

Fill volume: 15,935 cubic yards

Cut and fill data based on Softdesk Civil/Survey software, release 8.0 and AutoCAD Map software, release 2.

obtained from adjacent areas of cut material. Prior to cutting or filling in areas shown on Plate 3-7 as having been contemporaneously reclaimed, the topsoil on those areas will be stripped and temporarily set aside in an area that will not be impacted by construction activities. Topsoil stripping operations will be supervised by an individual who is experienced in the field identification of topsoil resources. Once an area is properly prepared, this topsoil will be placed on regraded slopes in accordance with the topsoil placement procedures outlined elsewhere in this M&RP. Based on an affected area of 0.20 acre (as noted on Plate 3-7) and an average topsoil thickness in the contemporaeously reclaimed areas of 11 inches (see Section 8.8.1 of this M&RP), a total of 296 cubic yards of topsoil will be affected by this effort. Reclamation channels (described in Chapter 7) will be constructed to convey runoff through the reclaimed area. Operational culverts will be removed as the construction of the reclamation channel moves down each canyon. Details regarding the reestablishment of drainages in Jewkes Creek and Portal Canyon are provided in Section 7.2.3.2.

(d) During backfilling and regrading operations, the surface will be scarified to prevent slippage of topsoil and promote root penetration.

(e) A loader will be used to load topsoil into haul trucks at the topsoil stockpiles. The haul trucks will be used to deliver the topsoil from the topsoil stockpiles to the area where the dozer and backhoe will be working. The dozer will be used to evenly distribute the topsoil over the area.

(f) Following redistribution of topsoil, the site will be reseeded, fertilized, and mulched in accordance with Section 3.5.5. Plates 3-1 and 3-7 show the planned surface facility and the proposed final configuration, respectively. Plate 3-7A presents the related cross sections.

(g) Depending upon the season of the year and weather conditions the procedures listed above may be completed as one operation from start to finish or may be completed area by area to control erosion and provide drainage. Erosion control matting and sediment controls will be place throughout the reclamation process as they are needed (see Plate 7-7a).

The schedule for backfilling and grading is detailed in Section 3.5.7.1.

All exposed coal outcrops resulting from this operation as well as toxic and acid-forming materials will be covered with a minimum of 4 feet of non-combustible, non-acid, non-toxic material during backfilling and grading. Similarly, any underground development waste that remains in temporary storage on the surface at the time of reclamation will be placed against an adjacent faceup or cut slope and covered with at least 4 feet of suitable backfill.

3.5.4.1 Removal or Reduction of Highwalls

The faceups (highwalls) will be backfilled along the pad and road areas. Erosion controls (silt fences, etc.) will be placed below these backfill areas to minimize washing of the fill materials prior to revegetation. All fills will be compacted to promote stabilization of the backfills.

3.5.4.2 Recontouring

All surface reclaimed areas will be protected and stabilized to effectively control erosion. Final grading, preparation of overburden, and placement of topsoil will be done along the contour to minimize subsequent erosion and instability. Should rills or gullies develop in regraded areas, these will be filled, graded, or otherwise stabilized and then reseeded or replanted. This will be accomplished using the best technology currently available.

3.5.4.3 Fencing and Erosion Control

During redistribution of the topsoil, silt fences will be established and anchored at the bottom of fill slopes and along the top bank of the reclamation channel to control possible erosion from newly graded and seeded areas. The sedimentation pond will be retained as discussed in Section 7.2.3.2. All areas will be mulched during seeding and slopes 2 1/2H:1V or greater will be matted to minimize erosion. Fencing will be placed as required to protect revegetation efforts from livestock grazing. This fencing will be removed prior to requesting final bond release.

3.5.4.4 Soil Redistribution and Stabilization

When final reclamation begins, the disturbed areas to be reclaimed will be loosened by ripping to allow easier backfilling and grading operations. During redistribution of soils, care will be taken to prevent excessive compaction.

Soils disturbed during mining, including but not limited to fill material, will be placed within the disturbed area boundary. Refer to Section 8.8 for further information concerning plans for soil redistribution.

3.5.5 Revegetation Plan

The revegetation plan has been designed to assure that all disturbed lands will be returned to productive self-perpetuating plant communities once the mining operation has been completed. The plan calls for temporary revegetation of disturbed areas where possible during the mining operation as well as permanent reclamation of all areas once mining has ceased.

The goal of the plan is to create diverse plant communities which are at least as productive and in comparable amounts to plant cover existing on the site prior to this mining operation.

3.5.5.1 Soil Preparation

After backfilling, grading, recontouring, scarifying, and the redistribution of topsoil, the seedbed will be prepared using the best technology currently available. Prior to seeding, composite soil samples as will be collected and analyzed as discussed in Section 8.9. Based on the results of these analyses, fertilizer will be applied at the time of seeding.

3.5.5.2 Seeding

Areas which have been disturbed during mining operations will be reseeded with either Seed Mix #1 (Table 3-2) or with Seed Mix #2 (Table 3-3), as outlined below. These mixes are composed primarily of native species which either occur on the site or would be expected to grow on the site, especially on reclaimed areas. The mixes have been designed to include species which will provide sufficient cover to prevent soil erosion, and should contain sufficient species diversity to produce a stable self-perpetuating plant community. All seeds will comply with applicable state and federal seed laws.

Temporary Seed Mix

On those sites where revegetation is needed during the operating years, a temporary seed mix will be used. This mix (Table 3-2) is composed primarily of native species and is designed for quick establishment and erosion control. Only one introduced grass species (pubescent wheatgrass - Agropyron trichophorum), is included in the mix. It has been included since it is known to do well on dry sites, and will assist in controlling soil erosion. Cicer milkvetch (Astragalus ciscer) has been included because of its ability to fix nitrogen. No shrubs or forbs are included in the temporary mix, since these areas will be re-disturbed prior to final reclamation. At the actual time of planting, the mix may be altered depending on availability of the listed species and under the approval of the Division prior to substitution.

Permanent Seed Mix

The permanent revegetation mix is composed of a mixture of native grasses, forbs, shrubs and trees (Table 3-3). The grasses, forbs, and some of the shrubs will be planted as seeds. The remaining shrubs and trees will be planted as containerized stock. A variety of species are included in the mix in order to obtain a higher level of diversity on the revegetated surfaces. This will increase habitat diversity as variations in the microenvironments of the reclaimed surface will enhance or inhibit the germination and development of the various species.

The permanent seed mix reflects the composition of the original communities which occurred on the site. Cicer milkvetch is the only introduced species in the permanent seed mix. It is included because of its ability to fix nitrogen. Approval will be obtained from the Division prior to using any substitution in seed mixtures and on the number of containerized shrubs needed per acre.

The riparian seeding mix is included in Table 3-3.

Seeding Methods

Reclaimed areas will be seeded by broadcasting. Seeds when broadcast will be raked to ensure proper seed/soil contact. See Tables 3-2 and 3-3 for the seeding rates. If the first seeding does not establish, the area will be reseeded. Reclaimed areas will be seeded in the fall. Since the majority of the species in the mix are cool season grasses, fall is a better time to plant. The containerized stock will be planted in late fall or early spring, attempting to avoid undesirable conditions such as overly wet, overly dry, or frozen soils. Should the planting window close prior to completion of seeding, a sterile, quick growing ground cover will be planted to control erosion during the winter months. The final reclamation seed mixture will be planted during the following

year. Small depressions will be left in areas where containerized stock is planted to accumulate water during wet periods.

In the riparian disturbed area (see Section 9.4.1.2) the containerized or cuttings of willow stock will be planted in clumps along the banks of Jewkes Creek. Other containerized shrubs and sedges will be planted in clumps within the riparian area. The seed mix (Table 3-3, Riparian Reclamation Seeding Mix) will be planted using the methods described above.

3.5.5.3 Mulching

During reclamation mulch will be applied to all newly reseeded areas in order to provide a more equitable environment for seed germination and initial growth. A mulch will be applied at a rate of 2000 pounds per acre. Once applied, the mulch will be incorporated while the surface is being roughened before seeding. Erosion control matting will be placed on all slopes 2 1/2H:1V or steeper.

At the time of reclamation the most beneficial type of mulch to be used will be determined by Horizon and UDOGM, for bonding purposes the price will be assumed to be that for alfalfa.

3.5.5.4 Reclamation Management

The reclaimed and revegetated areas will be closely monitored to determine if any maintenance is necessary (refer to Sections 3.5 and 9.8 for a description of the monitoring program). Problems which may require management include severe erosion, excessive weeds, bare patches of failed planting, and damage by wildlife. When necessary soil erosion will be controlled by regrading, application of mulch, and matting. If weeds occur, a weed control plan will be proposed to UDOGM and implemented upon approval. No weed control will be attempted during the first growing season. It is likely that weed species will form a conspicuous part of the vegetation on the reclaimed areas during the first year but will be replaced by revegetative species thereafter.

3.5.5.5 Revegetation Monitoring

Revegetated areas will be monitored in accordance with Section 9.8 of this permit application.

3.5.5.6 Establishment of Wildlife Habitat

Reclamation is particularly important as a means of controlling erosion and restoring disturbed areas to a productive state. To assist in meeting these desirable ends, the following aspects have been incorporated into the reclamation plan: (1) planting a diverse mixture of native grasses, forbs, and (where appropriate) woody species, (2) using seedling stock rather than relying solely on seeds for trees or shrubs, and (3) planting vegetation to create an edge effect by clumping selected shrub or tree species.

TABLE 3-2
Reclamation Seed Mix #1

Species		Pounds of PLS per acre
PERENNIAL GRASSES		
Streamband Wheatgrass (Agropyron riparium)		8.0
Bluebunch Wheatgrass (Agropyron spicatum)		4.0
Slender Wheatgrass (Agropyron trachycaulum)		8.0
Pubescent Wheatgrass (Agropyron trichophorum)		6.0
Indian Ricegrass (Oryzopsis hymenoides)		4.0
FORBES		
Cicer Milkvetch (Astragalus cicer)		4.0
	TOTAL	34.0

TABLE 3-3

Reclamation Seeding Mix #2

Species	Pounds of PLS Per Acre
SHRUBS	
Serviceberry Amelanchier utahensis	4.0
Big Sagebrush (Vasey) Artemisia tridentata	0.4
Mtn. Mahogany Cercocarpus ledifolius	4.0
Wyoming Big Sagebrush (Gordon Creek Var.) Artemisia tridentata wyomingensis	1.0
FORBS	
Yarrow Achillea millifolium	0.2
Pacific Aster Aster chilensis	0.4
Northern Sweetvetch Hedysarum boreale	3.0
Lewis Flax Linum lewsii	2.0
Palmer's Penstemon Penstemon palmeri	1.0

TABLE 3-3 (Continued)

Reclamation Seeding Mix #2

Species	Pounds of PLS Per Acre
GRASSES	
Gt. Basin Wildrye Elymus cinereus	6.0
Thickspike Wheatgrass Elymus lanceolatus	4.0
Western Wheatgrass Elymus smithii	6.0
Bluebunch Wheatgrass Elymus spicatus	6.0
Indian Ricegrass Stipa hymenoides	4.0
TOTAL	42.0
CONTAINERIZED STOCK	PLANTS/ACRE
Oak Brush Quercus gambelii	400
Aspen Populus tremuloides	300
White Fir Abies concolor	200
Big-tooth Maple Acer grandidentatum	400
Serviceberry Amelanchier alnifolia	300

TABLE 3-3 (Continued)

Reclamation Seeding Mix #2

SPECIES	PLANT/ACRE
Mountain Mahogany Cercocarpus montanus	400
Oregon Grape Mahonia repens	500
TOTAL	2,500

Riparian Reclamation Seeding Mix

SPECIES	PLANT/ACRE
SHRUBS	CONTAINERIZED/ROOT CUTTING STOCK
Snowberry Symphoricarpos oreophilus	300
Wood Rose Rosa woodsii	300
Willow Salix	1,100
Water Birch Betula occidentalis	300
TOTAL	**2,000**

TABLE 3-3 (Continued)

Riparian Reclamation Seeding Mix

SPECIES	POUNDS OF PLS PER ACRE
FORBS	
Yarrow Achillea millifolium	1.0
Pacific Aster Aster chilensis	1.0
Prairie Sage Artemisia ludoviciana	1.0
Marsh Indian Paintbrush Castelleja exilis	1.0
Wild Geranium Geranium viscosissimum	1.0
TOTAL	**5.0**
GRASSES	
Blue Wildrye Elymus glaucus	8.0
Kentucky Bluegrass Poa pratensis	4.0
Gt. Basin Wildrye Elymus cinereus	6.0
Idaho Fescue Festica idahoensis	4.0

TABLE 3-3 (Continued)

Riparian Reclamation Seeding Mix

SPECIES	POUNDS OF PLS PER ACRE
Western Wheatgrass Elymus smithii	6.0
Bluebunch Wheatgrass Elymus spicatus	6.0
Indian Ricegrass Stipa hymenoides	6.0
TOTAL	**40.0**
CONTAINERIZED/ROOT CUTTING STOCK	PLANT/ACRE
Nebraska Sedge Carex nevrascensis	200
Beaked Sedge Carex rostrata	200
TOTAL	**400**

Locations where containerized stock will be planted:

Oakbrush	South & East Slopes
Aspen	North Slopes & Canyon Bottoms
White Fir	North Slopes
Big-tooth Maple	North Slopes & Canyon Bottoms
Serviceberry	South Slopes
Mountain Mahogany	Ridge tops & South Facing Slopes
Oregon Grape	North, East, West Slopes & Canyon Bottom
Willow	Along Creek Banks

Section 10.5 provides a detailed discussion of the reclamation, mitigation and management plans for terrestrial habitats and wildlife.

Enhancement of the area for wildlife will be accomplished by the installation of rock piles for smaller mammals, the improved revegetation of the area, and planting of Salix cuttings per acre along the creek banks within the disturbed area. Rock piles will be scatter along the perimeter of Jewkes Creek, and through Portal Canyon. Containerized shrub stock will be planted near the rock piles to provide additional cover and as a food source. The appropriate regulatory agencies (i.e., UDOGM, DWR) will be consulted as to the frequency and placement of the rock piles during reclamation.

3.5.6 Reclamation Monitoring

The standards for success in the previously disturbed areas of the site are outlined in section R645-301-356.250 of the regulations. The applicant intends to return the previously disturbed areas to stable plant communities capable of withstanding the intended post-mining land use and controlling erosion (see Section 9.8).

3.5.7 Schedule of Reclamation for Horizon Mine

3.5.7.1 Timetable for Completion of Major Reclamation Processes

The approximate schedule of reclamation activities is outlined in Table 3-4. The graphical schedule has been extended by approximately 10 percent beyond the numerical estimates presented below to account for unanticipated delays. Reclamation is proposed to be initiated within 90 days (weather permitting) of final abandonment of the mining operation. Each listing is for an 8-hour work day.

The Phase I reclamation tasks are therefore proposed to be completed within 24 weeks following the start of reclamation activities, assuming adequate weather conditions. Eight weeks are planned for the completion of Phase II reclamation tasks.

Due to the size and topography of the mine site, the concept of completing reclamation activities in Portal Canyon prior to starting reclamation activities in Jewkes Canyon is not feasible. Potential problems include having to move topsoil twice and not having the fill in Jewkes Canyon to reclaim slopes in Portal Canyon. Horizon commits to begin reclamation activities in Portal Canyon and to leave the sediment pond and UC-1 located in Jewkes Canyon in place as long as possible. Prior to the removal of the sediment pond during reclamation, UDOGM hydrologist will be notified and given the opportunity to inspect and endorse the removal. The timetable and sequence for removal of sediment control structures will depend upon the season of the year and precipitation.

3.5.8 Cost Estimate for Final Reclamation

The estimated cost to reclaim the Horizon Mine surface facilities is provided in Appendix 3-7.

The reclamation costs were evaluated to determine if the 100-foot culvert extension planned for 1997 (Appendix 3-9) would be covered by the estimated amount. The previous calculations allowed for 4 days of backhoe use to remove the culverts within the disturbed area. It is currently estimated

that a period of only 2.3 days will be required to remove the culverts within the disturbed area. Therefore, the original estimate of 4 days is sufficient to cover the additional 100 feet of culvert installed in 1998. No increase in earthwork bonding costs are necessary with the removal of the 100-foot culvert extension during reclamation, refer to Appendix 3-9.

TABLE 3-4

Reclamation Timetable

Task	Months from Start of Reclamation					
	1	2	3	4	5	6
PHASE I						
Seed/Plant Ordering*						
Portal Sealing						
Demolition - Structure Removal						
Rough and Final Grading						
Construction of Reclamation Channels and Installation of Sediment Controls						
Soil Testing/Order Amendments						
Topsoil Distribution						
Seeding & Mulching						
Vegetation/Water Monitoring	10 years after seeding or until bond release					
PHASE II - To Follow Phase I Bond Release						
Seed/Plant/Amendment Ordering*						
Grading (Disturbed Area Access Road)						
Topsoil Distribution						
Seeding & Mulching						
Reclamation Monitoring	Until bonding requirements are satisfied					

* Seed and plants will be ordered one year prior to their proposed planting time.

APPENDIX 3-10

ASTM COAL CLASSIFICATIONS

APPENDIX 3-10
ASTM COAL CLASSIFICATIONS

ASTM Classification	ASTM Group	Carbon (%)	Oxygen (%)	Moisture(%)	Volatiles (%)	R (vitrinite)	Btu/lb	MJ/kg	kcal/kg
	Peat	50 - 60	30 - 42	50 - 95	62 - 72	0.2 - 0.4	3000 - 4000	7.0 - 9.3	4000
Lignite	B	55 - 73	23 - 35	45 - 60	40 - 65	0.2 - 0.4	< 6300	< 14.6	5500
	A	55 - 73	23 - 35	31 - 50	40 - 65	0.2 - 0.4	6300 - 8300	14.6 - 19.3	5500
Subbituminous	C	60 - 80	15 - 28	25 - 38	35 - 55	0.3 - 0.7	8300 - 9500	19.3 - 22.1	7000
	B	60 - 80	15 - 28	20 - 30	35 - 55	0.3 - 0.7	9500 - 10500	22.1 - 24.4	7000
	A	60 - 80	15 - 28	18 - 25	35 - 55	0.3 - 0.7	10500 - 11500	24.4 - 26.7	7000
Bituminous	HV C	76 - 83	8 - 18	10 - 25	35 - 55	0.4 - 0.7	10500 - 13000	26.7 - 30.2	-
	HV B	80 - 84	7 - 12	5 - 12	35 - 50	0.5 - 0.8	13000 - 14000	30.2 - 32.5	-
	HV A	78 - 88	6 - 10	1 - 7	31 - 45	0.6 - 1.2	> 14000	> 32.5	8650
	MV	84 - 91	4 - 9	< 1.5	22 - 31	1.0 - 1.7	> 14000	> 32.5	8650
	LV	87 - 92	3 - 5	< 1.5	14 - 22	1.5 - 2.0	> 14000	> 32.5	8650
Anthracite	Semi.	89 - 93	3.5	< 1.5	8 - 14	1.8 - 2.6	> 14000	> 32.5	8650
	Anth.	90 - 97	2 - 4	0.5 - 2	2 - 8	2.2 - 5.0	> 14000	> 32.5	8650
	Meta.	> 94	1 - 2	1 - 3	< 2	> 4.5	> 14000	> 32.5	8650

HV - High Volitale MV - Medium Volitale LV - Low Volitale
Semi. - Semianhracite Anth. - Anthracite Meta. - Metanthracite

Source: University of Illinois, Geology Lecture

APPENDIX 3-5

Updated Water Rights

Assignment letter of the Water Rights to Lodestar Energy

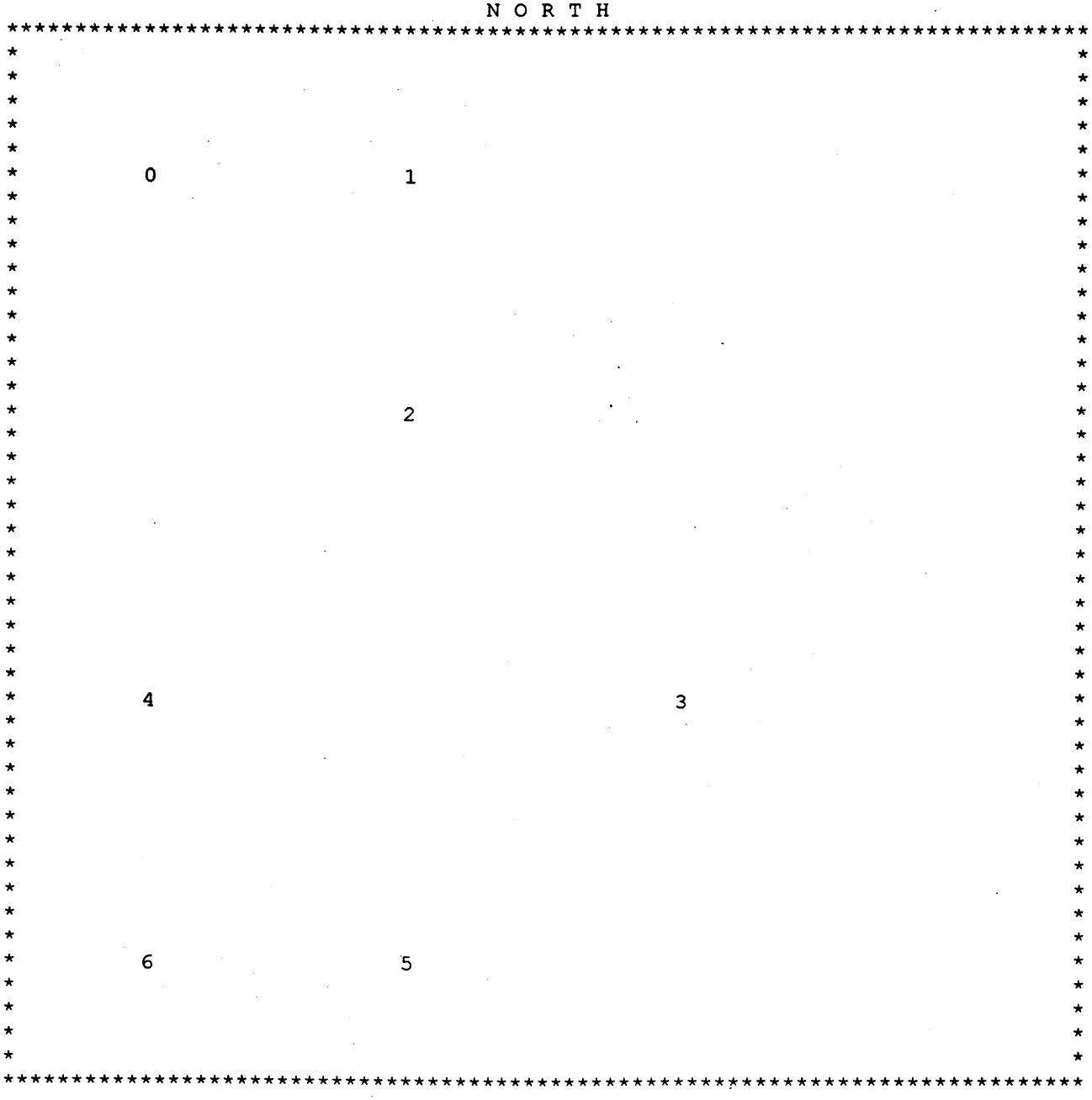
APPENDIX 3-5

WATER RIGHTS

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 28 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 4 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1957	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.					2651 Hiawatha Circle		
0	91 1958	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.					2651 Hiawatha Circle		
0	91 1959	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.					2651 Hiawatha Circle		
0	91 1464	.0000		.00	Beaver Creek			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1465	.0000		.00	Beaver Creek			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1466	.0000		.00	Beaver Creek			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1450	.0020		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1474	.0020		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 312	.0020		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1951	.2500		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1952	.2500		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1953	.2500		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
1	91 1911	.0110		.00	Unnamed Spring			
	WATER USE(S):							

