

BEAVER CREEK COAL NO 2 & 7 MINES 1987 ANNUAL REPORT

BEAVER CREEK COAL COMPANY
1987 ANNUAL REPORT
GORDON CREEK NO. 2/7 MINES

Beaver Creek Coal Company

P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 31, 1988

RECEIVED

MAR 31 1988

**DIVISION OF OIL
GAS & MINING
PRICE, UTAH**

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

RE: 1987 Annual Report
Gordon Creek No. 2/7 Mines
ACT/007/016
Carbon County, Utah

Dear Mr. Braxton:

Enclosed is the Annual Report for Coal Mining and Reclamation Operations for 1987 for the Gordon Creek No. 2/7 Mines.

If you have any questions or need any further information, please let me know.

Respectfully,

Dan W. Guy,
Manager, Permitting & Compliance

DWG/cr

cc: Johnny Coffey
File 4-P-5-1-1

BEAVER CREEK COAL COMPANY
1987 ANNUAL REPORT
GORDON CREEK NO. 2/7 MINES

[Revised January 1988]

COAL MINING AND RECLAMATION OPERATIONS FOR 1987
(Authority UMC 784)

(Must be submitted to the Division by March 31, 1988)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, UT 84180-1203
(801) 538-5340

Operator: Beaver Creek Coal Company

Mine Name: Gordon Creek No.2/7 Mines

Mailing Address: P.O. Box 1378, Price, Utah 84501

Company Representative: Dan W. Guy

Permit Number: ACT/007/016

Date of Most Recent Permanent Program Permit: 08/27/84

Quantity of Coal Mined (tonnage) 1987: 537,521 Tons

Attach Updated Mine Sequence Map. (Included)

All monitoring activities during the report period must be submitted with this report (including, but not limited to):

- A. Summarized Water Monitoring Data (Included)
- B. Precipitation or Other Climatological Data (Included)
- C. Subsidence Monitoring Report (Included)
- D. Vegetation Data (test plots) or Revegetation Success Monitoring (includes interim and final) (Included)
- E. Permit Stipulation Status (Included)

jr
1426R/1

CERTIFICATES OF INSURANCE

Revised November, 1987.

CERTIFICATE OF LIABILITY INSURANCE

Issued to:
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
--oo00oo--

THIS IS TO CERTIFY THAT:

Insurance Company of North America

(Name of Insurance Company)

1600 Arch Street, Philadelphia, PA 19101

(Home Office Address of Insurance Company)

HAS ISSUED TO:

BEAVER CREEK COAL CO.

(Name of Permit Applicant)

GORDON CREEK No. 2/7 MINES

(Mine Name)

ACT/007/016

(Permit Number)

CERTIFICATE OF INSURANCE:

HDO GO 969065-7

(Policy Number)

1-1-88

(Effective Date)

UNDER THE FOLLOWING TERMS AND CONDITIONS:

As Per UMC/SMC Part 800.60 Terms and Conditions for Liability Insurance;

- A. The Division shall require the applicant to submit as part of its permit application a certificate issued by an insurance company authorized to do business in the state of Utah certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operations for which the permit is sought. Such policy shall provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of the surface coal mining and reclamation operations, including the use of explosives and who are entitled to compensation under the applicable provisions of state law. Minimum insurance coverage for bodily injury and property damage shall be \$300,000 for each occurrence and \$500,000 aggregate.
- B. The policy shall be maintained in full force during the life of the permit or any renewal thereof, including the liability period necessary to complete all reclamation operations under this chapter.

CERTIFICATE OF LIABILITY INSURANCE

C. The policy shall include a rider requiring that the insurer notify the Division whenever substantive changes are made in the policy including any termination or failure to renew.

IN ACCORDANCE WITH THE ABOVE TERMS AND CONDITIONS, and the Utah Code Annotated 40-10-1 et seq., the Insurance Company hereby attests to the fact that coverage for said Permit Applicant is in accordance with the requirements of the State of Utah and agrees to notify the Division of Oil, Gas and Mining in writing of any substantive change, including cancellation, failure to renew, or other material change. No change shall be effective until at least thirty (30) days after such notice is received by the Division.