Stamatakis, Pete Jr. 1111 South 450 West

1 91 1912 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

1 91 1913 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

2 91 1447 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

2 91 1448 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

2 91 1449 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1973 .0220 .00 Unnamed Spring
WATER USE(S):
Jensen, K.C. and Tonda Hampton P.O. Box 97

4 91 1455 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1456 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1457 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1452 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1453 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1454 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

6 91 1444 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

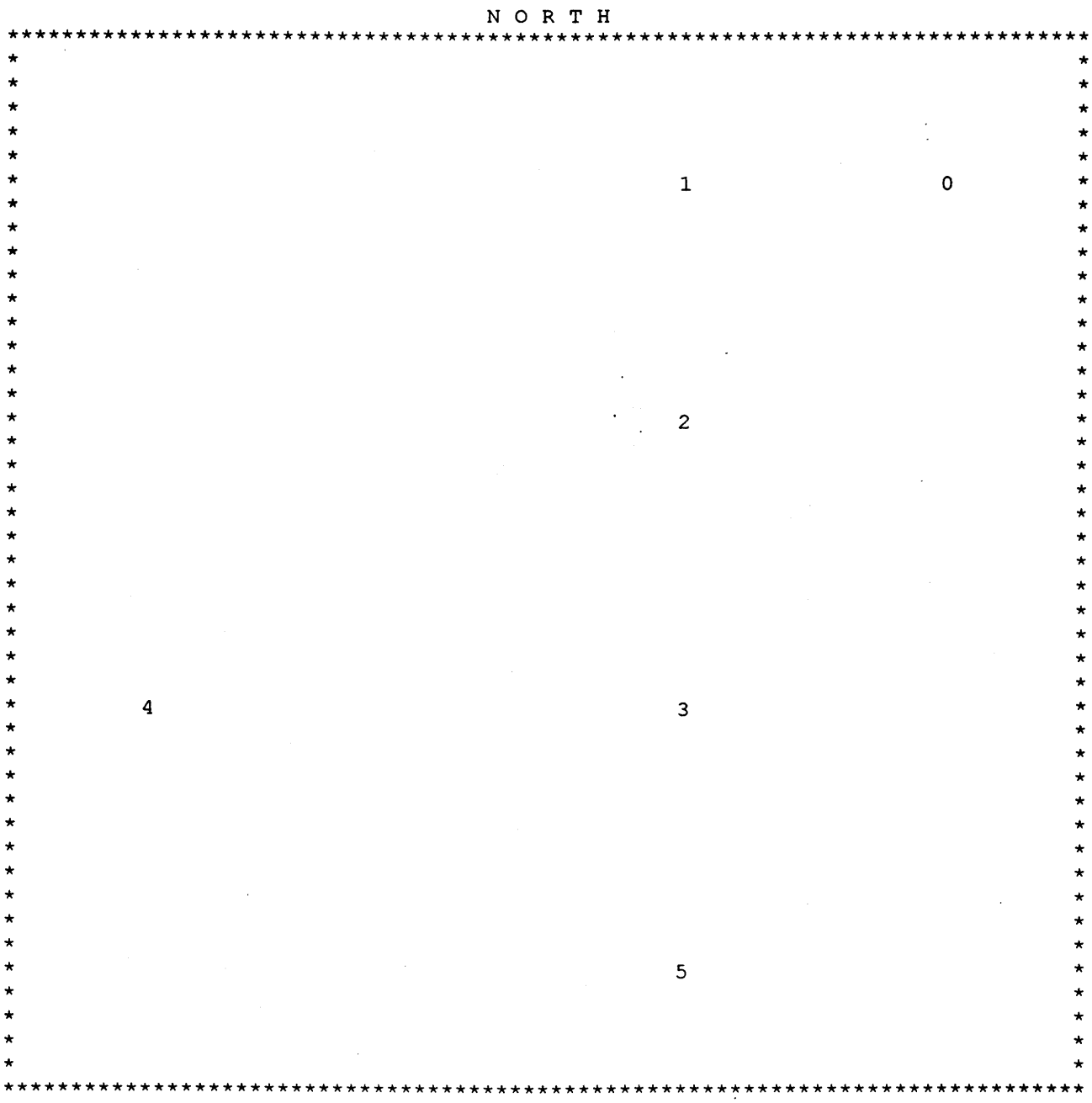
6 91 1445 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

6 91 1446 .2200 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 21 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 5 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1461	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
0	91 1462	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete JR.						1111 South 450 West	
0	91 1463	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
0	91 1957	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.						2651 Hiawatha Circle	
0	91 1958	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.						2651 Hiawatha Circle	
0	91 1959	.0000		.00	Jump Creek			
	WATER USE(S): Jewkes, Robert F. and Linda N.						2651 Hiawatha Circle	
0	91 1954	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
0	91 1955	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 North	
0	91 1956	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
1	91 1908	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
1	91 1909	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
1	91 1910	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West	
2	91 1458	.0110		.00	Unnamed Spring			
	WATER USE(S):							

Stamatakis, Pete Jr. 1111 South 450 West

2 91 1459 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1905 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1906 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1907 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1441 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1442 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1443 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1460 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

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                        UTAH DIVISION OF WATER RIGHTS
      WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
                 PLOT SHOWS LOCATION OF     12 POINTS OF DIV

    PLOT OF ALL QUARTER(S) IN SECTION 7   TOWNSHIP 13S   RAN

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UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1401	.2500	.00	Sand Gulch Spring			
	WATER USE(S): DOMESTIC STOCKWATERING						
	Anderson, Clarence (Estate)				General Delivery		
1	91 1926	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 West		
1	91 1927	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 West		
1	91 1928	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 West		
2	91 1929	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 West		
2	91 1930	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 North		
2	91 1931	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Stamatakis, Pete Jr.				1111 South 450 West		
3	91 1932	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle		
3	91 1933	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle		
3	91 1934	.0110	.00	Unnamed Spring			
	WATER USE(S):						
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle		
4	91 4034	.1250	.00	Unnamed Spring		N	325
	WATER USE(S): DOMESTIC STOCKWATERING						
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle		
4	91 4035	.1250	.00	Unnamed Spring		N	325
	WATER USE(S): DOMESTIC STOCKWATERING						
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle		

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 20 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 8 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE

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UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN. NORTH
0	91 1470	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1471	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1472	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1467	.0130		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1468	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
0	91 1469	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
1	91 1467	.0130		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
1	91 1468	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
1	91 1469	.0000		.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
2	91 1402	.2000		.00	Unnamed Spring			
	WATER USE(S): DOMESTIC Anderson, Clarence (Estate)					General Delivery		
3	91 1945	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
3	91 1946	.0110		.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West		
3	91 1947	.0110		.00	Unnamed Spring			
	WATER USE(S):							

Stamatakis, Pete Jr. 1111 South 450 West

4 91 1941 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1943 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1944 .0110 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1464 .0000 .00 Beaver Creek
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1465 .0000 .00 Beaver Creek
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

5 91 1466 .0000 .00 Beaver Creek
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

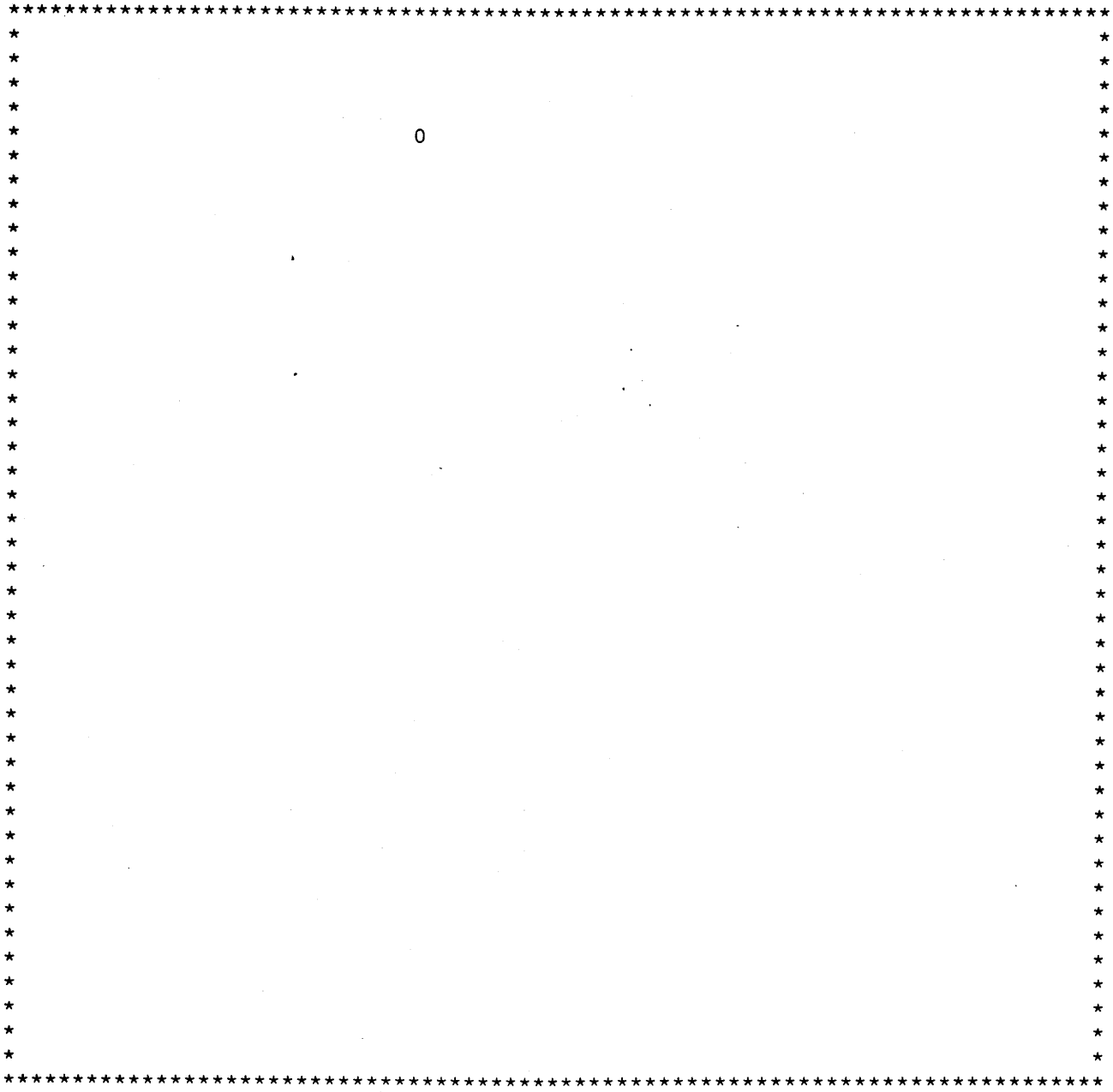
6 91 488 .0110 .00 Unnamed Spring
WATER USE(S):
Marakis, John 165 East 1st South

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 6 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 9 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE

N O R T H



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

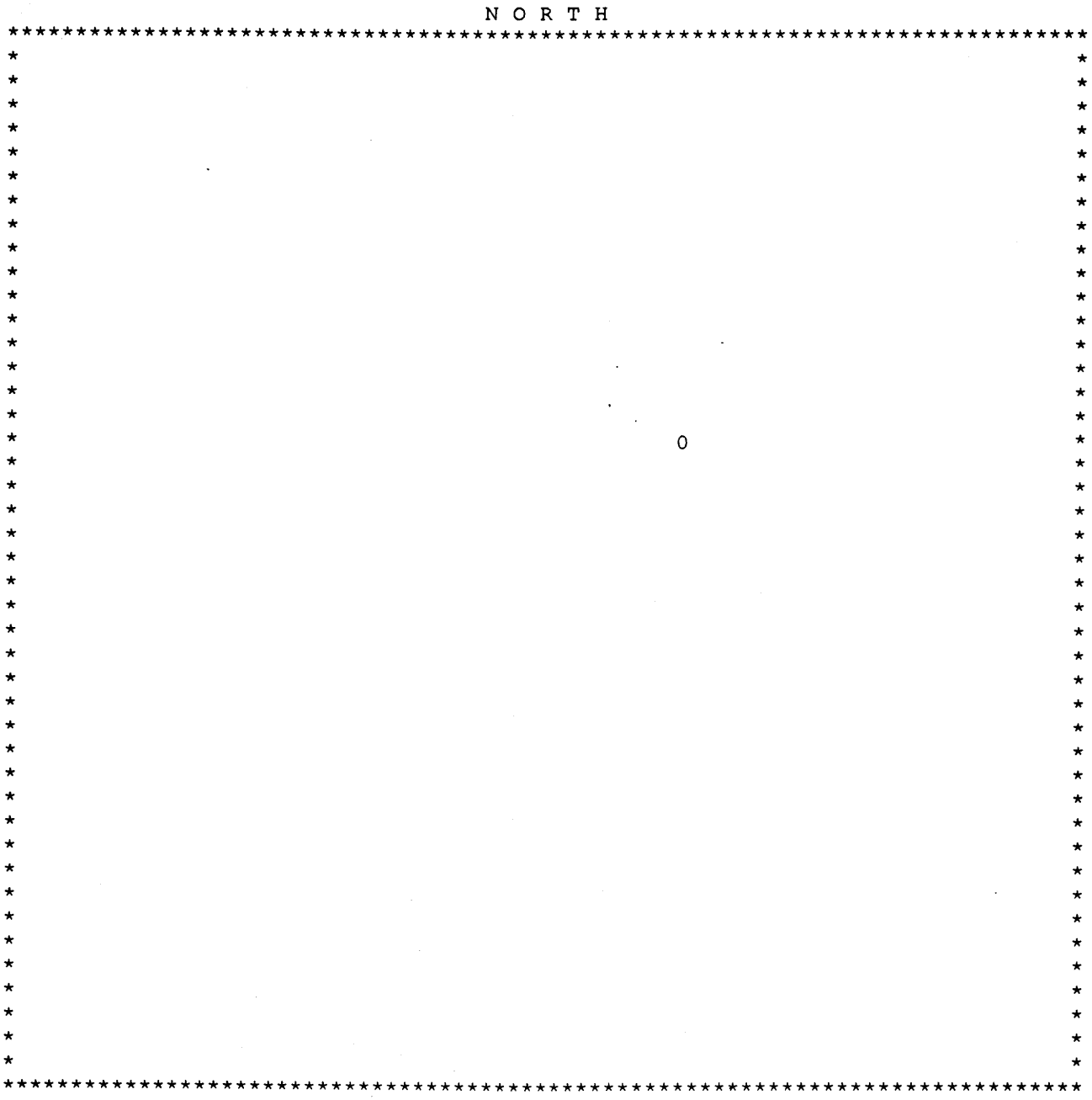
MAP CHAR	WATER RIGHT	QUANTITY CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1948	.0110	.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West	
0	91 1949	.0110	.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West	
0	91 1950	.0110	.00	Unnamed Spring			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West	
0	91 1954	.0000	.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West	
0	91 1955	.0000	.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 North	
0	91 1956	.0000	.00	Unnamed Stream			
	WATER USE(S): Stamatakis, Pete Jr.					1111 South 450 West	

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 1 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 16 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE

N O R T H



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

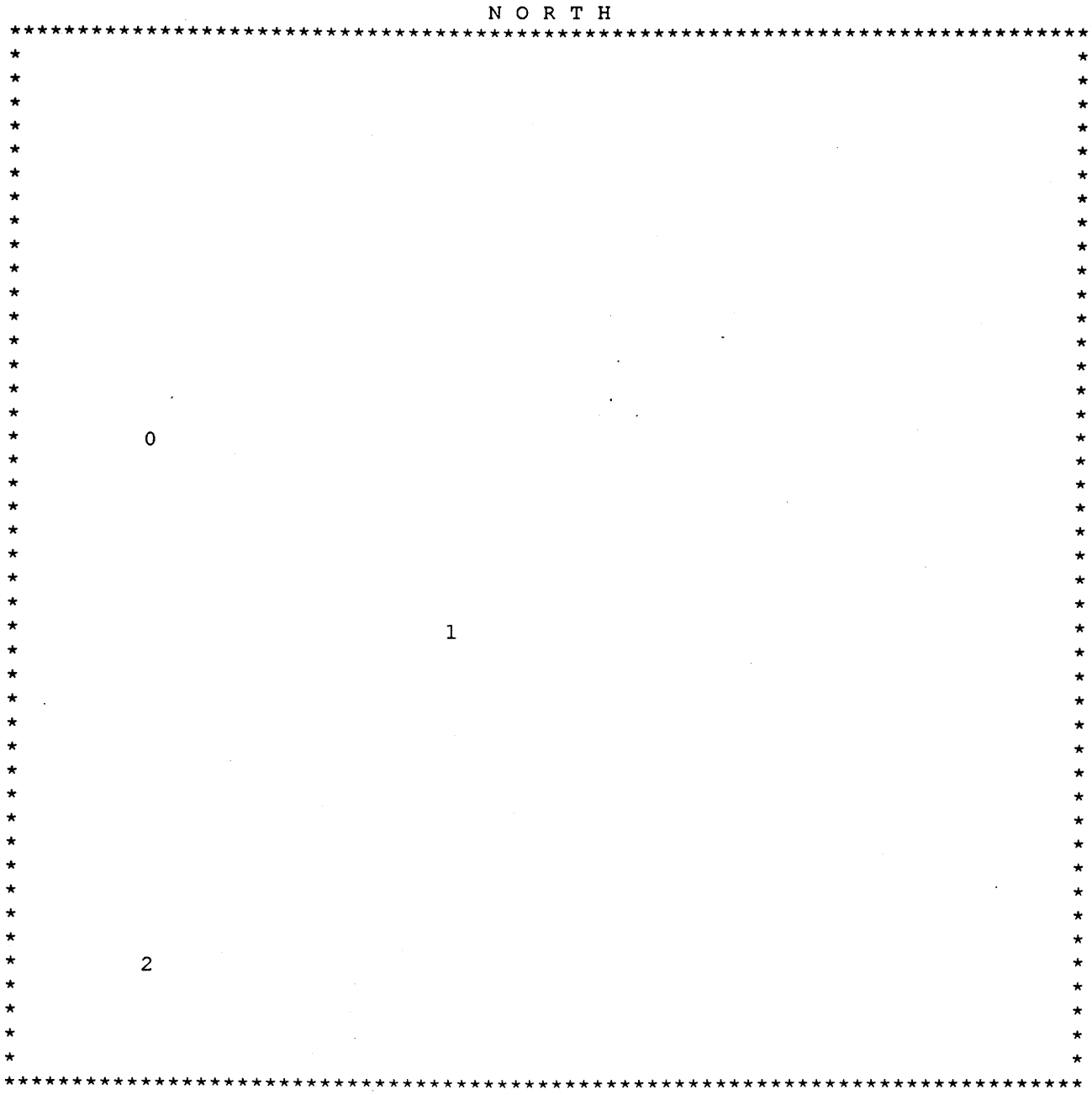
MAP CHAR	WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1675	.0000		.00	Coal Canyon Creek			

WATER USE(S):
Marakis, John (Estate)

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 7 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 17 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 487	.0000	.00	Spring Stream				
	WATER USE(S):							
	Marakis, John				165 East 1st South			
0	91 487	.0000	.00	Spring Stream				
	WATER USE(S):							
	Marakis, John				165 East 1st South			
0	91 3881	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Marakis, John (Estate)							
1	a19773	.5570	.00	Underground Tunnel			N	2248
	WATER USE(S): DOMESTIC MINING OTHER							
	Sweet, Florence A.				1750 Orchard Drive			
1	a21487	.5570	.00	Mine Tunnel & Unnamed Springs			N	2248
	WATER USE(S): DOMESTIC MINING OTHER							
	Sweet Family Partnership				1750 Orchard Drive			
2	91 3688	.0000	.00	Gordon Creek				
	WATER USE(S): STOCKWATERING							
	Peirce, E.E. (Jr.)				Route #1			
2	91 3688	.0000	.00	Gordon Creek				
	WATER USE(S): STOCKWATERING							
	Peirce, E.E. (Jr.)				Route #1			

Utah Division of Water Rights

Water Right Listing

Water Right a19773

```
 ***CHANGE#: a19773    has been PRINTED!!
                          (WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 02/21/2000  Page 1

CHANGE: a19773                    WATER RIGHT: 91-330   CERT. NO.:           AMENDATORY? No

RIGHT EVIDENCED BY: 91-330 (U11850)

CHANGES: Point of Diversion [X], Place of Use [X], Nature of Use [X], Reservoir Storage [ ].

*------------------------------------------------------------------------------------------------------*

NAME: Sweet, Florence A.                                    OWNER MISC:

ADDR: 1750 Orchard Drive

CITY: Salt Lake City                STATE: UT  ZIP: 84106      INTEREST: 100%

*------------------------------------------------------------------------------------------------------*

FILING:     02/02/1996|PRIORITY:  03/17/1936|ADV BEGAN: 04/11/1996|ADV ENDED: 04/18/1996|NEWSPAPER:  Sun Advocate

PROTST END:05/08/1996|PROTESTED: [Hea]     |APPR/REJ:  [Approved]|APPR/REJ:  11/20/1996|PROOF DUE:    /  /    |EXTENSION:    /  /

ELEC/PROOF:[         ]|ELEC/PROOF:  /  /    |CERT/WUC:    /  /    |LAP, ETC:    /  /    |PROV LETR:    /  /    |RENOVATE:    /  /

Status: APP    Date Verified: 03/01/1996  Initials: MJK

*****************************************************************  *****************************************************************

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>  <<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

*****************************************************************  *****************************************************************

 ________________________________________________________________   ________________________________________________________________
|FLOW:    0.557 cfs                                                ||FLOW:    0.557 cfs                                  R/W:       |
|SOURCE: Underground Tunnel                                        ||SOURCE: Underground Tunnel                                     |
|COUNTY: Carbon                                                    ||COUNTY: Carbon     COM DESC: 10 miles West of Helper           |
|------------------------------------------------------------------||----------------------------------------------------------------|
|                                                                  ||     Applicant seeks to change the point of                     |
|                                                                  ||     diversion and the place of use for this                    |
|                                                                  ||     water for use in its mining operations                     |
```

	at the Horizon Mine located in Sections
	7, 8, 17 and 18, T13S, R8E, SLB&M.
	Domestic use will be for showers,
	restrooms, etc.