UNDERWRITING AGENT:

M. J. Morehouse

(Agent's Name)

213-739-4630

(Phone)

Insurance Company of North America

(Company Name)

3333 Wilshire Blvd

(Mailing Address)

Los Angeles, CA 90010

(City, State, Zip Code)

The undersigned affirms that the above information is true and complete to the best of his or her knowledge and belief, and that he or she is an authorized representative of the above-named insurance company.

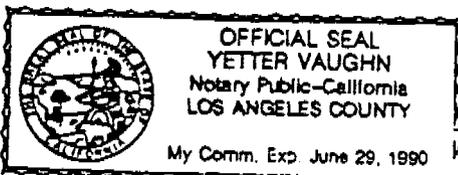
1-27-88 M. J. Morehouse - Account Manager
(Date, Signature and Title of Authorized Agent of Insurance Company)

Signed and sworn before me by

M. J. MOREHOUSE

(Name)

this 27th day of January, 1988.



My Commission Expires:

Yetter Vaughn
(Signature)

June 29, 1990
(Date)

STATEWIDE OR NATIONWIDE MINERAL LEASE BOND
(EXCEPT OIL AND GAS)

KNOW ALL MEN BY THESE PRESENTS, That we,

SWISHER COAL COMPANY, a Utah Corporation

of the county of Carbon, in the State of Utah

as principal, and ALINA CASUALTY & SURETY CO., of the county of Hartford

in the State of Connecticut, as surety, are held and firmly bound unto the United States

of America in the sum of Twenty Five Thousand Dollars

(\$25,000.00) lawful money of the United States, for which payment, well and truly to be made, we, by these presents, bind ourselves, and each of us, and each of our heirs, executors, administrators, successors, and assigns, jointly and severally, upon the following conditions, viz:

If the amount of this bond is \$75,000, or if it is raised by an attached rider to that amount, coverage shall extend to all the principal's holdings involving deposits in the United States, including Alaska, under the Act or Acts cited in Schedule A.

If the amount of this bond is \$25,000, its coverage extends only to the principal's holdings involving coal deposits in the State named in Schedule A. Furthermore, such coverage is confined to the holdings under the Public Domain Leasing Act of February 25, 1920 (41 Stat. 437) as amended.

SCHEDULE A

Public Domain Leasing Act of February 25, 1920 (41 Stat. 437) as amended and supplemented (30 U.S.C. 181-287)
Acquired Lands Leasing Act of August 7, 1947 (61 Stat. 913; 30 U.S.C. 351-359)

| NAME OF STATE | LEASE NUMBER | NAME OF STATE | LEASE NUMBER |
|---------------|--------------|---------------|--------------|
| Utah | U-8319 | | |

and other federal leases now covered by individual bonds which coverage is in process of being transferred by rider or otherwise statewide bond.

The principal and surety both agree to "assume the liability for the necessary reclamation and abandonment work required as a result of operations on the lease lands prior to the date of the assignment" of U-8319.

The conditions of the foregoing obligations are such that, whereas the said principal, in one or more of the following ways, has an interest in mineral leases issued under the Act or Acts cited in Schedule A of this bond:

- 1. as the lessee of such leases;
- 2. as the approved holder of operating rights in all or part of the lands covered by such leases under operating agreements with the lessee; and
- 3. as designated operator or agent under such leases pending approval of an assignment of operating agreement; and

WHEREAS the principal is authorized to drill for, mine, reclaim, remove, and dispose of mineral deposits in or

agreements or designations, and is obligated to comply with certain covenants and agreements set forth in such instruments; and

WHEREAS the principal agrees that the coverage of this bond, in addition to the present holdings of the principal shall extend to and include:

- 1. Any mineral lease hereafter issued to, or acquired by, the principal affecting mineral deposits in the State or States not named in Schedule A, or later named in a rider, the coverage to be confined in the principal's holdings under the Act or Acts cited at the head of the column in which the name(s) of the State or States appears and to become effective immediately upon such issuance or upon operational approval of a United States

2/15/83

2-22

2. Any operating agreement, whether entered into or acquired by the principal, affecting mineral deposits in the States now named in Schedule A, or later named in a rider, relating to mineral leases issued under the Act or Acts cited in Schedule A at the head of the column in which the name of the State is placed. The coverage shall become effective immediately upon departmental approval of the agreement or of a transfer of an operating agreement to the principal.