POINT(S) OF DIVERSION ------>	CHANGED AS FOLLOWS:
Point Underground:	Point Underground:
(1) S 970 ft W 1580 ft from NE cor, Sec 18, T 13S, R 8E, SLBM	(1) N 2248 ft E 2151 ft from SW cor, Sec 17, T 13S, R 8E, SLBM
Diameter: ins. Depth: to ft.	Diameter: ins. Depth: to ft.
COMMENT: Underground Tunnel	COMMENT: Underground Tunnel

PLACE OF USE ------>	CHANGED as follows:
--NW4-- --NE4-- --SW4-- --SE4--	--NW4-- --NE4-- --SW4-- --SE4--
N N S S N N S S N N S S N N S S	N N S S N N S S N N S S N N S S
W E W E W E W E W E W E W E W E	W E W E W E W E W E W E W E W E
	Sec 7 T 13S R 8E SLBM *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*
	Sec 8 T 13S R 8E SLBM *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*
	Sec 17 T 13S R 8E SLBM *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*
	Sec 18 T 13S R 8E SLBM *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*

NATURE OF USE ------>	CHANGED as follows:

SUPPLEMENTAL to Other Water Rights: No

SUPPLEMENTAL to Other Water Rights: Yes

DOM: 20 Persons USED 01/01 - 12/31

MIN: District: Carbon USED 01/01 - 12/31
Name: Horizon
Ores: Coal

OTH: INDUSTRIAL: Coal mining operation USED 01/01 - 12/31
at the Sweet Coal Mine

OTH: INDUSTRIAL: Uses associated with USED 01/01 - 12/31
the operation of the Horizon Coal Mine

PROTESTANTS

NAME: Department of Natural Resources
C/O : Division of Wildlife Resources
ADDR: 1594 West North Temple Suite 2110 Box 146301
CITY: Salt Lake City STATE: UT ZIPCODE: 84114-6301

NAME: Gordon Creek Water Users
C/O : c/o Ray Prettyman
ADDR: 3217 West Gordon Creek Road
CITY: Price STATE: UT ZIPCODE: 84501

END OF DATA

END OF DATA

Utah Division of Water Rights

Water Right Listing

Water Right a21487

***CHANGE#: a21487 has been PRINTED!!

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 02/21/2000 Page 1

CHANGE: a21487 WATER RIGHT: 91-330 CERT. NO.: AMENDATORY? No

RIGHT EVIDENCED BY: 91-330 (U11850)

CHANGES: Point of Diversion [X], Place of Use [ ], Nature of Use [ ], Reservoir Storage [ ].

+---

NAME: Sweet Family Partnership OWNER MISC:

ADDR: 1750 Orchard Drive

CITY: Salt Lake City STATE: UT ZIP: 84106 INTEREST: 100%

+---

FILING: 08/27/1997 | PRIORITY: 08/27/1997 | ADV BEGAN: 09/11/1997 | ADV ENDED: 09/18/1997 | NEWSPAPER: Sun Advocate

PROTST END: 10/08/1997 | PROTESTED: [No] | APPR/REJ: [Approved] | APPR/REJ: 12/12/1997 | PROOF DUE: 02/28/2000 | EXTENSION: 02/18/1999

ELEC/PROOF: [ ] | ELEC/PROOF: / / | CERT/WUC: / / | LAP, ETC: / / | PROV LETR: / / | RENOVATE: / /

Status: APP Date Verified: 08/27/1997 Initials: MJK

****

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****

FLOW: 0.557 cfs	FLOW: 0.557 cfs R/W: See HERETOFORE
SOURCE: Underground Mine Tunnel	SOURCE: Mine Tunnel & Unnamed Springs (3)
COUNTY: Carbon	COUNTY: Carbon COM DESC: 11 miles West of Price
POINT(S) OF DIVERSION ------>	CHANGED AS FOLLOWS:

Point Surface:

Point Underground:

(1) N 2248 ft E 2151 ft from SW cor, Sec 17, T 13S, R 8E, SLBM

Diameter: ins. Depth: to ft.

COMMENT:

Point Surface:

(1) S 1308 ft W 595 ft from NE cor, Sec 18, T 13S, R 8E, SLBM

Diverting Works:

Source:

(2) S 1350 ft W 410 ft from NE cor, Sec 18, T 13S, R 8E, SLBM

Diverting Works:

Source:

(3) S 1430 ft W 488 ft from NE cor, Sec 18, T 13S, R 8E, SLBM

Diverting Works:

Source:

Point Underground:

(1) N 2248 ft E 2151 ft from SW cor, Sec 17, T 13S, R 8E, SLBM

Diameter: ins. Depth: to ft.

COMMENT:

PLACE OF USE ------>

SAME AS HERETOFORE

	--NW4--	--NE4--	--SW4--	--SE4--
	N N S S	N N S S	N N S S	N N S S
	W E W E	W E W E	W E W E	W E W E
Sec 7 T 13S R 8E SLBM	*X:X:X:X	**X:X:X:X	**X:X:X:X	**X:X:X:X*
Sec 8 T 13S R 8E SLBM	*X:X:X:X	**X:X:X:X	**X:X:X:X	**X:X:X:X*
Sec 17 T 13S R 8E SLBM	*X:X:X:X	**X:X:X:X	**X:X:X:X	**X:X:X:X*

```
|Sec 18 T 13S R  8E SLBM     *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*||                                                  |

 ____________________________________________________________  ____________________________________________________________

 ____________________________________________________________  ____________________________________________________________

|NATURE OF USE ------>                                          ||SAME AS HERETOFORE                                        |
|-------------------------------------------------------------||-----------------------------------
 ____________________________________________________________  ____________________________________________________________

 ____________________________________________________________  ____________________________________________________________

|PLACE OF USE ------>                                           ||SAME AS HERETOFORE                                        |
|-------------------------------------------------------------||-------------------------------------------------------------|
|                          --NW4--  --NE4--  --SW4--  --SE4-- ||                                                          |
|                         |N N S S||N N S S||N N S S||N N S S|||                                                          |
|                         |W E W E||W E W E||W E W E||W E W E|||                                                          |
|Sec  7 T 13S R  8E SLBM     *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*||
|Sec  8 T 13S R  8E SLBM     *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*||                                                          |
|Sec 17 T 13S R  8E SLBM     *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*||                                                          |
|Sec 18 T 13S R  8E SLBM     *X:X:X:X**X:X:X:X**X:X:X:X**X:X:X:X*||                                                          |

 ____________________________________________________________  ____________________________________________________________

 ____________________________________________________________  ____________________________________________________________

|NATURE OF USE ------>                                          ||SAME AS HERETOFORE                                        |
|-------------------------------------------------------------||-------------------------------------------------------------
|SUPPLEMENTAL to Other Water Rights: No                         ||SUPPLEMENTAL to Other Water Rights: No                    |
|.............................................................||.............................................................|
|DOM: 20 Persons                              USED 01/01 - 12/31||                                                          |
|.............................................................||.............................................................|
|MIN: District: Carbon County                 USED 01/01 - 12/31||                                                          |
|     Name:     Horizon                                         ||                                                          |
|     Ores:     Coal                                            ||                                                          |
|.............................................................||.............................................................
```

|OTH: INDUSTRIAL: Uses associated with USED 01/01 - 12/31|| |

| the operation of the Horizon Coal Mine || |

Change#: a21487 cont.** (WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 02/21/2000 Page 2

** **

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** **

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SEGREGATION HISTORY**

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This Change was Segregated from a19773, WRNUM: 91-330, Approval Date: 11/20/1996 under which Proof is to be submitted.

This Change as originally filed:

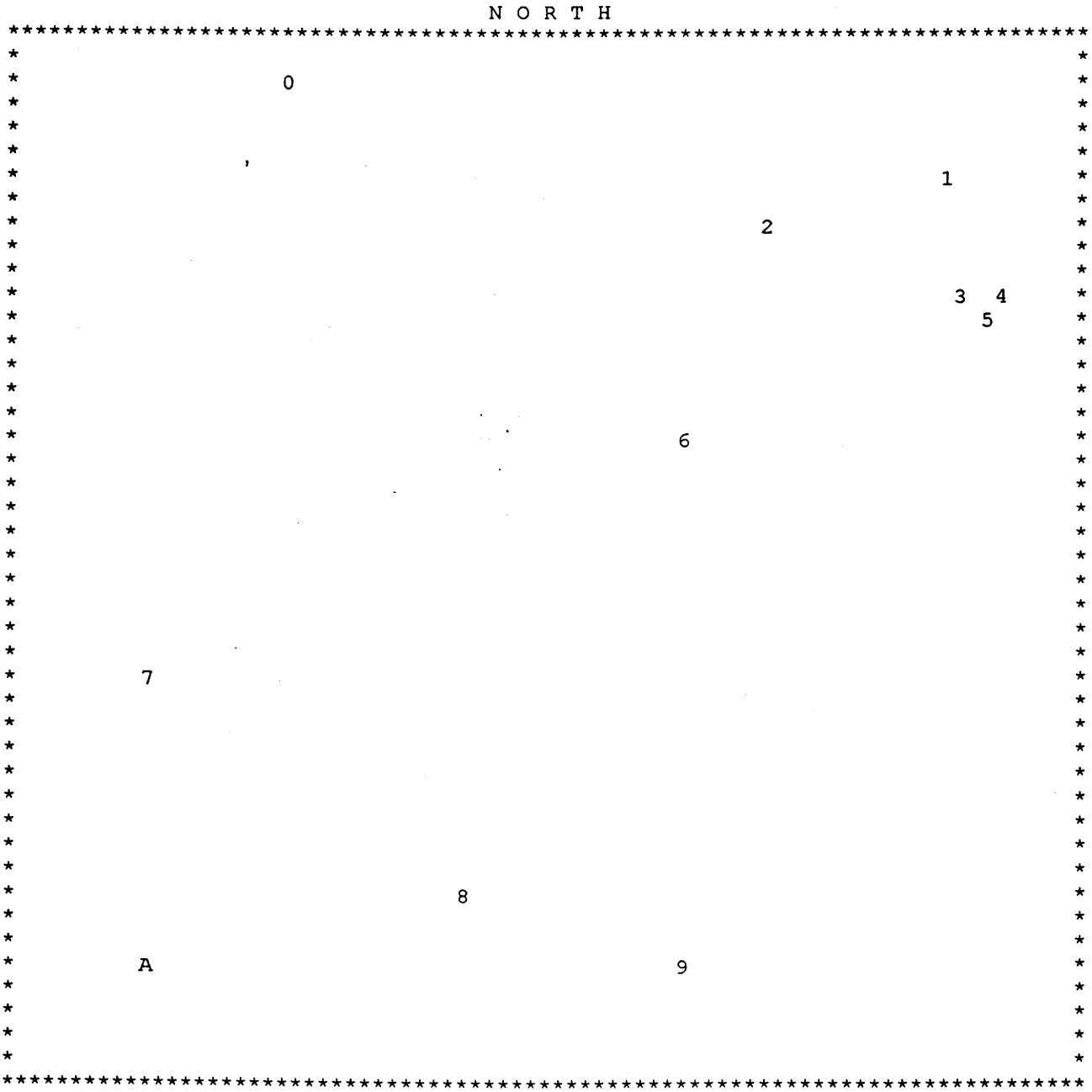
FLOW IN	QUANTITY IN	W A T E R	U S E S	
CFS	ACRE-FEET	IRRIGATED ACREAGE	STOCK (ELUs)	DOMESTIC (FAMILIES)

IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII E N D O F D A T A IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 15 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 18 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 779	2.0000	.00	Beaver Creek & North Fork Gord			S	200
	WATER USE(S): IRRIGATION							
	State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21							
1	91 3672	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
2	91 330	.5570	.00	UGW-Tunnel			S	970
	WATER USE(S): OTHER							
	Sweet Family Partnership				1750 Orchard Drive			
	Sweet, Florence				1850 Beneficial Life Tower			
3	a21487	.5570	.00	Mine Tunnel & Unnamed Springs			S	1308
	WATER USE(S): DOMESTIC MINING OTHER							
	Sweet Family Partnership				1750 Orchard Drive			
4	a21487	.5570	.00	Mine Tunnel & Unnamed Springs			S	1350
	WATER USE(S): DOMESTIC MINING OTHER							
	Sweet Family Partnership				1750 Orchard Drive			
5	a21487	.5570	.00	Mine Tunnel & Unnamed Springs			S	1430
	WATER USE(S): DOMESTIC MINING OTHER							
	Sweet Family Partnership				1750 Orchard Drive			
6	91 3671	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
7	91 1935	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle			
7	91 1936	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle			
7	91 1937	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jewkes, Robert F. and Linda N.				2651 Hiawatha Circle			
8	91 5004	.0270	.00	Unnamed Spring			N	1013
	WATER USE(S): STOCKWATERING							
	Jacob, J. Mark and James C. Jacob				914 East 300 North			
9	91 3670	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Jacob, James C.				914 East 300 North			

Jacob, J. Mark 914 East 300 North

A 91 1938 .2500 .00 Unnamed Spring
WATER USE(S):
Jewkes, Robert F. and Linda N. 2651 Hiawatha Circle

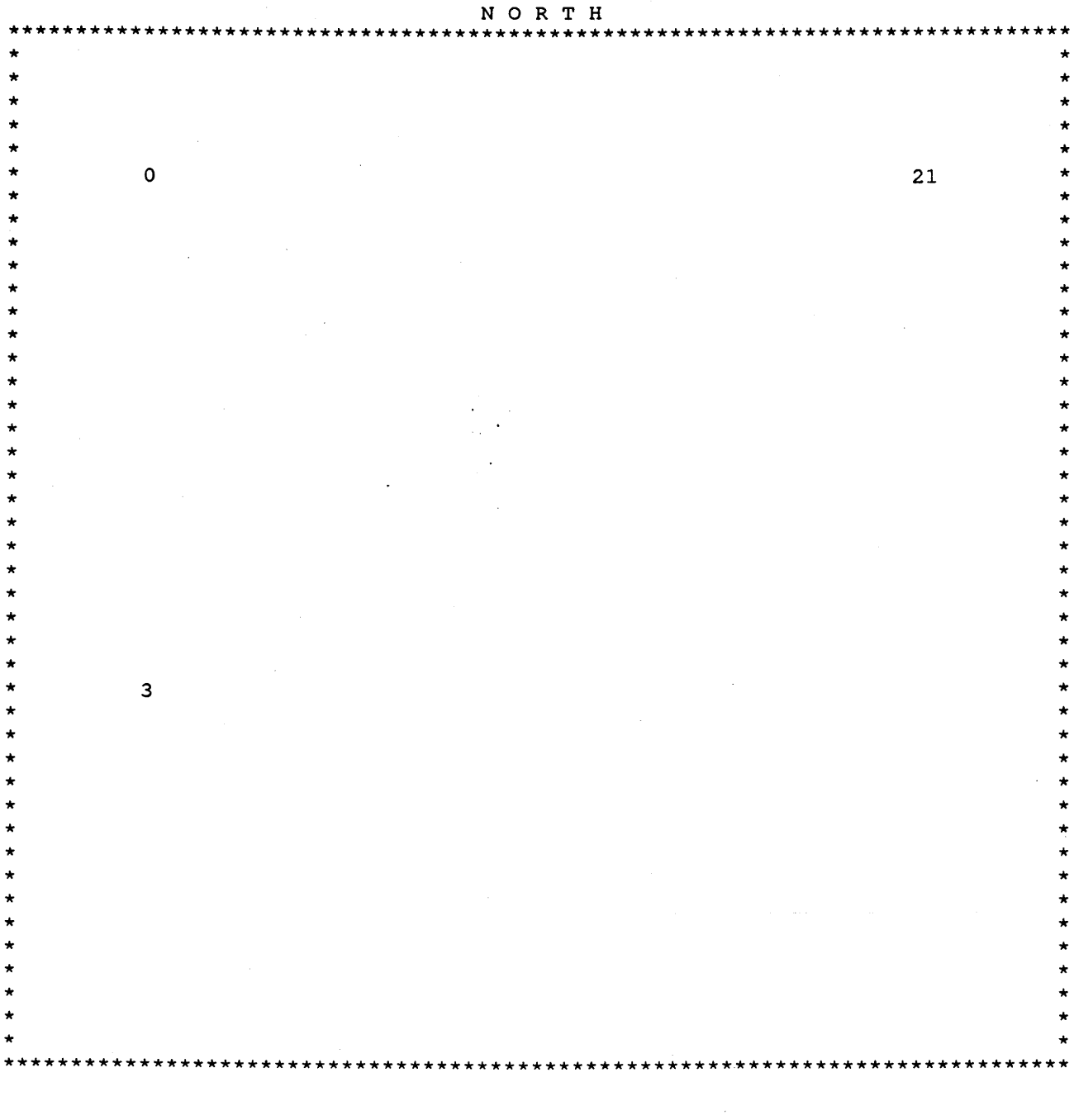
A 91 1939 .2500 .00 Unnamed Spring
WATER USE(S):
Jewkes, Robert F. and Linda N. 261 Hiawatha Circle

A 91 1940 .2500 .00 Unnamed Spring
WATER USE(S):
Jewkes, Robert F. and Linda N. 2651 Hiawatha Circle

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 5 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 19 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



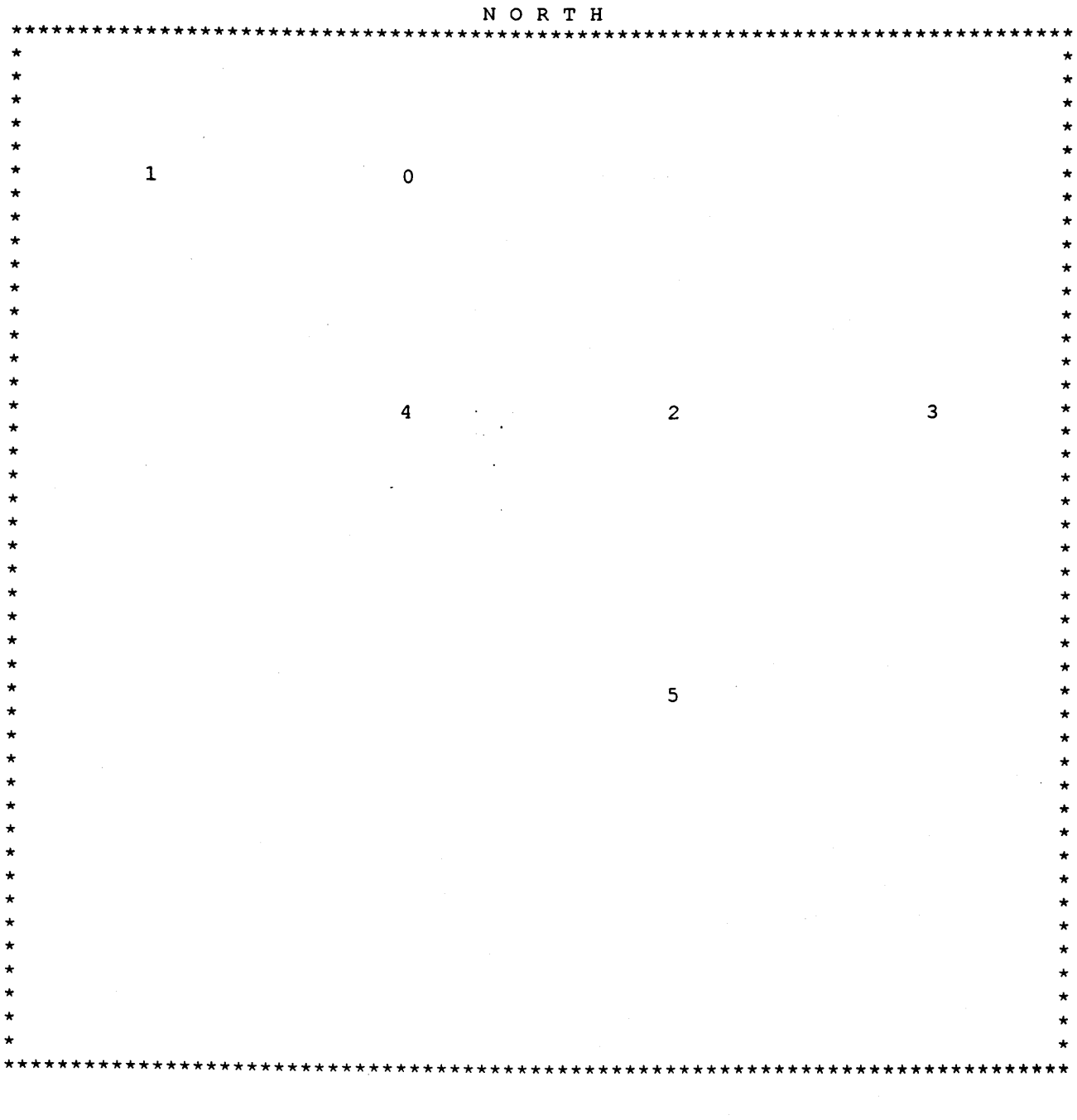
UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 3669	.0110		.00	Unnamed Spring				
	WATER USE(S):								
	Jacob, James C.					914 East 300 North			
	Jacob, J. Mark					914 East 300 North			
1	91 1473	.0000		.00	North Fork Gordon Creek				
	WATER USE(S): STOCKWATERING								
	Pierce, E. E. Jr.					General Delivery			
2	91 353	.0150		.00	Unnamed Spring			S	760
	WATER USE(S): OTHER								
	Sweet Family Partnership					1750 Orchard Drive			
	Sweet, Florence					1850 Beneficial Life Tower			
2	91 94	.1500		.00	Unnamed Spring			S	760
	WATER USE(S): OTHER								
	Sweet Family Partnership					1750 Orchard Drive			
	Sweet, Florence					1850 Beneficial Life Tower			
3	91 1473	.0000		.00	North Fork Gordon Creek				
	WATER USE(S): STOCKWATERING								
	Pierce, E. E. Jr.					General Delivery			

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 10 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 20 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



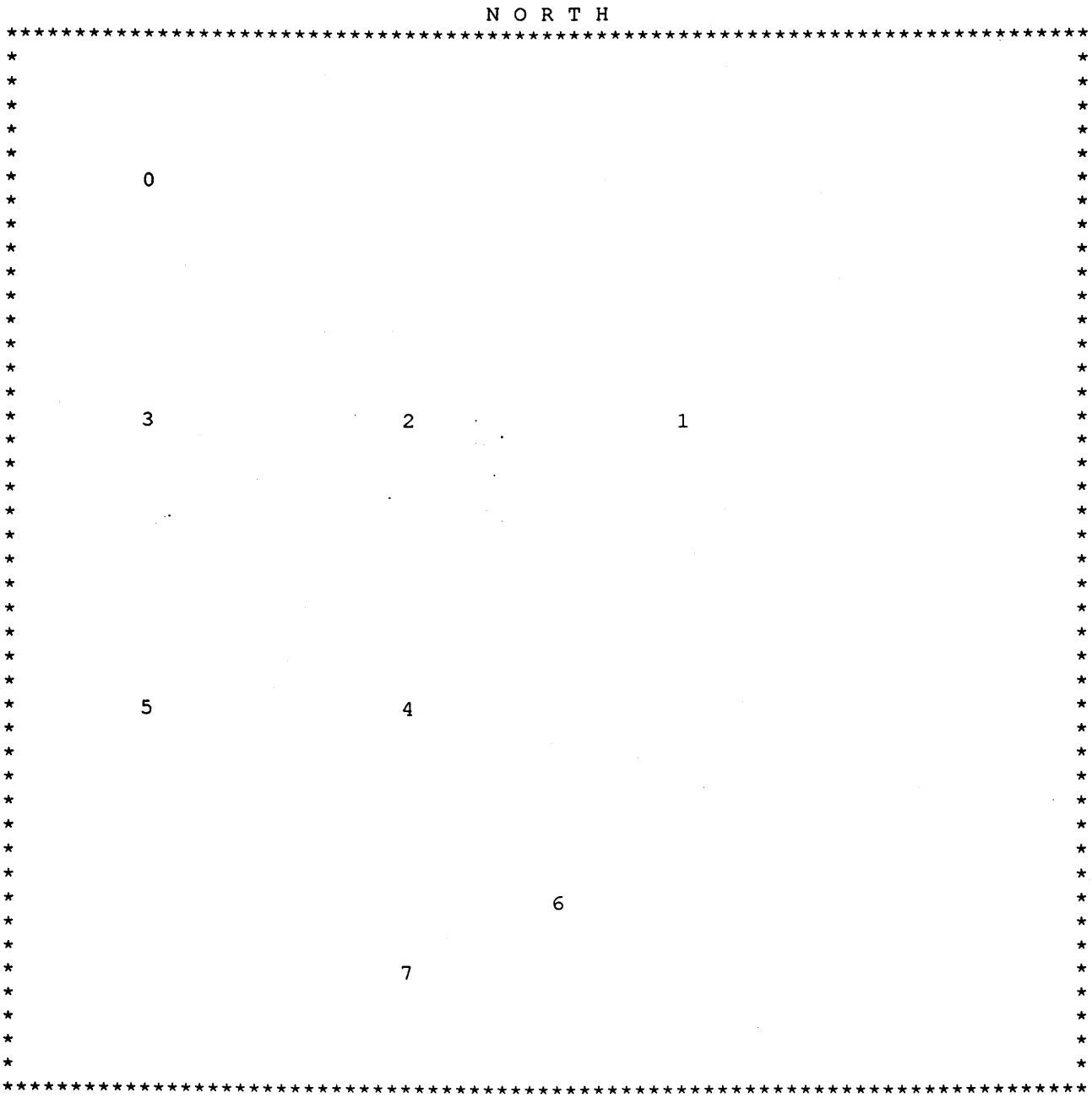
UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 3686	.0000		.00	Gordon Creek				
	WATER USE(S):								
	USA Bureau of Land Management (Price Fie							125 South 600 West	
0	91 3686	.0000		.00	Gordon Creek				
	WATER USE(S):								
	USA Bureau of Land Management (Price Fie							125 South 600 West	
1	91 348	.0000		.00	Gordon Creek				
	WATER USE(S): STOCKWATERING								
	Frandsen, Pete								
1	91 348	.0000		.00	Gordon Creek				
	WATER USE(S): STOCKWATERING								
	Frandsen, Pete								
2	91 3682	.0000		.00	Gordon Creek				
	WATER USE(S): STOCKWATERING								
	R. L. Bird Company							2069 Yale Avenue	
2	91 3682	.0000		.00	Gordon Creek				
	WATER USE(S): STOCKWATERING								
	R. L. Bird Company							2069 Yale Avenue	
3	91 2697	.0000		.00	Gordon Creek				
	WATER USE(S):								
	Marakis, John (Estate)								
3	91 2697	.0000		.00	Gordon Creek				
	WATER USE(S):								
	Marakis, John (Estate)								
4	91 4095	.0110		.00	Unnamed Spring				
	WATER USE(S): STOCKWATERING								
	Jacob, James C.							914 East 300 North	
	Jacob, J. Mark							914 East 300 North	
5	91 4096	.0110		.00	Unnamed Spring				
	WATER USE(S): STOCKWATERING								
	Jacob, James C.							914 East 300 North	
	Jacob, J. Mark							914 East 300 North	

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 16 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 21 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 4099	.0110	.00	Unnamed Spring				
	WATER USE(S): STOCKWATERING							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
1	91 1676	.0110	.00	Unnamed Spring				
	WATER USE(S):							
	Marakis, John (Estate)							
1	91 1675	.0000	.00	Coal Canyon Creek				
	WATER USE(S):							
	Marakis, John (Estate)							
2	91 3687	.0000	.00	Coal Canyon Creek				
	WATER USE(S): STOCKWATERING							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
2	91 3687	.0000	.00	Coal Canyon Creek				
	WATER USE(S): STOCKWATERING							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
3	91 3683	.0000	.00	Gordon Creek				
	WATER USE(S):							
	Oman, Milton A.				717 Continental Bank			
3	91 3683	.0000	.00	Gordon Creek				
	WATER USE(S):							
	Oman, Milton A.				717 Continental Bank			
4	91 398	.0000	.00	Coal Canyon Creek				
	WATER USE(S): STOCKWATERING							
	State of Utah Division of Wildlife Resou				1594 West North Temple, Ste 21			
4	91 257	.0000	.00	Gordon Creek				
	WATER USE(S):							
	State of Utah Division of Wildlife Resou				1594 West North Temple, Ste 21			
5	91 3681	.0000	.00	Gordon Creek				
	WATER USE(S):							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
5	91 3681	.0000	.00	Gordon Creek				
	WATER USE(S):							
	Jacob, James C.				914 East 300 North			
	Jacob, J. Mark				914 East 300 North			
6	91 777	1.5000	346.40	North Fork Gordon Creek			N	950

WATER USE(S): IRRIGATION STOCKWATERING
State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21

6 91 778 .1500 .00 North Fork Gordon Creek N 950
WATER USE(S):
State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21

6 91 4995 .0000 29.60 North Fork Gordon Creek N 950
WATER USE(S): IRRIGATION
State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21

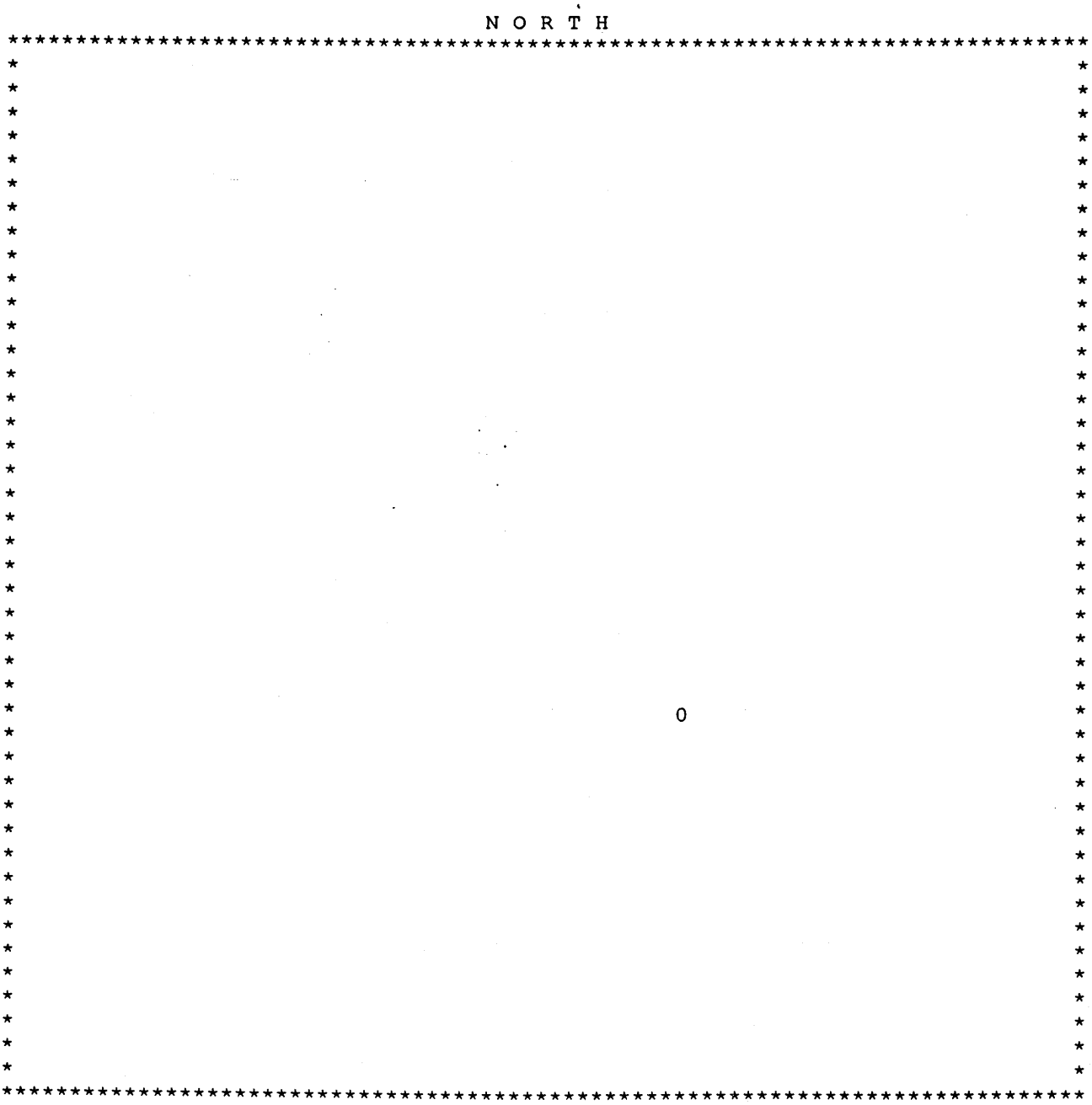
6 91 779 2.0000 .00 Beaver Creek & North Fork Gord N 950
WATER USE(S): IRRIGATION
State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21

7 91 398 .0000 .00 Coal Canyon Creek
WATER USE(S): STOCKWATERING
State of Utah Division of Wildlife Resou 1594 West North Temple, Ste 21

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 1 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 1 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

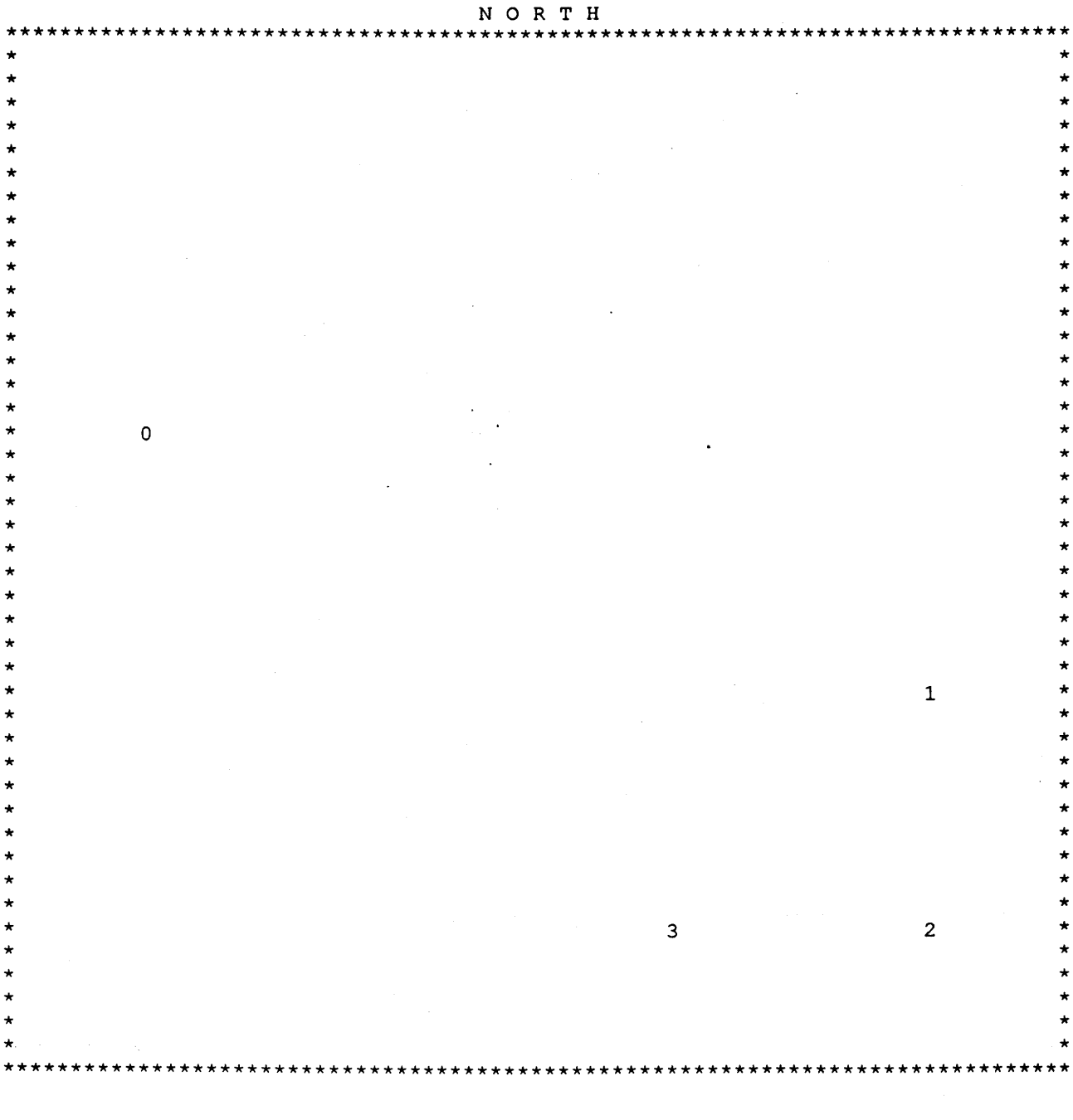
MAP CHAR	WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1413	.0000		.00	Left Hand Fork of Jump Creek			

WATER USE(S): DOMESTIC STOCKWATERING
Helper State Bank General Delivery

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 4 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 12 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	QUANTITY CFS	QUANTITY AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POIN NORTH
0	91 1414	.0000	.00	Shingle Fork of Beaver Creek			
	WATER USE(S): STOCKWATERING						
	Helper State Bank				General Delivery		
1	91 1414	.0000	.00	Shingle Fork of Beaver Creek			
	WATER USE(S): STOCKWATERING						
	Helper State Bank				General Delivery		
2	91 1407	.0000	.00	Beaver Creek			
	WATER USE(S): STOCKWATERING						
	Helper State Bank				General Delivery		
3	91 1405	.0000	.00	Spring Stream			
	WATER USE(S): DOMESTIC STOCKWATERING						
	Helper State Bank				General Delivery		

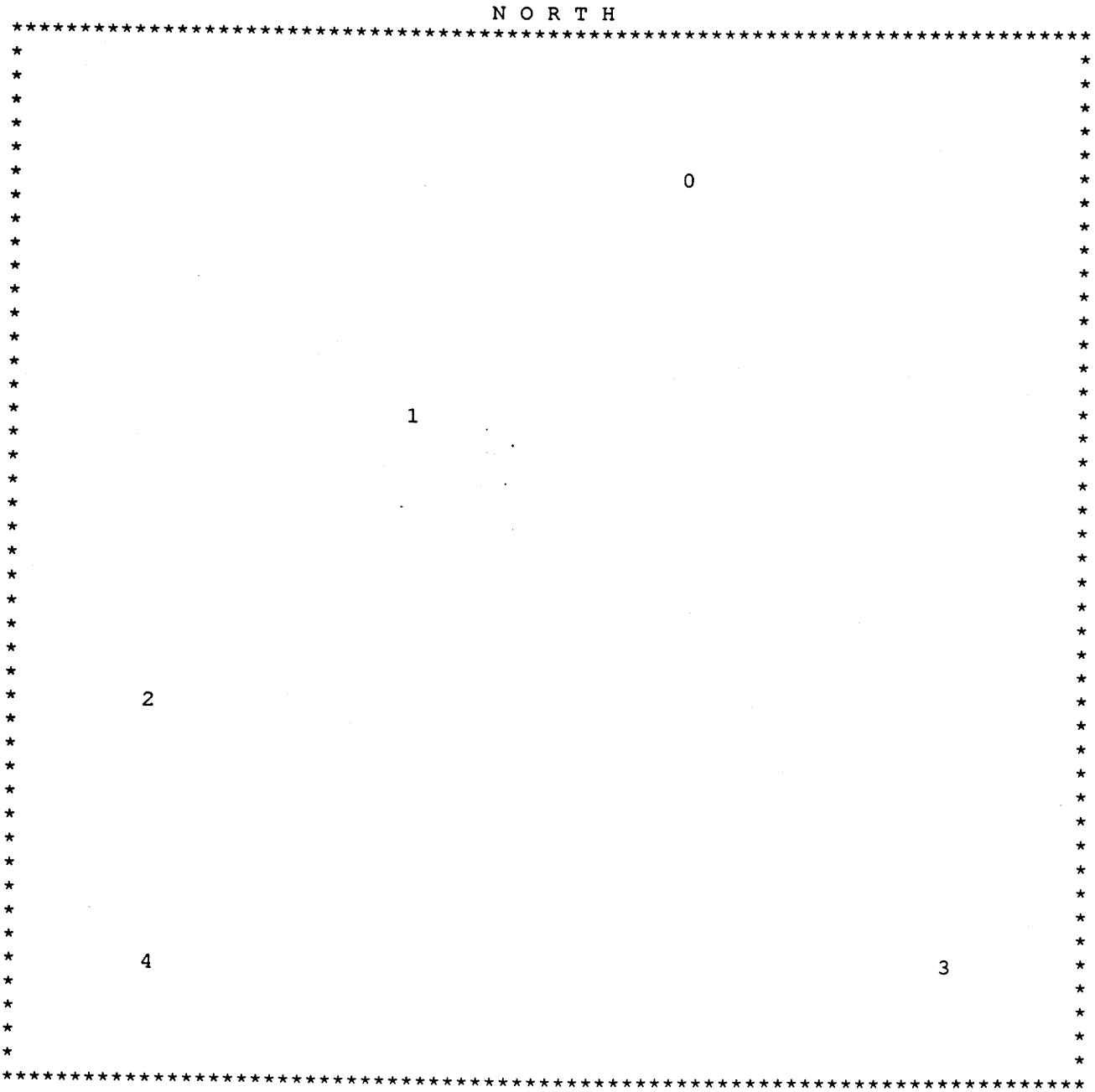
UTAH DIVISION OF WATER RIGHTS
NWPLAT POINT OF DIVERSION LOCATION PRO

MAP CHAR	WATER RIGHT	CFS	QUANTITY AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	NORTH	POIN
0	91 1914	.0110		.00	Unnamed Spring				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
0	91 1915	.0110		.00	Unnamed Spring				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
0	91 1916	.0110		.00	Unnamed Spring				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
0	91 1430	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
0	91 1431	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
0	91 1429	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
1	91 1430	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
1	91 1431	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
1	91 1429	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
2	91 1426	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
2	91 1426	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
2	91 1427	.0000		.00	Unnamed Stream				
	WATER USE(S): Stamatakis, Pete Jr.						1111 South 450 West		
2	91 1427	.0000		.00	Unnamed Stream				
	WATER USE(S):								

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, FEB
PLOT SHOWS LOCATION OF 24 POINTS OF DIV

PLOT OF ALL QUARTER(S) IN SECTION 6 TOWNSHIP 13S RAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 1000 FE



Stamatakis, Pete Jr. 1111 South 450 West

2 91 1428 .0000 .00 Unnamed Stream
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

2 91 1428 .0000 .00 Unnamed Stream
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1438 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1439 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

3 91 1440 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1435 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1436 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1437 .0220 .00 Unnamed Spring
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1432 .0000 .00 Burnt Canyon Stream
WATER USE(S):
Stamatakis, Pete Jr 1111 South 450 West

4 91 1433 .0000 .00 Burnt Canyon Stream
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

4 91 1434 .0000 .00 Burnt Canyon Stream
WATER USE(S):
Stamatakis, Pete Jr. 1111 South 450 West

COPY

00075378 Bk00439 Pg00085-00088

SHARON MURDOCK - COUNTY OF CARBON
1999 JUL 16 16:44 PM FEE $45.00 BY
REQUEST: SOUTH-EASTERN UTAH TITLE CO

When recorded, return to:
Parsons Behle & Latimer
Attn: Elizabeth Jones
P.O. Box 45898
Salt Lake City, Utah 84145-0898

DEED AND ASSIGNMENT

HORIZON MINING, LLC, a Utah limited liability company, having an address of HC35, Box 370, Helper, Utah 84526 ("Grantor"), for $10.00 (TEN DOLLARS) and other good and valuable consideration, hereby assigns, transfers, conveys and warrants against all claiming by, through, or under it to LODESTAR ENERGY, INC., a Delaware corporation, having an address of 333 West Vine Street, Suite 1700, Lexington, Kentucky 40507 ("Grantee"), its successors and assigns, the Federal Coal Leases, Hidden Splendor Lease, Property Rights and Water Rights, located in Carbon County, Utah, and described in Exhibit A attached hereto, along with such tracts of land and real property, coal, coal reserves, coal inventory, oil, gas and other minerals located in, on or under the land, water rights, buildings, fixtures and improvements on the land and any other easements, rights of way and related facilities, roads, haulways, leases, subleases, rents, issues, profits, income, tenements, hereditaments, possessory rights, claims, including mining claims, privileges and appurtenances belonging to, used, or enjoyed with such land, and all of the water and water rights, including all of the rights, privileges, easements and appurtenances belonging to and connected in any manner with the water and water rights owned or held by Grantor (collectively the "Property").