3. Any designation subsequent hereto of the principal as operator or agent of a lessee under a lease issued pursuant to an Act or Acts cited in Schedule A and covering lands in a State named in Schedule A, either presently or by rider. This coverage shall become effective immediately upon the filing of such a designation under a lease.

4. Any extension of a lease covered by this bond, such coverage to continue without any interruption due to the expiration of the term set forth in the lease.

WHEREAS the principal hereby agrees that notwithstanding the termination of any lease or leases, operating agreements or designations as operator or agent covered by this bond, whether the termination is by operation of law or otherwise, the bond shall remain in full force and effect as to any remaining leases, operating agreements, or designations covered by the bond; and

WHEREAS the principal as to any lease or part of a lease in lands as to which he has been designated as operator or agent, or approved as operator, in consideration of being permitted to furnish this bond in lieu of

bind himself to fulfill, on behalf of each lessee, all the obligations of each such lease for the entire leasehold in the same manner and to the same extent as though he were the lessee; and

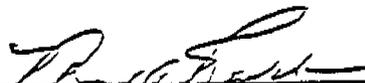
WHEREAS the principal agrees that notwithstanding any use of the security pledged herewith for the purpose for which it is pledged, the bond shall remain in full force and effect in the sum above set forth and the he will, whenever so required by the lessee, deposit additional security to bring the security up to the full amount; and

WHEREAS the principal agrees that the neglect or forbearance of said lessee in enforcing or against the lessees of such lessee, the payment of rentals or royalties or the performance of any other covenants, conditions, or agreements of the lease, shall not, in any way, release the principal from any liability under this bond; and

WHEREAS the principal agrees that in the event of any default under the lease, the lessee may commence and prosecute any claim, suit, action, or other proceeding against the principal without the necessity of joining the lessee.

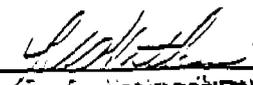
NOT, THEREFORE, if said principal shall in all respects faithfully comply with all of the provisions of the lease referred to hereinbefore, that the above obligations are to be void; otherwise to remain in full force and effect.

Signed on this 21st day of JANUARY, 1976, in the presence of:


(Signature of Principal)

607 Keene Building, C.P. Trust, SUITE 200
(ADDRESS OF PRINCIPAL AND/OR AGENT)

[SEAL]


E. C. WETMORE (Signature of Agent)

The Aetna Casualty & Surety Company
425 South Main, Salt Lake City, Utah 84111
(BUSINESS ADDRESS OF SURETY, AND/OR AGENT)

If this bond is required by a corporation, it must bear the seal of such corporation.



December 20, 1984

Mr. Dan W. Guy, Manager
Permitting and Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

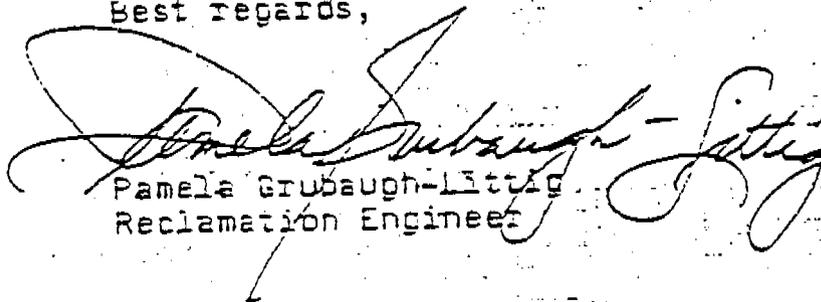
Dear Mr. Guy:

RE: Posted Bond in 1989 Dollars, Gordon Creek #2 and #7,
ACT/007/016, #5, Carbon County, Utah

I enclosed a signed original bond for your files. This bond represents posting of the reclamation surety in 1989 dollars for the Gordon Creek #2 and #7 operations.

If you have any comments, please let me know. Thank you for your cooperation.

Best regards,


Pamela Grubaugh-Little
Reclamation Engineer

dtb

Enclosure

cc: Mary Humphrey
Ron Daniels
Mary Boucek

6606R-33

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES AND ENERGY
DIVISION OF OIL, GAS AND MINING
4241 State Office Building
Salt Lake City, Utah 84148

RECEIVED
FEB 4 1984
DIVISION OF
OIL, GAS & MINING

THE MINED LANDS RECLAMATION ACT

BOND

The undersigned Beaver Creek Coal Company
as principal, and FEDERAL INSURANCE COMPANY as
surety, hereby jointly and severally bind ourselves, our heirs, administrators,
executors, successors and assigns unto the State of Utah, Division of Oil, Gas
and Mining, and the U. S. Department of the Interior, Office of Surface Mining
in the penal sum of Six hundred forty one thousand four hundred forty three and no/100
dollars (\$ 641,443.00). Such sum shall be payable to
one, but not both, of the above-named agencies.

The principal estimated in a "Notice of Intention to Commence Mining
Operations and a Mining and Reclamation Plan," filed with the Division of Oil,
Gas and Mining on the 2nd day of February,
1983, that 2,286.05 acres of land will be affected by this mining
operation in the State of Utah. A description of the affected land is attached
hereto as Exhibit "A."

If the principal shall satisfactorily reclaim the above-mentioned lands
affected by mining by the said principal in accordance with the Mining and
Reclamation Plan and shall faithfully perform all requirements of the Mined
Land Reclamation Act, and comply with the Rules and Regulations adopted in
accordance therewith, then this obligation shall be void; otherwise it shall
remain in full force and effect until the reclamation is completed as outlined
in the approved Mining and Reclamation Plan.

If the approved plan provides for reclamation of the land affected on a
piecemeal or cyclic basis, and the land is reclaimed in accordance with such
plan, then this bond may be reduced periodically.

In the converse, if the plan provides for a gradual increase in the area
of the land affected or increased reclamation work, then this bond may
accordingly be increased with the written approval of the surety company.

STATE OF UTAH
County of Salt Lake

ss.:

On this 28th day of November in the year nineteen hundred
eighty four, A. D., before me, Mary Cristaudo, a Notary Public in and for
County of Salt Lake, State of Utah, residing therein, duly commissioned and

personally appeared Norman D. Squires
known to me to be the Attorney(s) in Fact of Federal Insurance Company executing
annexed instrument, and acknowledged to me that such Corporation executed it.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed by office
in said county the day and year in this certificate first above written.

Mary Cristaudo
Notary Public in and for the County of Salt Lake, State of Utah

My Commission expires July 4, 1987

POWER OF ATTORNEY

Know all Men by these Presents, That the FEDERAL INSURANCE COMPANY, 15 Mountain View Road, Warren, New Jersey, a New Jersey Corporation has constituted and appointed, and does hereby constitute and appoint Norman D. Squires, Richard G. Taylor and George L. Williams, Salt Lake City, Utah

true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as person or otherwise, bonds of any of the following classes, to-wit:

1. Bonds and Undertakings filed in any suit, matter or proceeding in any Court, or filed with any Sheriff or Magistrate, for the doing or not doing of anything specified in such Bond or Undertaking.
2. Surety bonds to the United States of America or any agency thereof, including those required or permitted under the laws or regulations relating to Customs or Internal Revenue; License and Permit Bonds or other indemnity bonds under the laws, ordinances or regulations of any State, City, Town, Village, Board or other body or organization, public or private; bonds to Transportation Companies, Lost Instrument bonds; Lease bonds, Workers' Compensation bonds, Miscellaneous Surety bonds and bonds on behalf of Notaries Public, Sheriffs, Deputy Sheriffs and similar public officials.
3. Bonds on behalf of contractors in connection with bids, proposals or contracts.