This conveyance is subject to the terms of the Asset Purchase Agreement between the parties dated July 14th, 1999. The representations and warranties contained in such Agreement relating to the Property are incorporated herein by this reference.

This Deed and Assignment does not supersede or waive any contractual remedy between Grantor and Grantee. Such remedies are in addition to and are not merged into this instrument.

Grantor shall, in addition to this instrument, execute such additional instruments or documents as necessary to complete the assignment, transfer and conveyance of the property in accordance with applicable federal, state and local laws or regulations.

This Deed and Assignment is intended to and does convey any right, title or interest Grantor may hereafter acquire in the Property.

The undersigned Grantor hereby acknowledges and affirms to the below named notary public that (1) he appeared before such notary public, holds the position or title set forth below and, on behalf of Grantor, by proper authority, either executed the foregoing document before such notary public or acknowledged to such notary public that the undersigned Grantor executed the foregoing document, and that (2) the foregoing document was the act of such limited liability company for the purpose stated in it.

DATED this 14th day of July, 1999.

GRANTOR:

HORIZON MINING, LLC

BY _____

ITS _____

STATE OF Utah)
: ss.
COUNTY OF Salt Lake)

On this 14th day of July, 1999, personally appeared before me Scott Kiseaden, personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he is the President of Horizon Mining, LLC, and that said document was signed by him in behalf of said limited liability company by authority of members and said Scott Kiseaden acknowledged to me that said limited liability company executed the same.

Julie L. McKenzie
NOTARY PUBLIC
Residing at: Davis County

My Commission Expires:
May 23, 2001

NOTARY PUBLIC
JULIE G. MCKENZIE
111 E. Broadway, Ste. 900
Salt Lake City, Utah 84111
Commission Expires
May 23, 2001
STATE OF UTAH

Section 20:	NE¼NW¼, NW¼NE¼, SE¼NE¼
Section 21	NW¼NE¼,
	including a 66 foot wide roadway containing approximately 1.31 acres referred to as the "Vacated Parcel" and more particularly described in Exhibit B to Attachment 1 of the Second Amendment of Mining Lease dated November 1, 1998

Containing 640.00 acres, more or less

PROPERTY RIGHTS

U.S. Department of the Interior, Bureau of Land Management, Underground Tunnel Right of Way No. UTU-73227 (merged into Federal Coal Lease UTU-74804 effective September 1, 1998).

WATER RIGHTS

1. Water Rights Lease and Sale Agreement between Mountain Coal Company and E.E. Pierce dated April 7, 1993, assigned to Horizon Coal Corporation, June 18, 1996, assignment ratified and consented to by Agnes K. Pierce and Billy Troy Kennick on June 18, 1996.

2. Water Lease Agreement and Memorandum of Water Lease Agreement between Florence A. Sweet and Horizon Coal Corporation dated May 1, 1995. Subject to application for permanent change of water, filed by Richard A. Sweet, approved by Utah State Engineer, to add springs as points of diversion to provide water for Horizon Mine, approximately .557 cfs total from mine tunnel and three springs (approved November 20, 1995).

00075378 Bk00439 Pg00088

APPENDIX 3-5

Insert Renewal Letter of Sweet Water Lease Agreement through 2005

Lodestar Energy, Inc.
Mountain Operations
White Oak Mines, Horizon Mine and Grand Valley Mines
HC 35 Box 370
Helper, Utah 84526

May 12, 2000

Florence A. Sweet
c/o Richard A. Sweet
Attorney–in-fact
1750 Orchard Drive
Salt Lake City, UT 84106

Dear Mr. Sweet:

This letter is to request on behalf of Lodestar Energy, Inc., recent assignee of the water rights lease between the Sweet family and the Horizon Coal Corporation, an extension of five years to the existing lease agreement. A check for the adjusted annual payment will follow using the Consumer's Price Index factor to determine the adjustment.

If you have any questions please feel free to call me at 435-448-9454.

Sincerely,

David B. Miller
Business Manager

APPENDIX 3-6

Insert updated UPDES Permit

APPENDIX 3-6

UPDES PERMIT

State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Michael O. Leavitt
Governor

Dianne R. Nielson, Ph.D.
Executive Director

Don A. Ostler, P.E.
Director

288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146
(801) 538-6016 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

Water Quality Board
Leroy H. Wullstein, Ph.D.
Chairman
K.C. Shaw, P.E.
Vice Chairman
Robert G. Adams
Nan Bunker
Ray M. Child, C.P.A.
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Ronald C. Sims, Ph.D.
Douglas E. Thompson, Mayor
J. Ann Wechsler
William R. Williams
Don A. Ostler, P.E.
Executive Secretary

July 15, 1999

Larry G. Jones
Horizon Mining, LLC
P.O. Box 599
Helper, Utah 84526

Dear Mr. Jones:

Subject: Plan Approval, and UPDES Permit UTG040019 Horizon Mine

We have reviewed the information submitted on July 13, 1999 for the mine water treatment system. The three underground sumps of 0.3 to 1.0 million gallons each are for the settling of 0.4 million gallons per day. The submitted data indicates that while the mine is inactive the total suspended solids is reduced to less than 10 mg/L.

Therefore, we approve the proposal of using sumps for the treatment of mine water.

If the discharge fails to comply with the UPDES permit limitations, further treatment must be provided.

Enclosed is the modified UPDES permit No. UTG040019 for your facility. Copies of EPA form 3320-1 Discharge Monitoring Report (DMR) forms for reporting and self-monitoring requirements as specified in the permit, will be sent as soon as printed. This permit will become effective on July 15, 1999, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Sections R317-8-6.11 and R317-8-6.13.

If you have any questions regarding this letter, please contact Steven McNeal at 538-6075.

Sincerely,

Utah Water Quality Board

Don A. Ostler, P.E.
Executive Secretary

DAO:SRM:st

Enclosures

cc: Curt McCormick, Permits (8P2-W-P), U.S. EPA Region VIII (w/encl)
Claron D. Bjork, Soueastern Utah District Health Dept. (w/encl)
Dave Ariotti, District Engineer (w/encl)
Division of Oil, Gas & Mining (w/encl)
Mark Burrell, DWQ Accounts (w/o encl)
Vicky Miller, Earth Engineering Inc., (w/encl)

K:\WQ\PERMITS\SMCNEAL\WP\HORZBIL2.LTR
FILE: UPDES HORIZON

Permit No. UTG040000
Industrial

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

AUTHORIZATION TO DISCHARGE UNDER THE

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM
(UPDES)

GENERAL PERMIT FOR COAL MINING

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the *"Act"*),

Horizon Mine

located approximately 20 miles northwest of Price, Utah as identified in the application No. UTG040019 is authorized to discharge from

outfall 001 located at latitude **39°41'37"** and longitude **111°02'58"**
outfall 002 located at latitude **39°41'39"** and longitude **111°02'56"**

to Jewkes Creek a tributary to the North Fork of Gordon Creek a tributary of the Price River

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on July 15, 1999.

This general permit and the authorization to discharge shall expire at midnight, April 30, 2003.

Signed this 15th day of July, 1999

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

TABLE OF CONTENTS

Cover Sheet--Issuance and Expiration Dates — Page No.

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS 3
- A. Definitions. 3
- B. Criteria for Inclusion in the General Permit for Coal Mining 5
- C. Notice of Intent for a General Permit for Coal Mining 5
- D Description of Discharge Point(s) 7
- E. Narrative Standard 7
- F. Specific Limitations and Self-monitoring Requirements 7

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS 10
- A. Representative Sampling 10
- B. Monitoring Procedures 10
- C. Penalties for Tampering 10
- D. Reporting of Monitoring Results 10
- E. Compliance Schedules 10
- F. Additional Monitoring by the Permittee 10
- G. Records Contents 10
- H. Retention of Records 11
- I. Twenty-four Hour Notice of Noncompliance Reporting 11
- J. Other Noncompliance Reporting 12
- K. Inspection and Entry 12

III. COMPLIANCE RESPONSIBILITIES 13
- A. Duty to Comply 13
- B. Penalties for Violations of Permit Conditions 13
- C. Need to Halt or Reduce Activity not a Defense 13
- D. Duty to Mitigate 13
- E. Proper Operation and Maintenance 13
- F. Removed Substances 13
- G. Bypass of Treatment Facilities 13
- H. Upset Conditions 14
- I. Toxic Pollutants 15
- J. Changes in Discharge of Toxic Substances 15
- K. Industrial Pretreatment 16

IV. GENERAL REQUIREMENTS 17
- A. Planned Changes 17
- B. Anticipated Noncompliance 17
- C. Permit Actions 17
- D. Duty to Reapply 17
- E. Duty to Provide Information 17
- F. Other Information 17
- G. Signatory Requirements 17
- H. Penalties for Falsification of Reports 18
- I. Availability of Reports 18
- J. Oil and Hazardous Substance Liability 18
- K. Property Rights 19
- L. Severability 19
- M. Transfers 19
- N. State Laws 19
- O. Water Quality-Reopener Provision 19

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

1. The "30-day (and monthly) average" is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. The "7-day (and weekly) average" is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

3. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

4. "Composite samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the composite sample period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

   a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

   b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

   c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

   d. Continuous collection of sample, with sample collection rate proportional to flow rate.

5. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

6. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly

designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

7. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

8. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

9. "Executive Secretary" means Executive Secretary of the Utah Water Quality Board.

10. "EPA" means the United States Environmental Protection Agency.

11. "Act" means the "*Utah Water Quality Act*".

12. "Best Management Practices" ("*BMPs*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. *BMPs* also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

13. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

14. "*CWA*" means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987.*

15. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.

16. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311* of the *Clean Water Act* (see *40 CFR 110.10* and *40 CFR 117.21*) or *Section 102* of *CERCLA* (see *40 CFR 302.4*).

17. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

18. "Waste pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

19. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *NOAA Atlas 2*, 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

20. The term "coal preparation plant" means a facility where coal is crushed, screened, sized, cleaned, dried, or otherwise prepared and loaded for transit to a consuming facility.

21. The term "coal preparation plant associated areas" means the coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.

22. "Alkaline mine drainage" means mine drainage which before any treatment has a pH equal to or greater than 6.0 and total iron concentration less than 10 mg/L.

23. The term "settleable solids" is that matter measured by the volumetric method specified below:

> Fill an Imhoff cone to the one-liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating material occurs, do not include the floating material in the reading.

B. Criteria for Inclusion in the General Permit for Coal Mining

This General permit shall apply only to the discharge of treated wastewater from:

Coal mining operations either new or existing in Utah which include or will include in part, or in whole, alkaline mine water drainage, storm water runoff from coal preparation plant associated areas, active mining areas, and post mining areas until the performance bond is released. The total amount of total dissolved solids discharged from all mine water and decant operations is limited to one ton per day.

C. Notice of Intent for a General Permit for Coal Mining

Any facility which desires coverage under this general permit for coal mining and meets the requirements of Part I.B. can be issued general permit coverage by submitting a notice of intent (NOI) to the Division of Water Quality at the addresses listed on page -- of this permit.

The NOI shall include:

a. A completed Environmental Protection Agency Application (EPA Form 3510-1) or equivalent information.

b. Location and identification number (such as 001, 002, etc.) of each existing discharge and/or proposed discharge point(s). This includes the latitude and longitude to the nearest 15 seconds and the name of the receiving water(s).

c. A description of the source of the wastewater for each discharge point.

d. A description of the treatment given or proposed for the wastewater at each discharge point and if necessary a justification of why no treatment is required.

e. Flow characteristics for each discharge point such as whether flow is or will be continuous or intermittent and indicate projected and/or actual average and maximum flows in gpd.

f. Data for each discharge point for the following parameters:

1) Biochemical oxygen demand (BOD_5).
2) Chemical oxygen demand (COD).
3) Total organic carbon (TOC).
4) Total suspended solids (TSS).
5) Flow.
6) Ammonia (as N).
7) Oil and grease.
8) Temperature.
9) pH.
10) Total dissolved solids (TDS).
11) Total iron and metals, cyanide, phenols located in Table III UAC R317-8-3.12.
12) For discharge(s) of mine water or mine water and mine water mixed with surface runoff one acute whole efficiency toxicity test using two species and a full dilution series (five dilutions plus a control). Sediment pond discharges which have only surface runoff do not require WET tests.
13) Date and time of sampling for each parameter
14) Date and time of analysis for each parameter
15) Utah certified laboratory which has completed the analysis for each parameter

If no data are available, indicate why the data are not available. The Executive Secretary may waive the reporting requirements for any of these pollutants and parameters if the applicant submits a request for such a waiver before or when the NOI is submitted which demonstrates that information adequate to support issuance of the permit can be obtained through less stringent reporting requirements.

g. For each discharge point the presence or absence of any toxic and/or priority pollutants as listed Table II, UAC R317-8-3.12.

D Description of Discharge Point(s).

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit is a violation of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

Outfall Number	Location of Discharge Point(s)
001	Sediment pond outfall to Jewkes Creek latitude 39°41 37" and longitude 111°02'58"
002	Mine discharge outfall to Jewkes Creek latitude 39°41 39" and longitude 111°02'56"

E. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

F. Specific Limitations and Self-monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations a/ Average 30-Day	Average 7-Day	Daily Maximum	Monitoring Requirements Measurement Frequency	Sample Type
Flow, gpd	NA	NA	NA	Monthly	Measured b/
Oil & Grease, mg/L	NA	NA	10 c/	Monthly	Grab
Total Suspended Solids,mg/L	25	35	70	Monthly	Grab e/
Total Iron, mg/L	NA	NA	1.0	Monthly	Grab e/
Total Diss. Solids,lbs/day	NA	NA	d/	Monthly	Grab e/

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample and shall be monitored monthly by a grab sample.

There shall be no visible sheen or floating solids or visible foam in other than trace amounts.

There shall be no use of gypsum for rock dusting unless the permittee provides sufficient information to the Executive Secretary such that approval is granted based upon the Colorado River Basin Salinity Control Forum Policies and the fact that it will not significantly increase total dissolved solids concentrations.

There shall be no discharge of sanitary wastes or any process water from coal preparation plants.

N.A. - Not Applicable.

a/ See Definitions, *Part I.A* for definition of terms.

b/ For intermittent discharge, the duration of the discharge shall be reported along with the flow.

c/ If a visual sheen for oil and grease is observed then a grab sample must be taken immediately and the results shall not exceed 10 mg/L.

d/ The total amount of total dissolved solids (TDS) discharged from all mine water and decant operations is limited to one ton (2000 pounds) per day.

e/ These samples may also be a composite sample.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken from the effluent before mixing with any receiving water.

3. Any overflow, increase in volume of a discharge or discharge from a bypass system caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at all surface runoff ponds (outfalls) may comply with the following limitation instead of the total suspended solids limitations contained in Part I.F.1:

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 mL/L

In addition to the monitoring requirements specified under Part I.F.1, all effluent samples collected during storm water discharge events shall also be analyzed for settleable solids. Such analyses shall be conducted on either grab or composite samples.

4. Any overflow, increase in volume of a discharge or discharge from a bypass system caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at all surface runoff

pond outfalls may comply with the following limitations instead of the otherwise applicable limitations:

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units. However, as stated under Part I.F.3, all effluent samples collected at all surface runoff pond outfalls during storm water discharge events shall be analyzed for settleable solids and the parameters identified under Part I.F.1.

5. The permittee/operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described in Parts I.F.3. and F.4. The alternate limitation in Parts I.F.4. and F.5. shall not apply to treatment systems that treat underground mine water only.

6. Best Management Practices.

All requirements for best management practices are covered by the Multi-Sector General Storm Water Permit.

I. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to the use-disposal practice.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10*, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Reporting of Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), post-marked no later than the 28th day of the month following the completed reporting period. The first report is due on June 28, 1999 If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part IV.G)*, and submitted to the Director, Division of Water Quality at the following address:

original to: Department of Environmental Quality
Division of Water Quality
288 North 1460 West
PO Box 144870
Salt Lake City, Utah 84114-4870

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10* or as otherwise specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;

3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance which may seriously endanger health or environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 538-6146, or 24 hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4123 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:

   a. Any noncompliance which may endanger health or the environment;

   b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See *Part III.G, Bypass of Treatment Facilities.)*;

   c. Any upset which exceeds any effluent limitation in the permit (See *Part III.H, Upset Conditions.*); or,

   d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and,

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.

4. The Executive Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 538-6146.

5. Reports shall be submitted to the addresses in *Part II.D, Reporting of Monitoring Results.*

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part II.D* are submitted. The reports shall contain the information listed in *Part II.I.3.*

K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location.

I. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding $25,000 per day of violation; Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding $50,000 per day. Except as provided at *Part III.G, Bypass of Treatment Facilities* and *Part III.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section. Return of removed

substances, as described in *Part III.F*, to the discharge stream shall not be considered a bypass under the provisions of this paragraph.

2. Notice:

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under *Part II.I, Twenty-four Hour Reporting.*

3. Prohibition of bypass.

   a. Bypass is prohibited and the Executive Secretary may take enforcement action against a permittee for a bypass, unless:

      (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage ;

      (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

      (3) The permittee submitted notices as required under paragraph 2 of this section.

   b. The Executive Secretary may approve an anticipated bypass, after considering its adverse effects, if the Executive Secretary determines that it will meet the three conditions listed above in paragraph 3.a of this section.

H. <u>Upset Conditions</u>.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2. of this section are met. Executive Secretary's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The permittee submitted notice of the upset as required under *Part II.I, Twenty-four Hour Notice of Noncompliance Reporting*; and,

   d. The permittee complied with any remedial measures required under *Part III.D, Duty to Mitigate.*

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. One hundred micrograms per liter (100 ug/L);

   b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

   c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,

   d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6).*

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

a. Five hundred micrograms per liter (500 ug/L);

b. One milligram per liter (1 mg/L) for antimony:

c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,

d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

K. Industrial Pretreatment. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Executive Secretary of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for coverage under the new general permit. The NOI shall be submitted at least 60 days before the expiration date of this permit. An application shall be submitted at least 180 days before the expiration date of this permit if an individual permit is necessary.

E. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.

F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.

G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized

representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph *IV.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph *IV.G.2* must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Executive Secretary. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any

responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Executive Secretary at least 20 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117*.

O. Water Quality-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.

3. A revision to the current Water Quality Management Plan is approved and adopted which calls for different effluent limitations than contained in this permit.

APPENDIX 3-11

Insert New Appendix 3-11
Approval Letter from BLM for R_2P_2

APPENDIX 3-11

BLM APPROVAL OF R2P2

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Price Field Office
125 South 600 West
Price, Utah 84501

3482
UTU-74804
(UT-070)

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
Certified No. Z 182 430 780

APR 21 2000

Mr. David B. Miller
Lodestar Energy, Inc.
HC 35 Box 370
Helper, Utah 84526

Re: Resource Recovery and Protection Plan (R2P2) Horizon Mine, Lodestar Energy, Inc., November 4, 1999

Dear Mr. Miller:

On November 4, 1999, the Bureau of Land Management (BLM) received Lodestar Energy, Inc.'s Resource Recovery Protection Plan (R2P2) for the Horizon Mine. This letter is to notify you that the BLM has completed our review of Lodestar Energy, Inc.'s R2P2 regarding the Horizon Mine. The purpose of our review is to determine compliance with The Mineral Leasing Act of 1920,as amended; the regulations at 43CFR 3480; the lease terms and conditions and to ensure that maximum economic recovery (MER) will be achieved.

Our determination of the subject R2P2 is as follows:

- Due to conflicting geologic information, reserves north of the NW-SE trending geologic feature have not been removed from the recoverable reserve base.
- Recoverable coal reserves for UTU-74804 are 6,295,700 as determined by the May 12, 1998 Engineering and Geologic Report.
- The actual sequencing and initial date of commencement of mining operations on UTU-74804 will probably change. Once all the permits are in place, a revised sequence and timing map will need to be submitted to the BLM.

Based upon the above-stated requirements, BLM determination is conditioned with the following stipulation:

Stipulation : Horizon shall submit the following information (as requested above):

- An updated mine plan that details mining sequencing and any other changes will be submitted when all permits are in place, but prior to commencement of operations on the Federal lease.

BLM has determined that the information contained in the R2P2 for the Horizon Mine with stipulation, does comply with the Mineral Leasing Act of 1920, as amended, the regulations at 43 CFR 3480 and the lease terms and stipulations. Thus, approval for the Horizon Mine's R2P2 is granted. If you have any questions, please contact Jay Marshall at the Price Field Office at (435) 636-3614.

Sincerely,

Field Manager

cc: UT-921, SD, Utah
Utah Division of Oil, Gas and Mining
355 West North Temple Street
3 Triad Center Ste.350
Salt Lake City, Utah 84180-1203
Joe Wilcox
Office of Surface Mining
Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

Chapter 4

LAND STATUS, LAND USE AND POST MINING LAND USE

4.1 Scope

This section details surface and mineral ownership as well as lease holders or easement holders, or other pending options or interests in lands which are contiguous to or within the area to be covered by the permit.

The existing regional and site specific land use as well as the possible impacts which may occur during and after mining to the land-use and socioeconomy are considered.

4.2 Methodology

All information documenting land status has been acquired from information on file with various governmental agencies, and also through independent land checks completed by Utah Coal and Chemical Corp.

4.3 Land Status

4.3.1 Surface Land Status

~~Figure 4-1~~Plate 4-2 shows surface ownership of the area. Surface land owners will be notified by letter of the applicants intent to mine six months prior to mining. Table 4-1 contains addresses for the surface owners. The letter will state the mine's name and address, company contact, purpose of notification, possible impacts to their land due to mining, and request of access to surface for monitoring. A copy of the letters has been forwarded to UDOGM.

4.3.2 Mineral Status

~~Figure 4-2~~Plate 4-3 shows the ownership and location of the mineral tracts. Table 4-1 list the names and addresses of the mineral ownership.

4.3.3 Legal Right to Enter

Plate 1-1 shows the boundaries of the land within the proposed permit area upon which the applicant has the legal right to enter and conduct coal mining activities. See Chapter 2 of this permit for further information concerning the permit boundary.

Leased Property

Lease documentation, description, and right-to-enter information are located in Chapter 2.

TABLE 4-1

Names and Addresses
Record Holders of Legal Interests

1. U P & L
   P.O. Box 899
   Salt Lake City, Utah 84110

2. Hidden Splendor Resources
   50 West Liberty Street, Suite 880
   Reno, NV 89501

3. J. Mark & James Jacobs
   734 S. Cherry Drive
   Orem, Utah 84057

4. Agnes and Eldred E. Peirce, Jr.
   3432 South 500 East
   Price, Utah 84501

5. Steve and Pete (Jr.) Stamatakis
   1111 South 450 West
   Price, Utah 84501

6. United States of America
   Bureau of Land Management
   2370 South 2300 West
   West Valley City, Utah 84084

7. R. L. Bird
   1840 East Bryan Avenue
   Salt Lake City, Utah 84108

8. Nielson Ltd.
   P.O. Box 620
   Huntington, Utah 84528

9. Roy M. and Tessie K. Farley
   5240 So. Highland Drive
   Salt Lake City, Utah 84117

10. Robert and Linda N. Jewkes
    Wellington, Utah 84542

11. Luke G. and Gene S. Pappas
2030 S. Cave Hollow Way
Bountiful, Utah 84010

12. Milton A. Oman
1714 E. Millcreek Way
Salt Lake City, Utah 84106

13. Utah Division of Wildlife Resources
455 West Railroad Avenue
Price, Utah 84501

14. K.C. Jensen and Tonda Hampton
P.O. Box 957
Price, Utah 84501

15. Carbon County
Courthouse Building
Price, Utah 84501

16. Arthur J. Anderson, Et al
4190 Fortuna Way
Salt Lake City, Utah 84117

17. Utah State Fish and Game
1095 West Motor Avenue
Salt Lake City, Utah 84116

4.3.3.1 Road Usage Agreements

In a letter dated May 13, 1996 Carbon County agreed to allow Horizon to use their County Road 290 to access the Horizon No. 1 mining project. Carbon County also agreed to ~~continued~~continue the maintenance of county road 290 (Appendix 3-1).

4.3.4 Associated Surface Mining

The surface operations associated with underground coal mining activities do not involve the surface mining of coal. The private mineral lease to be mined (coal) has not been severed from the private surface lands.

4.4 Existing Land Use

4.4.1 Regional Land Use

Agricultural/Livestock

Historically, the livestock industry has played an important part of the ~~regions~~region's economy. Early settlers depended on range land for grazing sheep, cattle, and horses. Presently, the trend is towards more cattle grazing and fewer sheep. The lands in the area used for grazing are outlined on Plate 4-1.

Forestry

Timber operations were once closely tied to ranch operations in the area. Early settlers needed the timber for fences, corrals, mine timber, railroad ties, etc. In more recent years, the majority of the sawmills have closed due to less demand for wood products.

During 1995 a logging operation opened on privately owned land above the Horizon proposed permit area. The logging operation uses County Road 290 and the county road (Consumer/Clear Creek) which runs through the proposed disturbed area.

Recreation

A large variety of wildlife zones are present ranging from cold desert to high mountain forest. Mule deer are the most abundant big game in the region. Mule deer and elk are popular big game hunting species. Lakes, streams, and rivers of this region provide habitat for a variety of fishes.

In addition to hunting and fishing, USFS and BLM provide lands for a variety of recreational activities in this region. They include camping, hiking, snowmobiling, etc.

4.4.2 Mine Plan Area Land Use - Past and Present

The land on which the Horizon No. 1 Mine is located has long been used for coal mining. Other than coal mining, this area has been used for hunting, hiking, and grazing. There are no developed campgrounds or paved public roads within the area and none are planned for the future.

The land use within and adjacent to the permit boundary at the time of this application is the monitoring of previous mining operations, mining reclamation activities, wildlife habitat, and grazing. The lands within the permit boundary are monitored to gather data necessary in permitting a mining operation. Horizon is unaware as to the owners intended use for all lands in the area, therefore Plate 4-1 outlines areas with specific or specialized land uses.

Private landowners presently administer the lands in this area for limited livestock forage. Cattle and sheep are herded through the proposed mine site area in spring and back through in the fall. Wildlife habitat, watershed, dispersed recreation, and coal mining are also land uses in the area. There are no range improvements in the area. Access to the grazing lands is limited to jeep trails into the higher elevations leading to Beaver Creek above the proposed mine sites. There are no plans to alter this access situation. The mine area has been classified as M & G by Carbon County~~, supportive~~. Supportive and descriptive documentation is located in Appendix 4-1.

Carbon County owns and maintains two roads, one ~~run~~runs parallel to the permit boundary on the south (290), the second runs through the disturbed area (for approximately 1250') enabling access to higher elevations for grazing and recreational activities (Consumers/Clear Creek).

4.4.3 Affect of Operations on Land Use and Mitigation Measures

The surface disturbance at the No. 1 Mine will consist of access/haul roads and surface ~~facility~~facilities that will service the mining operations; some wildlife will be displaced due to coal hauling and facility operation. There will be little impact on range land as the mine disturbed area is below areas used for grazing by private landowners.

There are no public roads or public parks in or near the proposed mining operations that would suffer any impacts from mining operations. The Gordon Creek State Wildlife Management Unit lies southeast of the permit area.

The sedimentation pond will be constructed below the disturbed area to prevent sediment from entering the North Fork Gordon Creek. Refer to Chapter 7 for the location of runoff and diversion structures.

It is not projected that the mining operation will affect the land use within and adjacent to the permit boundary.

4.5 Post Mining Land Use

Once mining has ceased, the disturbed areas will be reclaimed to a degree acceptable to UDOGM and the land will once again support its principle pre-mining use: i.e., undeveloped land. Private landowners will continue to graze sheep and cattle on areas near Beaver Creek, which is above the mine site.

The restoration of the area will be achieved by regrading the yards, reclaiming the roads and portal areas to a practical degree, planting all disturbed areas and monitoring the revegetation effort.

4.6 Socioeconomic Consideration

The coal mining industry within Emery and Carbon Counties ~~have~~has shown several erratic periods of renewed growth and sudden decline. During the 1950 -1960 census period, the population of Emery County declined 8.79 percent. From 1960 to 1970, Emery County's population declined .74 percent per year. From 1970 to 1975, the population increased from 5,137 to an estimated 6,700 persons, a 23 percent increase.

Carbon and Emery Counties are economically dependent upon conditions in the coal market. This is evident by the slump in population of these counties that occurred between 1950 - 1970. The recent increase in coal mining has centered in Emery County where mining employment has increased over 210 percent from 1969 to 1980. The increase has been more modest in Carbon (40 to 50 percent).

CHAPTER 4

Redline / Strikeout of the text in this Chapter

Revised Plate 4-1 for Land Use

Replace Figure 4-1 with Plate 4-2 Surface Ownership

Replace Figure 4-2 with Plate 4-3 Coal Ownership

CHAPTER 6

Revised Plate 6-1 Geology with Expanded Permit Boundary

CHAPTER 6

Replacement Plate 6-1 Geology with Drill Holes and Cross-section Locations

CHAPTER 7

Replacement Page 7-10 Updated Water-Level Data for Monitoring Wells

Revised Plate 7-1 Water Monitoring Locations with expanded Baseline Locations

Revised Plate 7-3 Water Rights

TABLE 7-1 (Continued)

WATER-LEVEL DATA OBTAINED FROM
LOCAL MONITORING WELLS

Date	HZ-95-1		HZ-95-1S		HZ-95-2		HZ-95-3	
	Depth (ft)*	Elevation (ft)	Depth (ft)*	Elevation (ft)	Depth (ft)*	Elevation (ft)	Depth (ft)*	Elevation (ft)
12/5/95	--	--	135.0	8221.5	828.0	7519.6	--	--
12/13/95	786.0	7570.7	--	--	--	--	--	--
12/21/95	--	--	--	--	--	--	378.8	7522.7
7/9-10/96	771.3	7585.4	133.8	8222.7	830.0	7517.6	380.8	7520.7
8/5/96	770.8	7585.9	133.5	8223.0	829.4	7518.2	387.8	7513.7
9/11/96	769.4	7587.3	132.5	8224.0	829.4	7518.2	387.7	7513.8
10/23/96	776.4	7580.3	132.5	8224.0	829.2	7518.4	380.7	7520.8
11/1/96	776.4	7580.3	132.5	8224.0	829.2	7518.4	380.8	7520.7
12/13/96	#		#		829.5	7518.1	379.5	7522.0
1/6/97	771.05	7584.75	133.0	8223.5				
2/10/97	+		+		+		+	
3/25/97	+		+		+		+	
4/1/97	+		+		+		+	
5/28/97	770.95	7584.9	131.5	8225.1	828.05	7519.55	379.9	7522.4
6/30/97	770.2	7585.6	132.14	8224.36	827.72	7519.88	379.9	7522.4
9/16/97	773.5	7588.9	132.5	8224.0	827.2	7520.4	379.9	7522.4
10/17/97	773.7	7588.7	132.5	8224.0	827.2	7520.4	379.9	7522.4
6/30/98	817.8	7538.9	133.1	8223.4	836.6	7511.0	395.1	7506.4
9/1/98	745.0	7611.7	134.5	8222.0	840.9	7506.7	398.0	7503.5
6/1/99	758.8	7597.9	133.7	8222.8	847.8	7499.8	399.5	7502.0
7/1/99	758.1	7598.6	134.4	8222.1	845.9	7501.7		
11/1/99	+		+		+		397.0	7504.5
5/20/00	862.7	7494.0	132.8	8223.7	849.8	7497.8	401.5	7500.0
9/8/00							402.1	7499.4
9/26/00	875.0	7481.7	134.4	8222.1	863.8	7483.8		

* Depth measured from top of 2" tubing
\# Well site inaccessible 12/16/96, access attempted with Bill Malencik, UDOGM
\+ Mine site declared inaccessible by Bill Malencik

Surface Elevations

	Top of 6" Casing	Top of 2" Tubing	Ground Elevation
HZ-95-1	8357.1	8356.7	8352.6
HZ-95-1S	8357.6	8356.5	8352.6
HZ-95-2	8348.1	8347.6	8346.3
HZ-95-3	7902.2	7901.5	7897.6

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CHAPTER 7

Replacement Tables 7-2 and 7-5

TABLE 7-2

WATER MONITORING PARAMETERS FOR HORIZON MINE DURING OPERATION AND RECLAMATION PERIODS

	GROUND WATER SITES						SURFACE WATER SITES						
	SP-1	SP-2	SP-4	SP-9	GV-70	2-6-W	SS-3	SS-5	SS-7	SS-8	SS-10	SS-11	SS-12
Field Parameters	Quarterly Samples						Quarterly Samples						
Flow (gpm)	x	x	x	x	x	x	x	x	x	x	x	x	x
pH (standard units)	x	x	x	x	x	x	x	x	x	x	x	x	x
Specific Conductivity	x	x	x	x	x	x	x	x	x	x	x	x	x
Temperature (°C)	x	x	x	x	x	x	x	x	x	x	x	x	x
Disoloved Oxygen (mg/l)							x	x	x	x	x	x	x
Laboratory Parameters	Quarterly Samples						Quarterly Samples						
Total Disolved Solids	x	x	x	x	x	x	x	x	x	x	x	x	x
Total Settleable Solids							x	x	x	x	x	x	x
Total Suspended Solids							x	x	x	x	x	x	x
Total Hardness (as $CaCO_3$)	x	x	x	x	x	x	x	x	x	x	x	x	x
Bicarbonate	x	x	x	x	x	x	x	x	x	x	x	x	x
Carbonate	x	x	x	x	x	x	x	x	x	x	x	x	x
Calcium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Chloride	x	x	x	x	x	x	x	x	x	x	x	x	x
Iron (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Iron (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
Magnesium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Manganese (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Manganese (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
Potassium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Sodium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Sulfate	x	x	x	x	x	x	x	x	x	x	x	x	x
Oil & Grease							x	x	x	x	x	x	x
Cations (meq/l)	x	x	x	x	x	x	x	x	x	x	x	x	x
Anions (meq/l)	x	x	x	x	x	x	x	x	x	x	x	x	x
Alkalinity (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
5th Year Low Flow Prior to Permit Renewal													
Acidity	x	x	x	x	x	x	x	x	x	x	x	x	x
Aluminum (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Arcenic (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Boron (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Cadmium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Copper (dissolvd)	x	x	x	x	x	x	x	x	x	x	x	x	x
Lead (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Molybdenum (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Ammonia	x	x	x	x	x	x	x	x	x	x	x	x	x
Nitrate	x	x	x	x	x	x	x	x	x	x	x	x	x
Nitrite	x	x	x	x	x	x	x	x	x	x	x	x	x
Phosphate (ortho)	x	x	x	x	x	x	x	x	x	x	x	x	x
Selenium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Zinc (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x

TABLE 7-5

WATER MONITORING PARAMETERS FOR HORIZON MINE DURING OPERATION AND RECLAMATION PERIODS

	GROUND WATER SITES						SURFACE WATER SITES						
	SP-1	SP-2	SP-4	SP-9	GV-70	2-6-W	SS-3	SS-5	SS-7	SS-8	SS-10	SS-11	SS-12
Field Parameters	Quarterly Samples						Quarterly Samples						
Flow (gpm)	x	x	x	x	x	x	x	x	x	x	x	x	x
pH (standard units)	x	x	x	x	x	x	x	x	x	x	x	x	x
Specific Conductivity	x	x	x	x	x	x	x	x	x	x	x	x	x
Temperature (°C)	x	x	x	x	x	x	x	x	x	x	x	x	x
Disoloved Oxygen (mg/l)							x	x	x	x	x	x	x
Laboratory Parameters	Quarterly Samples						Quarterly Samples						
Total Disolved Solids	x	x	x	x	x	x	x	x	x	x	x	x	x
Total Settleable Solids							x	x	x	x	x	x	x
Total Suspended Solids							x	x	x	x	x	x	x
Total Hardness (as $CaCO_3$)	x	x	x	x	x	x	x	x	x	x	x	x	x
Bicarbonate	x	x	x	x	x	x	x	x	x	x	x	x	x
Carbonate	x	x	x	x	x	x	x	x	x	x	x	x	x
Calcium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Chloride	x	x	x	x	x	x	x	x	x	x	x	x	x
Iron (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Iron (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
Magnesium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Manganese (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Manganese (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
Potassium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Sodium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Sulfate	x	x	x	x	x	x	x	x	x	x	x	x	x
Oil & Grease							x	x	x	x	x	x	x
Cations (meq/l)	x	x	x	x	x	x	x	x	x	x	x	x	x
Anions (meq/l)	x	x	x	x	x	x	x	x	x	x	x	x	x
Alkalinity (total)	x	x	x	x	x	x	x	x	x	x	x	x	x
5th Year Low Flow Prior to Permit Renewal													
Acidity	x	x	x	x	x	x	x	x	x	x	x	x	x
Aluminum (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Arcenic (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Boron (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Cadmium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Copper (dissolvd)	x	x	x	x	x	x	x	x	x	x	x	x	x
Lead (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Molybdenum (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Ammonia	x	x	x	x	x	x	x	x	x	x	x	x	x
Nitrate	x	x	x	x	x	x	x	x	x	x	x	x	x
Nitrite	x	x	x	x	x	x	x	x	x	x	x	x	x
Phosphate (ortho)	x	x	x	x	x	x	x	x	x	x	x	x	x
Selenium (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x
Zinc (dissolved)	x	x	x	x	x	x	x	x	x	x	x	x	x

APPENDIX 7-6

Insert Beaver Creek Tract Lease Baseline Water Data and Location Map of Points JC-2 to JC-20

APPENDIX 7-6

Beaver Creek Tract Lease Baseline Water Data

BEAVER CREEK LEASE AREA

Spring No.: BC-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	5	7.67	418
9/96	SEEP			
7/97	DRY			
10/97	DRY			

Spring No.: BC-31
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	15	6	7.84	337
7/97	5	4	6.97	444
7/98	22	3	7.31	408
10/98	7	4	7.30	415

BEAVER CREEK LEASE AREA

Spring No.: BC-32
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1.5	6	7.73	416
10/96	2	7	8.25	565
7/97	4	4	7	474
7/98	5	4	7.70	310
10/98	2	5	7.83	257

BEAVER CREEK LEASE AREA

Spring No.: CC-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	10	9	7.34	788
10/96	.5	12	8.18	944
7/97	<1	9	7.90	1002
10/97	<1	7	7.49	1022
8/98	DRY			

Spring No.: CC-2
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	<1	5	7.35	922
9/96	DRY			
7/97	DRY			
9/97	DRY			
8/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CC-3
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	<1	7	7.44	786
9/96	DRY			
7/97	DRY			
9/97	DRY			
8/98	DRY			
10/98	DRY			

Spring No.: CC-4
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	<0.5	8	7.79	788
9/96	DRY			
7/97	10	15	8.06	975
10/97	12	9	7.90	892
8/98	2	11	7.88	900
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CC-5
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	2	5	7.69	782
9/96	2	8	7.58	813
10/96	2	11	7.97	1099
5/97	3	8	8.02	915
10/97	2	8	7.74	1071

CC5/CC6 was incorporated into the quarterly monitoring program in 1997.

Spring No.: CC-6
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	25	10	7.77	714
8/96	28	18	8.02	850
10/96	10	13	8.10	1099
7/97	29	9	7.81	1004
10/97	25	4	7.73	971

CC5/CC6 was incorporated into the quarterly monitoring program in 1997.

BEAVER CREEK LEASE AREA

Spring No.: CV-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	SEEP			
10/96	<1	8	6.97	526
7/97	18	4	7.35	474
10/97	<1	10	6.83	546
7/98	23	5	6.08	530
10/98	2.75	4	8.12	450
6/99	18	7	7.04	550

Spring No.: CV-2
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)	Noted Usage
7/96	15	6	7.00	412	
10/96	4	7	7.20	481	
7/97	21				
10/97	10	8	6.84	550	
7/98	20	6	7.23	525	Cattle
10/98	6	4	8.16	218	
6/99	20	7	7.17	487	

BEAVER CREEK LEASE AREA

Spring No.: CV-3
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	9	7	6.89	395
10/96	SEEP			
7/97	SEEP			
10/97	<1	8	7.11	517
7/98	34	10	7.31	452
10/98	10	11	7.28	430
6/99	22	7	7.64	430

Spring No.: CV-4
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	SEEP			
10/96	SEEP			
7/97	15	7	7.52	368
10/97	SEEP			
7/98	2	4	7.38	733
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: CV-5
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	SEEP			
10/96	<1	6	7.33	602
7/97	3	4	7.39	374
10/97	<1	11	6.58	480
7/98	1	10	7.59	422
10/98	SEEP			

Spring No.: CV-6
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	2	6	7.00	391
10/96	<1	8	7.78	255
7/97	10	3	7.41	437
10/97	DRY			
7/98	0.75	10	7.66	421
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-7
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)	Usage Noted
7/96	SEEP				
10/96	SEEP				
7/97	4	7	7.43	356	
10/97	<1	10	6.28	526	
7/98	2.5	6	7.79	335	Cattle
10/98	1	7	7.85	338	

Spring No.: CV-8
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	0.5	7	7.34	254
8/96	<1	9	7.85	277
10/96	1	7	6.96	357
7/97	2	8	7.20	361
10/97	<1	7	6.75	403
7/98	1	4	7.76	492
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: CV-10
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	5	7.67	493
7/97	SEEP			
10/97	<1	5	7.51	514
7/98	.10	7	7.86	157.4
10/98	DRY			

Spring No.: CV-11
Usage:

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)	
10/96	.5	5	7.67	377	
7/97	5	5	7.10	110	
10/97	4	4	6.37	131	
10/98	SEEP(A)				

(A) Spring effected by logging activity.

BEAVER CREEK LEASE AREA

Spring No.: CV-12
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	SEEP			
7/97	<1	5	7.12	150
10/97	DRY			
7/98	.10	12	8.02	216
10/98	DRY			

Spring No.: CV-13
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	SEEP			
7/97	2	5	7.08	359
10/97	<1	7	6.58	442
8/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-30
Usage: Wildlife/Livestock (Heavy Usage)

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	2	9	7.38	263
8/96	SEEP			
10/96	SEEP			
7/97	3	4	7.34	359
10/97	DRY			
7/98	3	10	7.93	404
10/98	SEEP			

Spring No.: CV-31
Usage: Wildlife/Livestock (Heavy Usage)

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	2	4	7.07	429
10/96	2	7	7.23	606
7/97	5	2	7.04	444
10/97	2	4	6.56	566
7/98	4.5	4	7.88	533
10/98	1.75	4	7.80	551

BEAVER CREEK LEASE AREA

Spring No.: CV-31A
Usage: Wildlife/Livestock (Heavy Usage)

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	3	7	7.19	551
7/97	3	4	7.42	484
10/97	1	7	6.72	538
7/98	1	7	7.97	445
10/98	SEEP			

Spring No.: CV-32
Usage: Wildlife/Livestock (Heavy Usage)

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
7/96	1	5	7.37	250
10/96	<1	7	7.02	370
7/97	DRY			
10/97	DRY			
7/98	2	7	7.74	440
10/98	<1	10	8.04	389

BEAVER CREEK LEASE AREA

Spring No.: CV-33
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	7	6.17	51
7/97	<1	9	7.27	78
10/97	DRY			
7/98	<1	8	7.92	340
10/98	DRY			

Spring No.: CV-34
Usage: Livestock (Heavy Usage)

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	7	7.75	432
10/96	DRY			
7/97	1	10	7.15	304
10/97	DRY			
7/98	DRY			
10/98	DRY			
6/99	1	7	7.53	377

BEAVER CREEK LEASE AREA

Spring No.: CV-35
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	3	5	7.91	423
7/97	12	3	7.25	420
10/97	9	4	7.10	418
7/98	9	7	7.22	421
10/98	4.5	9	7.92	437

Spring No.: CV-36
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	SEEP			
7/97	<1	12	6.44	447
10/97	<1	9	7.59	325
7/98	.10	12	7.90	439
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-40
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	0.5	8	8.17	187
10/96	<1	8	7.12	209
7/97	DRY			
10/97	DRY			
7/98	DRY			
10/98	DRY			

Spring No.: CV-41
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	10	8.08	199
10/96	SEEP			
7/97	21	10	7.56	109
10/97	<1	9	6.89	264
8/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-42
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	10	8.08	180
10/96	SEEP			
7/97	DRY			
10/97	DRY			
8/98	DRY			
10/98	DRY			

Spring No.: CV-43
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	9	8.05	212
10/96	<1	7	7.30	236
7/97	DRY			
10/97	DRY			
8/98	<1	7	7.32	227
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-44
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	7	7.88	326
10/96	0.5	8	7.50	323
7/97	1	4	6.93	291
10/97	DRY			
7/98	0.35	8	7.49	366
10/98	DRY			

Spring No.: CV-45
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	4	4	7.99	249
8/96	2	7	7.91	306
10/96	1.5	8	7.03	354
7/97	10	4	7.21	294
10/97	<1	6	6.64	352
7/98	0.25	7	7.54	429
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-46
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	6	7.91	348
10/96	12	6	7.11	441
7/97	32	4	7.21	390
10/97	3	6	6.71	433
8/98	Not Found			
10/98	<1	7	7.53	425

Spring No.: CV-47
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1.5	7	7.73	373
10/96	2	6	7.26	492
7/97	8	4	7.28	443
10/97	2	6	7.09	492
8/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CV-48
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	4	8.11	324
10/96	SEEP			
7/97	6	5	7.25	417
10/97	DRY(A)			
8/98	DRY(A)			

(A) Effected by logging

BEAVER CREEK LEASE AREA

Spring No.: CVG-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	7	7.89	187
10/96	<1	5	6.36	208
7/97	DRY			
10/97	<1	7	6.54	170
8/98	DRY			
10/98	DRY			
6/99	<1	7	6.66	188

Spring No.: CVG-2
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	SEEP			
10/96	<1	6	6.30	402
7/97	2	3	6.67	126
10/97	<1	6	6.28	312
8/98	DRY			
10/98	DRY			
6/99	<1	6	6.68	330

BEAVER CREEK LEASE AREA

Spring No.: CVG-3
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.25	7	7.16	513
10/96	<1	7	7.02	625
7/97	6	3	6.74	525
10/97	<1	7	6.71	601
8/98	DRY			
10/98	DRY			
6/99	<1	7	7.10	600

Spring No.: CVG-4
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	9	7.77	189
10/96	<1	4	6.34	218
7/97	DRY			
10/97	DRY			
8/98	DRY			
10/98	DRY			
6/99	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CVG-5
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.25	6	7.68	159
10/96	<1	5	6.92	154
7/97	DRY			
10/97	DRY			
8/98	DRY			
10/98	DRY			
6/99	SEEP			

Spring No.: CVG-6
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.25	5	7.55	191
10/96	<1	5	6.96	243
7/97	<1	5	6.60	244
10/97	DRY			
8/98	DRY			
10/98	DRY			
6/99	DRY			

BEAVER CREEK LEASE AREA

Spring No.: CVG-7
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.25	8	7.30	261
10/96	0.5	8	6.97	351
7/97	10	10	7.40	261
10/97	<1	10	6.47	246
8/98	DRY			
10/98	DRY			
6/99	<1	8	7.35	251

Spring No.: CVG-8
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	6	7.25	307
10/96	<1	7	7.34	348
7/97	14	5	7.34	257
10/97	<1	10	7.52	339
8/98	DRY			
10/98	DRY			
6/99	10	7	7.30	335

BEAVER CREEK LEASE AREA

Spring No.: CVG-9

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	7	7.16	374
9/96	1.5	7	7.78	342
7/97	3	8	8.07	456
10/97	2	5	7.07	309
8/98	4	6	7.97	457
10/98	3	6	7.83	450
6/99	3	7	7.34	442

Spring No.: CVG-10

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	6	7.20	274
9/96	2	5	7.76	308
10/96	5	6	7.80	398
7/97	4	4	6.72	401
10/97	3	5	8.06	417
8/98	3	5	7.70	403
6/99	4	6	7.81	406

BEAVER CREEK LEASE AREA

Spring No.: CVG-11
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	SEEP			
10/96	SEEP			
7/97	11	4	6.87	217
10/97	2	4	6.48	223
8/98	SEEP (A)			
10/98	SEEP (A)			

(A) Effected by logging.

BEAVER CREEK LEASE AREA

Spring No.: GV-1
Usage: Artesian Well

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	50	10	8.00	346
8/96	50	6	8.06	355
10/96	50	7	6.87	439
7/97	54	6	6.58	441
9/97	20	7	6.43	495
7/98	46	10	6.98	475
10/98	38	11	7.29	475
6/99	55	11	7.81	480

Spring No.: GV-2
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	8	3	7.63	378
8/96	10	5	8.06	373
10/96	4	5	7.34	501
7/97	25	3	7.48	465
9/97	20	6	7.07	528
7/98	31	3	7.31	516
10/98	10	4	7.41	410
6/99	22	5	7.44	501

BEAVER CREEK LEASE AREA

Spring No.: GV-3
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	10	3	8.02	301
8/96	15	6	8.17	309
10/96	<1	5	7.56	498
7/97	27	3	7.48	453
9/97	20	6	7.97	502
7/98	14	4	7.45	412
10/98	11	8	7.29	750

Spring No.: GV-3A
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	6	7.83	323
10/96	<1	10	6.93	458
7/97	3	3	6.82	402
9/97	<1	7	6.36	453
7/98	4	4	7.39	500
10/98	1	6	7.35	700

BEAVER CREEK LEASE AREA

Spring No.: GV-4
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	18	5	8.05	365
8/96	6	8	8.23	359
10/96	3	4	8.18	346
7/97	<1 (A)	4	8.07	394
9/97	6	6	7.81	466
7/98	2	8	6.83	395
10/98	<1	8	7.42	413
6/99	<1	7	7.47	434

(A) Effected by logging from 1997 through 1999.

Spring No.: GV-5
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	SEEP			
9/96	DRY			
7/97	SEEP (A)			
9/97	DRY			
7/98	2.45	4	7.43	448
10/98	SEEP			

A) Effected by logging from 1997 through 1999.

BEAVER CREEK LEASE AREA

Spring No.: GV-6
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	<1	4	7.15	722
9/96	DRY			
6/97	6	3	7.25	309
9/97	<1	7	7.12	425
7/98	.25	4	7.66	395
10/98	SEEP			

Spring No.: GV-7
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	5	4	7.41	700
9/96	DRY			
7/97	DRY			
9/97	<1	7	6.79	446
7/98	.35	6	7.35	435
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: GV-8
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	4	4	7.12	723
9/96	DRY			
6/97	DRY			
9/97	DRY			
7/98	DRY			
10/98	DRY			

Spring No.: GV-9
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	1	4	7.94	361
10/96	<1	4	8.08	345
7/97	DRY			
9/97	<1	6	6.91	473
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-10
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	10	4	8.31	312
10/96	2	4	8.19	255
7/97	12	3	6.70	257
9/97	3	5	6.38	283
7/98	7	5	6.90	318
10/98	3	6	7.66	399

Spring No.: GV-11
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	18	3	8.14	342
10/96	2	4	8.21	288
7/97	DRY			
9/97	3	5	6.97	377
7/98	3	5	8.00	403
10/98	1.75	5	7.51	415

BEAVER CREEK LEASE AREA

Spring No.: GV-12
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	1	4	8.07	338
10/96	<1	6	8.12	324
7/97	DRY			
9/97	<1	7	7.24	427
7/98	0.75	6	7.80	438
10/98	0.75	6	7.53	444

Spring No.: GV-13
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	50	3	7.62	218
8/96	<1	8	8.09	190
10/96	1	5	8.28	173
7/97	10	7	8.17	247
9/97	1	5	6.13	128
7/98	SEEP			
10/98	.10	4	7.99	143.4

BEAVER CREEK LEASE AREA

Spring No.: GV-14
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	25	3	7.80	361
8/96	3	7	7.80	366
10/96	1	8	7.92	349
7/97	1	4	7.28	427
9/97	<1	7	6.92	478
7/98	SEEP			

Spring No.: GV-15
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	SEEP			
10/96	<1	8	6.94	426
7/97	1	5	7.30	403
9/97	<1	7	7.03	454
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-16
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	30	9		
10/96	DRY			
7/97	1	6	7.55	213
9/97	<1	10	7.53	253
7/98	.15	6	7.53	274
10/98	DRY			

Spring No.: GV-21
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	10	4	7.64	255
8/96	1	7	7.90	264
10/96	2	7	7.21	503
7/97	40	3	7.28	433
10/97	9	6	6.64	350
7/98	17	5	7.48	460
10/98	6	5	7.40	435

BEAVER CREEK LEASE AREA

Spring No.: GV-21A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	10	7.19	684
7/97	2	9	7.20	428
9/97	1	7	8.02	419
7/98	DRY			
10/98	DRY			

Spring No.: GV-22
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	SEEP			
10/96	DRY			
7/97	DRY			
9/97	DRY			
7/98	.25	8	7.50	322
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-23A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	9	8.06	234
10/96	SEEP			
7/97	2	4	7.33	261
9/97	<1	9	7.37	289
7/98	DRY			
10/98	DRY			

Spring No.: GV-24
Usage: Artesian

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	3	4		
10/96	20	8	7.29	525
7/97	20	5	7.26	495
9/97	10	7	6.97	525
7/98	20	6	7.20	504
10/98	22	6.5	7.49	486

BEAVER CREEK LEASE AREA

Spring No.: GV-25
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	25	4	7.50	249
8/96	3	7	7.66	238
10/96	18	6	6.91	237
7/97	30	6	7.13	227
9/97	15	6	6.69	251
7/98	5.35	7	6.43	230
10/98	6	10	7.76	249

Spring No.: GV-26
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	3	4	7.60	203
10/96	2	7	6.67	241
7/97	3	3	7.51	235
9/97	3	5	6.94	271
7/98	.14	3	6.48	109.80
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-27
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	5	4	7.56	223
10/96	2	8	7.48	284
7/97	12	3	7.28	111
10/97	DRY			
7/98	0.8	3	6.39	116
10/98	DRY			

Spring No.: GV-28
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	5	3	7.80	234
9/96	DRY			
7/97	DRY			
9/97	DRY			
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.:GV-29
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	4	7	7.74	232
8/96	DRY			
6/97	5	3	7.69	304
10/97	DRY			
7/98	0.18	4	6.92	299
10/98	DRY			
6/99	<1	7	7.11	285

Spring No.: GV-30
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	<1	4	7.81	200
8/96	<1	9	7.90	133
10/96	<1	6	7.21	161
7/97	2	4	7.38	162
7/98	SEEP			
10/98	0.33 (A)	3	7.94	236
6/99	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: GV-31
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	1	7	7.57	253
8/96	DRY			
7/97	DRY			
9/97	DRY			
7/98	6	5	7.87	515
10/98	0.5	5	7.53	319
6/99	SEEP			

Spring No.: GV-32
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	SEEP			
8/96	SEEP			
7/97	DRY			
9/97	DRY			
7/98	.18	6	7.67	279
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-32A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	8	6.79	380
10/96	SEEP			
7/97	DRY			
9/97	DRY			
7/98	DRY			
10/98	DRY			

Spring No.: GV-34
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	7	7.75	432
10/96	<1	8	7.27	526
7/97	3	7	7.18	480
9/97	<1	7	6.76	509
7/98	2	7	7.56	499
10/98	SEEP			
6/99	<1	7	7.30	471

BEAVER CREEK LEASE AREA

Spring No.: GV-34A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	4	7	6.89	419
10/96	2	8	7.22	562
7/97	8	4	7.16	485
9/97	6	7	6.83	542
7/98	3	6	7.35	520
10/98	1	5	7.45	525
6/99	2.5	7	7.30	522

Spring No.: GV-34B
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	8	6.72	430
10/96	DRY			
7/97	3	4	7.18	546
9/97	<1	7	6.59	583
7/98	SEEP			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: GV-70 *
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	60	3	8.02	580
8/96	12	6	8.30	587
10/96	3	8	7.18	804
6/97	50	7	7.32	760
9/97	14	7	7.45	735
6/97	21	4	7.40	755
10/97	14	8	7.77	732

* After 1997 this site was incorporated into the quarterly water monitoring.

Pond - Sample No.: GV-71
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	Pond	11	7.99	90
8/96	Pond	16	8.07	92
10/96	Pond	17	7.22	114
6/97	Pond	13	7.60	89
9/97	Pond	15	10.49	115
7/98	Pond	14	8.09	92
10/98	Pond	11	8.57	102.1

BEAVER CREEK LEASE AREA

Spring No.: GV-72
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
5/96	1	8	-	-
10/96	SEEP			
7/97	DRY			
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: JC-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	4	8.52	167
10/96	<1	5	8.41	450
8/97	<1	4	8.10	503
10/97	<1	4	7.34	517
7/98	2.25	8	7.85	354
10/98	SEEP			

Spring No.: JC-2
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	5	8.57	126
10/96	<1	6	8.87	155
7/97	SEEP			
10/97	<1	10	8.36	348
7/98	1	6	8.27	150
10/98	1	3	7.67	144.9

BEAVER CREEK LEASE AREA

Spring No.: JC-3
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	5	8.53	141
10/96	1	6	8.72	185
7/97	4	5	8.35	340
10/97	5	4	7.03	345
7/98	2	4	7.54	178
10/98	.65	3	7.67	150

Spring No.: JC-4
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	6	7.99	262
10/96	<1	4	8.37	368
7/97	SEEP			
10/97	3	7	7.63	151
7/98	3	6	7.65	158
10/98	1.5	7	7.65	154

BEAVER CREEK LEASE AREA

Spring No.: JC-5
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	5	8.33	164
10/96	1	4	8.60	204
7/97	SEEP			
10/97	<1	6	7.79	412
7/98	2	6	7.84	160
10/98	2	7	7.75	158

Spring No.: JC-6
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	7	8.44	134
10/96	1	4	8.56	188
7/97	SEEP			
10/97	2	7	7.28	335
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: JC-7
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	4	8.46	100
10/96	<1	4	8.57	136
7/97	SEEP			
10/97	DRY (A)			
7/98	DRY			
10/98	DRY			

(A) Effected by logging.

Spring No.: JC-8 (3 springs)
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	4	8.50	101
10/96	2	5	8.66	121
7/97	2	6	7.59	155
7/98	2	5	7.18	151
10/98	1.85	6	7.25	529

BEAVER CREEK LEASE AREA

Spring No.: JC-9
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	4	8.59	98
10/96	<1	8	8.39	162
7/97	1	7	8.33	95
7/98	1	5	7.71	74
10/98	1	6	7.82	77.6

Spring No.: JC-10
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	6	7.70	293
10/96	SEEP			
7/97	SEEP			
10/97	DRY			
7/98	1	7	7.74	420
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: JC-10A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	5	7.83	279
10/96	2	5	8.00	302
7/97	2	6	8.03	444
7/98	1.5	6	7.92	483
10/98	1	6	8.03	460

Spring No.: JC-11
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	4	7.66	304
10/96	<1	7	7.88	492
7/97	SEEP			
10/97	<1	4	7.95	373
7/98	1	4	7.10	374
10/98	1	5	7.28	528

BEAVER CREEK LEASE AREA

Spring No.: JC-12
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	3	7.73	277
10/96	2	6	7.84	469
7/97	2	4	7.94	370
10/97	2	4	8.00	309
7/98	2	4	7.81	378
10/98	1.75	4.5	7.33	456

Spring No.: JC-13
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	3	7.72	251
10/96	1	4	7.94	420
7/97	2	4	7.86	440
10/97	4	7	6.97	427
7/98	2	4	7.70	440
10/98	2.15	6	7.34	433

BEAVER CREEK LEASE AREA

Spring No.: JC-14
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	4	7.66	277
10/96	1	5	7.92	462
7/97	SEEP			
10/97	2	4	7.92	440
7/98	3	4	7.26	404
10/98	2.5	5.5	7.29	491

Spring No.: JC-15
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	7	7.69	233
10/96	2	9	8.03	396
7/97	SEEP			
10/97	DRY			
7/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: JC-16
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	8	7.72	250
10/96	3	8	7.94	469
10/97	DRY			
7/98	2	7	7.94	486
10/98	SEEP			

Spring No.: JC-17
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	5	7.68	286
10/96	DRY			
7/97	SEEP			
10/97	3	3	7.71	460
7/98	5	6	7.81	275
10/98	5	7	8.00	264

BEAVER CREEK LEASE AREA

Spring No.: JC-19
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	8	5	8.11	287
10/96	2	7	8.26	242
7/97	SEEP			
10/97	DRY			
7/98	2	7	8.03	246
10/98	SEEP			

Spring No.: JC-20
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	6	8.14	309
10/96	2	8	7.95	344
7/98	1.75	10	7.77	448
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: JC-21
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	5	8.63	189
10/96	DRY			
7/97	DRY			
10/97	DRY			
7/98	1	7	7.66	415
10/98	DRY			

Spring No.: JC-22
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	20	4	8.02	326
10/96	10	4	7.91	383
7/98	.5	8	7.96	191.8
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: JC-25
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	7	8.00	362
10/96	4	6	8.14	255
10/97	4	5	7.08	470
7/98	4.75	6	7.92	357
10/98	2	6	7.84	370

Spring No.: JC-25A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	1.5	6	7.85	431
7/97				
10/97	2	3	7.00	468
7/98	4	6	7.60	483
10/98	2.5	6	7.71	480

BEAVER CREEK LEASE AREA

Spring No.: JC-26
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	6	7.67	374
10/96	18	6	7.73	385
7/97	14	5	7.60	408
10/97	10	4	8.05	430
7/98	4	6	7.73	435
10/98	2	6	7.60	379

Spring No.: JC-26A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	2	4	7.90	191
7/97	2	4	7.91	198
10/97	2	3	7.93	201
7/98	3	6	7.93	337
10/98	2	7	7.97	311

Spring No.: JC-27
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	5	7.85	300
10/96	1	7	7.79	332
7/97	SEEP			
10/97	2	4	7.49	354
7/98	.75	7	7.85	398
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: JC-28
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	25	5	7.68	319
10/96	25	6	7.81	353
7/97	25	3	7.50	318
10/97	24	3	8.32	368
7/98	21	9	7.74	430
10/98	10	7	7.58	389

BEAVER CREEK LEASE AREA

Spring No.: JC-34
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	0.5	6	7.67	388
10/96	3	3	7.69	495
7/97	1	4	8.25	410
10/97	<1	5	8.41	381
7/98	2	6	7.89	491
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: JC-35
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	5	7.69	363
10/96	<1	5	7.88	373
7/97	DRY			
10/97	DRY			
7/98	2	10	7.93	511
10/98	SEEP			

Spring No.: JC-36
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	6	7.56	452
10/96	25	5	7.76	442
7/97	5	5	7.85	440
10/97	<1	5	8.20	401
7/98	3	6	8.02	474
10/98	2	6	8.14	438

BEAVER CREEK LEASE AREA

Spring No.: JC-37
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	7	7.76	450
7/97	SEEP			
10/97	<1	7	8.15	373
7/98	5.5	7	8.11	468
10/98	SEEP			

Spring No.: JC-38
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	7	7.74	470
7/97	6	4	7.83	451
10/97	8	4	7.95	401
7/98	14	6	8.06	500
10/98	4	6	7.91	510

BEAVER CREEK LEASE AREA

Spring No.: JC-40
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	6	7.72	529
7/97	SEEP			
10/97	<1	6	6.64	446
7/98	4	6	7.70	116
10/98	4	7	7.76	98.4

Spring No.: JC-41
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	4	7.82	343
7/97	SEEP			
10/97	<1	6	7.44	391
7/98	.5	9	7.63	396
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: JC-42
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	5	5	8.05	197
10/96	2	4	7.94	273
7/97	9	4	8.02	280
10/987	8	5	7.88	296
7/98	1	6	7.62	351
10/98	DRY			

Spring No.: JC-43
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	6	8.05	237
7/97	10	5	8.03	248
10/97	9	4	8.01	260
7/98	1.25	5	7.47	520
10/98	0.15	7	7.80	531

BEAVER CREEK LEASE AREA

Spring No.: JC-50
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	<1	7	7.65	507
7/97	SEEP			
10/97	<1	5	7.55	536
7/98	4	8	7.92	466
10/98	SEEP			

Spring No.: JC-51
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	10	5	7.67	550
7/97	6	5	7.08	537
10/97	5	5	6.77	536
7/98	5	6	7.96	438
10/98	5	6	7.38	501

BEAVER CREEK LEASE AREA

Spring No.: JC-52
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	2	6	7.76	478
7/97	2	6	7.32	469
10/97	2	6	7.04	516
7/98	6	6	7.21	658
10/98	4.5	6	7.66	667

Spring No.: JC-53
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	6	5	7.81	485
7/97	4	6	7.62	465
10/97	3	7	7.89	375
7/98	25	8	8.01	353
10/98	9	6	7.85	370

BEAVER CREEK LEASE AREA

Spring No.: JC-54
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	1	6	7.76	567
10/97	3	4	7.81	386
7/98	9	6	7.84	478
10/98	7	6	7.89	480

Spring No.: JC-55
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
10/96	6	6	7.85	422
10/97	<1	8	7.69	447
7/98	3.25	5	7.82	457
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: MC-1
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	5	14	7.81	696
10/96	15	16	8.25	925
7/97	17	10	7.81	901
10/97	12	7	7.67	889
7/98	10	10	7.85	910
10/98	7	8	7.90	914
6/99	8	8	7.77	700

BEAVER CREEK LEASE AREA

Spring No.: MC-2
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	16	7.80	665
10/96	2	14	7.97	974
7/97	SEEP			
10/97	SEEP			
7/98	SEEP			
10/98	SEEP			
6/99	SEEP			

Spring No.: MC-3
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	14	7.78	665
10/96	<1	11	7.97	1006
6/97	<1	8	7.98	751
10/97	<1	11	7.49	1017
7/98	<1	8	7.80	810
10/98	<1	10	7.57	989
6/99	<1	9	7.49	700

BEAVER CREEK LEASE AREA

Spring No.: MC-3A
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	14	7.78	665
10/96	<1	11	7.97	1006
6/97	<1	8	7.98	751
10/97	<1	8	7.49	1017
7/98	<1	9	7.94	733
10/98	<1	8	7.88	1001
6/99	<1	10	7.90	725

Spring No.: MC-4*
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	4	12	7.70	803
9/96	6	10	7.81	747
10/96	4	7	7.92	1068
5/97	10	8	8.02	746
10/97	9	9	7.67	873

* After 1997 this site was incorporated into the quarterly water monitoring.

BEAVER CREEK LEASE AREA

Spring No.: N-1
Usage: Wildlife

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
6/97	2	6	7.86	77
10/97	DRY			
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VB-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	9	8.59	374
10/96	<1	6	6.91	470
7/97	<1	5	6.80	360
9/97	<1	7	7.82	423
7/98	.25	9	7.72	437
10/98	DRY			

Spring No.: VB-2
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	5	8	8.33	341
10/96	1.5	3	7.45	394
7/97	1	5	8.00	4.10
9/97	<1	6	8.05	411
7/98	0.5	8	7.67	77.3
10/98	DRY			

Spring No.: VB-3
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	60	8	8.60	226
10/96	25	5	7.94	407
7/97	35	3	7.24	419
9/97	18	4	7.17	450
7/98	38	8	7.75	430
10/98	30	6	7.78	437

BEAVER CREEK LEASE AREA

Spring No.: VB-4
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	9	8.46	241
10/96	<1	8	7.44	307
7/97	<1	8	8.28	375
9/97	<1	8	8.25	377
7/98	0.10	10	7.79	341
10/98	SEEP			

Spring No.: VB-5
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	7	5	8.22	377
10/96	8	4	7.51	389
7/97	5	4	7.82	353
9/97	3	4	7.84	355
7/98	14	5	7.64	447
10/98	8	6	7.90	438

BEAVER CREEK LEASE AREA

Spring No.: VB-6A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	5	8	8.15	540
10/96	3	8	7.50	560
7/97	4	8	8.00	232
9/97	1	9	8.06	232
7/98	2	9	7.34	427
10/98	.75	9	7.38	441

Spring No.: VB-7
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	1	9	8.18	372
10/96	DRY			
7/97	DRY			
9/97	DRY			
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VB-8
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	4	7	8.09	467
10/96	.5	6	7.27	511
7/97	10	4	6.82	481
9/97	3	5	6.86	527
7/98	8	4	7.79	478
10/98	6	6	7.70	460

Spring No.: VB-9
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	9	8.12	403
10/96	<1	8	7.45	536
7/97	10	4	6.79	500
9/97	2	6	7.00	511
7/98	5	9	8.09	490
10/98	3	7	8.00	488

BEAVER CREEK LEASE AREA

Spring No.: VB-10
Usage: Wildlife/Livestock/Mining

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	2	9	8.18	522
10/96	<1	16	7.63	667
7/97	<1	8		
9/97	DRY			
7/98	SEEP			
10/98	DRY			

Spring No.: VB-11
Usage: Wildlife/Livestock/Mining

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	7	8.47	487
10/96	.5	13	7.75	720
7/97	2	7	8.00	500
9/97	1	6	7.98	512
7/98	SEEP			
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: VB-12
Usage: Wildlife/Livestock/Mining

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	<1	14	8.11	1028
10/96	<1	12	7.52	1128
7/97	DRY			
9/97	DRY			
7/98	DRY			
10/98	DRY			

Spring No.: VB-14
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond.(ohms)
8/96	3	8	8.04	357
10/96	<1	9	7.73	503
7/97	DRY			
9/97	1	8	7.58	476
7/98	12	7	7.67	450
10/98	5	9	7.50	481

BEAVER CREEK LEASE AREA

Spring No.: VC-1
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	4	8.37	100
10/96	0.75	4	6.35	58
7/97	27	3	7.28	49
10/97	(A)			

(A) Displaced by logging

Spring No.: VC-2
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	7	8.25	107
10/96	<1	7	6.35	85
7/97	8	4	6.70	279
10/97	(A)			

(A) Displaced by logging

BEAVER CREEK LEASE AREA

Spring No.: VC-2A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
10/96	<1	6	7.16	204
7/97	2	7	7.43	105
10/97	(A)			

(A) Displaced by logging

Spring No.: VC-3
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	8	7.99	220
10/96	0.5	7	7.51	259
7/97	<1	7	6.95	245
10/97	7	6	6.62	310
7/98	SEEP			
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: VC-4A
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	5	8.06	227
10/96	SEEP			
7/97	2	7	6.78	178
10/97	<1	7	6.55	127
7/98	DRY			
10/98	DRY			

Spring No.: VC-6
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	9	7.74	261
10/96	<1	9	7.38	328
7/97	DRY			
10/97	<1	8	7.66	337
7/98	SEEP			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VC-7
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	3	6	7.93	321
10/96	SEEP			
7/97	3	3	7.55	310
10/97	1	4	7.88	354
7/98	2	7	7.92	414
10/98	SEEP			
6/99	2	7	7.90	334

Spring No.: VC-8
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	18	7	7.61	393
10/96	10	4	7.11	212
7/97	12	4	7.66	213
10/97	12	4	6.81	213
10/98	9	7	7.86	410
6/99	15	7	7.70	381

BEAVER CREEK LEASE AREA

Spring No.: VC-9
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	5	7.96	221
10/96	<1	5	6.85	243
7/97	DRY			
10/97	<1	4	6.54	275
7/98	DRY			
10/98	DRY			
6/99	<1	5	6.66	279

Spring No.: VC-10
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	4	5	8.15	232
10/96	0.5	4	7.52	266
7/97	DRY			
10/97	<1	4	7.37	289
7/98	DRY			
10/98	DRY			
6/99	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: VC-11
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	6	8.03	258
10/96	<1	5	7.25	279
7/97	13	2	7.19	263
10/97	2	7	7.45	289
7/98	3	7	7.53	297
10/98	SEEP			

Spring No.: VC-12
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	7	7.97	282
10/96	<1	7	7.09	349
7/97	11	6	7.04	310
10/97	<1	6	7.90	330
7/98	SEEP			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VC-13
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	3	6	8.09	212
10/96	1	4	6.75	199
7/97	4	3	6.93	192
10/97	<1	6	7.80	235
7/98	2.5	8	7.66	327
10/98	DRY			
6/99	3	7	7.10	251

Spring No.: VC-14
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	SEEP			
10/96	DRY			
7/97	DRY			
10/97	<1	10	6.25	148
7/98	1	7	7.86	161
10/98	DRY			
6/99	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: VC-15
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	10	7.90	290
10/96	<1	9	6.28	498
7/97	10	4	6.82	481
10/97	<1	10	6.90	496
7/98	2	9	7.45	401
10/98	SEEP			

Spring No.: VC-16
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	10	7.79	293
10/96	<1	11	6.59	443
7/97	<1	10	6.71	294
10/97	DRY			
7/98	1	12	7.22	474
10/98	SEEP			

BEAVER CREEK LEASE AREA

Spring No.: VC-17
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	4	10	7.88	282
10/96	<1	6	6.88	365
7/97	5	7	6.78	386
10/97	<1	6	6.63	353
7/98	8	9	7.19	412
10/98	4	7	7.22	411
6/99	5	7	7.20	418

Spring No.: VC-20
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1.5			
10/96	2			
7/97	18			
10/97	8			
7/98	(A)			

(A) Displaced by logging, not found

BEAVER CREEK LEASE AREA

Spring No.: VC-21
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	4	8.03	223
10/96	1	5	7.12	251
7/97	65	2	7.67	255
10/97	10	6	6.42	213
7/98	(A)			

(A) Displaced by logging, not found

Spring No.: VC-22
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	6	7.53	316
10/96	1.5	5	7.13	335
7/97	35	3	7.48	216
10/97	3	4	6.83	395
7/98	DRY			
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VC-23
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	7	7.70	288
10/96	<1	5	7.39	304
7/97	2	3	7.19	233
10/97	<1	8	7.95	342
7/98	1	7	7.35	300
10/98	DRY			
6/99	1	7	7.55	330

Spring No.: VC-24
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	7	7.66	299
9/96	0.75	6	6.97	371
7/97	9	4	7.80	320
10/97	1	7	8.12	367
8/98	8	8	7.42	361
10/98	7	7	7.40	350

BEAVER CREEK LEASE AREA

Spring No.: VC-25
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	7	8.00	362
9/96	<1	6	6.84	467
7/97	1	4	7.22	366
10/97	<1	7	7.62	432
7/98	3	8	7.50	438
10/98	2.5	7	7.27	430
6/99	3	7	7.70	440

Spring No.: VC-26
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	6	7.67	374
9/96	4	7	7.51	457
7/97	1	7	8.13	470
10/97	<1	8	8.21	476
7/98	3	8	7.58	288
10/98	1.75	7	7.50	317

BEAVER CREEK LEASE AREA

Spring No.: VC-27
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	5	7.85	300
9/96	1	6	7.46	334
7/97	1	6	8.08	361
10/97	<1	6	8.11	365
7/98	4	10	7.27	504
10/98	2	7	7.74	192.8

Spring No.: VC-28
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2.5	5	7.68	319
9/96	4	6	7.43	359
7/97	3	5	7.62	408
10/97	3	5	7.66	406
7/98	3.25	7	7.86	128
10/98	3	7	7.70	119

BEAVER CREEK LEASE AREA

Spring No.: VC-29
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	5	7.83	366
9/96	2	6	7.27	378
7/97	2	6	8.08	378
10/97	1	6	8.36	378
7/98	4.25	7	7.47	403
10/98	3	6	7.50	401

Spring No.: VC-30
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	SEEP			
9/96	<1	10	6.73	351
7/97	SEEP			
10/97	<1	11	8.17	452
7/98	7	6	7.58	407
10/98	DRY			
6/99				

BEAVER CREEK LEASE AREA

Spring No.: VC-31
Usage: Wildlife/Cabin

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	5	7.78	297
9/96	1	8	7.54	367
7/97	1	6	8.12	390
10/97	<1	7	8.13	397
7/98	0.25	8	7.70	369
10/98	DRY			

Spring No.: VC-32
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	1	4	7.73	348
9/96	<1	7	7.65	392
7/97	<1	7	8.01	416
10/97	<1	8	8.26	418
7/98	4	9	7.63	478
10/98	1.5	7	7.51	477

BEAVER CREEK LEASE AREA

Spring No.: VC-33
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	<1	8	7.66	336
9/96	1	8	7.29	389
7/97	SEEP			
10/97	<1	9	8.23	383
8/98	4	8	7.66	447
10/98	2.75	7	7.60	471

Spring No.: VC-34
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	0.5	6	7.67	388
9/96	4	6	7.99	450
7/97	5	4	7.67	465
10/97	4	4	7.72	462
7/98	0.25	9	7.54	459
10/98	DRY			

BEAVER CREEK LEASE AREA

Spring No.: VC-35
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	5	7.69	363
9/96	2	6	8.04	415
7/97	1	5	7.56	430
10/97	<1	5	7.60	465
7/98	7	6	7.76	450
10/98	SEEP			

Spring No.: VC-36
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	2	6	7.56	452
9/96	SEEP			
7/97	4	6	6.94	763
10/97	4	7	7.73	472
8/98	10	6	7.68	492
10/98	8	7	7.65	490

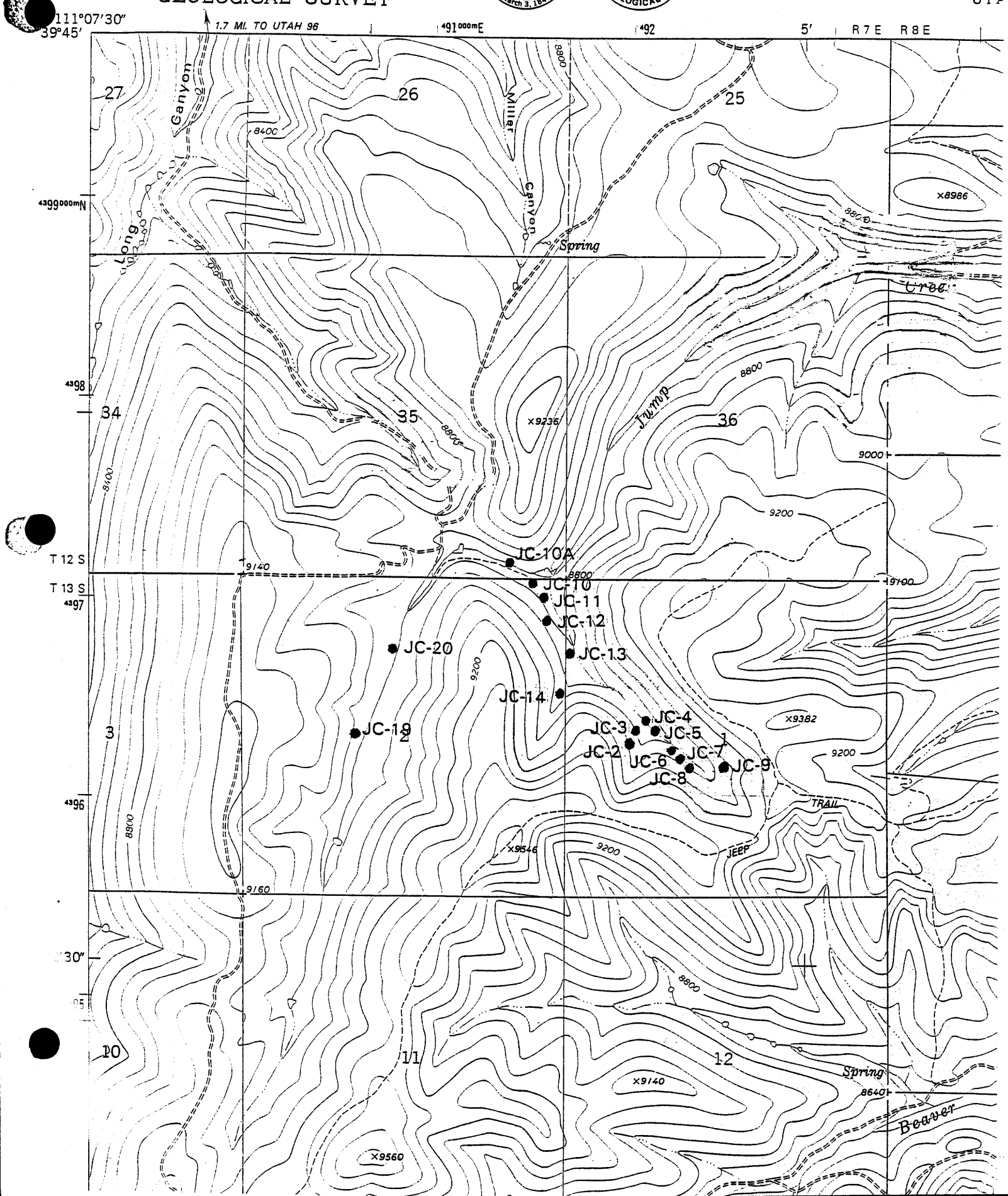
BEAVER CREEK LEASE AREA

Stream No.: VC-Stream
Usage: Wildlife/Livestock

Date	Flow (gpm)	Temperature (c)	pH	Spec. Cond. (ohms)
8/96	40	10	8.05	236
9/96	50	8	7.67	278
7/97	42	10	7.70	250
10/97	25	8	7.72	268
7/98	18	10	7.80	247
10/98	21	11	7.97	291
6/99	32	10	7.75	278

Jump Creek Quadrangle
1979

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



CHAPTER 8

Replacement Plate 8-2 Area Soils

CHAPTER 9

Revised Plate 9-1 Vegetation

CHAPTER 10

Replacement Pages 10-38 thru 10-43
Raptor Protection and Mitigation Plan

Replacement Page 10iii – Table of Contents

Replacement Plate 10-1 Wildlife with
2000 Raptor Survey Data

CHAPTER 10

FISH AND WILDLIFE RESOURCES

TABLE OF CONTENTS (Continued)

Section — Page

10.3.3 Species of Special Significance 10-25

10.3.3.1 Threatened and Endangered Species 10-25

10.4 Potential Impacts to Fish and Wildlife 10-35

10.5 Mitigation and Management Plans 10-36

10.5.1 Terrestrial Habitats and Wildlife 10-38

10.5.1.1 Mammals 10-39
10.5.1.2 Birds 10-39
10.5.1.3 Reptiles and Amphibians 10-39

10.5.2 Aquatic Habitats and Organisms 10-39

10.6 Stream Buffer Zone Determination 10-39

10.8 References . . . . . ~~10-40~~10-41

LIST OF TABLES

TABLE 10-1 FEDERALLY LISTED AND PROPOSED ENDANGERED SPECIES IN UTAH 10-26

TABLE 10-2 NATIVE UTAH WILDLIFE SPECIES OF SPECIAL INTEREST 10-28

LIST OF PLATES

PLATE 10-1 WILDLIFE

LIST OF APPENDICES

APPENDIX 10-1 WILDLIFE INFORMATION
APPENDIX 10-2 AQUATIC INFORMATION
APPENDIX 10-3 RAPTOR SURVEY

8. Due to the length of conveyors there should be no barriers. Cross unders can be installed along the belt lines if needed.

Jewkes Creek provides a riparian habitat within the area to be disturbed by facility construction for the Horizon mine. Due to road construction and improvement by Carbon County in the immediate area, Jewkes Creek's channel has been realigned above and within the disturbed area. This realignment above has made available an area of approximately 1 acre which in time will replace the riparian area disturbed by Horizon. Although the area is more open, being less obstructed by topography, it does provide access to water by wildlife that the steeper stream channels along Jewkes Creek do not. The realignment was done in the Fall of 1995, over time the cover in the area will improve to provide more shelter for larger species of wildlife. Livestock has been restricted from the area except for an occasional stray which may be separated from the herd during movement to pasture on Beaver Creek.

Riparian areas provide wildlife a source of water and food; a feeding and nesting site; and a resting or roosting site. Horizon understands the importance of the riparian area which they will disturb, therefore they have agreed to properly reclaim and improve the riparian area.

Mitigation measures for riparian replacement have been discussed with Bill Bates of the DWR, however the exact mitigation will be determined by Horizon, UDOGM and DWR at a later date.

Fish and Wildlife Monitoring

A wildlife monitoring program will be conducted throughout the operational life of the mine as required by regulatory agencies. The monitoring will utilize the services of an environmental specialist or as necessary, professional consultants. The program will also ensure that sensitive or critical use areas remain undisturbed by future activities and permit monitoring of reclamation efforts upon completion of mining activities.

The monitoring program will be initiated upon opening the Horizon Mine: (a) reporting of deer or elk road kills (see Section 10.5), (b) Nest surveys as dictated by the regulatory agencies prior to surface disturbance within the disturbed area boundary.

10.5.1 Terrestrial Habitats and Wildlife

DWR (1981b) emphasized three basic aspects to migration and impact avoidance for the terrestrial habitats at the mines: habitat and wildlife protection, reclamation, and wildlife management.

Habitat protection measures center on avoiding especially important or sensitive areas, such as riparian zones, and not using persistent pesticides, which would diminish the long-term health of an ecosystem.

Reclamation is particularly important as a means of controlling erosion and restoring disturbed areas to productive wildlife habitat. Recommended procedures in achieving the

reclamation goal include (1) planting a diverse mixture of native grasses, forbs, and where appropriate woody species, (2) using seedling stock rather than relying solely on seeds for trees or shrubs, (3) planting vegetation to create an edge effect by clumping selected shrub or tree species, (4)
actually transplanting stock or turf from new disturbed sites to reclaimed sites, and (5) leaving islands of natural vegetation in new disturbed sites.

Wildlife management is important for minimizing harmful effect (e.g., fencing animals out of areas containing toxic substances) and preventing damage to newly reclaimed areas (e.g., excluding large herbivores and possibly controlling rodents).

Direct impacts on springs and seeps on or adjacent to the permit area are not expected based on past mining experiences in the area. However, if mining operations negatively impact these features, Horizon plans to provide measures for replacement. See Chapter 7 for a discussion of the permit area hydrology.

10.5.1.1 Mammals

For small mammals, most of which are secretive and have small home ranges, mitigation will be almost totally related to habitat protection and reclamation (minimizing short and long-term habitat loss). For larger species the problem is complicated by their large home ranges, seasonal movements, and sensitivity to disturbance.

Disturbance-related impacts will be mitigated to a significant extent by Horizon Coal Corporation policies against harassing or hunting wildlife in the permit area by employees. These policies will continue throughout the operation of the mine. Sensitive aspects of the ecosystem will be avoided during future exploration, operation, and reclamation activities.

10.5.1.2 Birds

Like small mammals, songbirds and other small species are most sensitive to habitat loss, and mitigation will therefore focus on habitat protection and reclamation. In addition, active raptor nests or nest trees will not be disturbed.

Protection plans for raptor nests will be incorporated in the following manner. An active raptor nest will be verified prior to full pillar extraction being completed within 500 feet of an active nest. If the nest is still active, full pillar mining will leave a 200 foot barrier around the nest location. If the nest is inactive, a barrier of 100' will be left around the nest location. Mitigation of nests either active or inactive being lost due to subsidence or other mine related causes will be corrected by the placement of a replacement nest constructed under the guidelines and assistance of the DWR. The replacement nest would be place at or near the site of the lost nest.

10.5.1.3 Reptiles and Amphibians

Besides minimizing habitat loss and restoring native vegetation, the principal mitigation measures for reptiles will be to avoid killing individuals and to not disturb or destroy snake dens, amphibian breeding ponds, and other sensitive use areas.

10.5.2 Aquatic Habitats and Organisms

Habitat loss or deterioration of the North Fork Gordon Creek aquatic ecosystem will be limited by constructing a sediment pond to protect the stream from an increased sediment load from the mine affected area. Additional details of these procedures for protecting stream quality are provided in Chapter 7 of the mine permit application.

10.6 Stream Buffer Zone Determination

Refer to Chapter 7 for details concerning buffer zones, sedimentation, and runoff controls.

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