In Witness Whereof, the said FEDERAL INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Assistant Vice-President and Assistant Secretary and its corporate seal to be hereto affixed this 12th day of December 19 83



Richard D. O'Connor
Assistant Secretary

FEDERAL INSURANCE COMPANY
By George McClellan
Assistant Vice-President

STATE OF NEW JERSEY }
County of Somerset } SS.

On this 12th day of December 19 83, before me personally came Richard D. O'Connor to me known and by me known to be Assistant Secretary of the FEDERAL INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney, and the said Richard D. O'Connor being by me duly sworn, did depose and say that he is Assistant Secretary of the FEDERAL INSURANCE COMPANY and knows the corporate seal thereof; that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereon affixed by authority of the By-Laws of said Company, and that he signed said Power of Attorney as Assistant Secretary of said Company by his authority; and that he is acquainted with George McClellan and knows him to be the Assistant Vice-President of said Company, and that the signature of said George McClellan subscribed to said Power of Attorney is in the genuine handwriting of said George McClellan and was thereto subscribed by authority of said By-Laws and in person's presence.



STATE OF NEW JERSEY }
County of Somerset } SS.

Acknowledged and Sworn to before me on the date above written.
Alice Leonard
Notary Public

CERTIFICATION
ALICE LEONARD
NOTARY PUBLIC OF NEW JERSEY.
My Commission Expires June 28, 1988

I, the undersigned, Assistant Secretary of the FEDERAL INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and most recently amended March 11, 1983 and that this By-Law is in full force and effect:

"ARTICLE XVIII

Section 2. All bonds, undertakings, contracts and other instruments cover their, as above for and on behalf of the Company which it is authorized by law or its charter to execute, they and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

Section 3. All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the Vice-Chairman or the President or a Vice-President or an Assistant Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed.

I further certify that said FEDERAL INSURANCE COMPANY is duly licensed to transact liability and surety business in each of the States of the United States of America, District of Columbia, Puerto Rico, and each of the provinces of Canada with the exception of Prince Edward Island, and is also duly licensed to become surety on bonds, undertakings, etc., permitted or required by law.

I, the undersigned Assistant Secretary of FEDERAL INSURANCE COMPANY, do hereby certify that the foregoing Power of Attorney is in full force and effect:

Given under my hand and the seal of said Company at Warren, N.J. this 28th day of November 19 84



George L. Williams
Assistant Secretary



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE
324 SOUTH STATE, SUITE 301
SALT LAKE CITY, UTAH 84111-2303

3400
U-8319
(U-942)

JUN 25 1985

DECISION

Beaver Creek Coal Company
555 Seventeenth Street
Denver, CO 80217

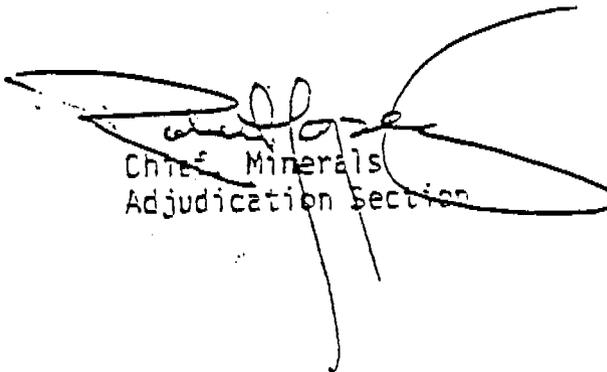
: Coal
: U-53159
:



Bond Accepted

On April 11, 1985, a coal lease bond (No. 8105 27 12) in the amount of \$123,000, with Beaver Creek Coal Company as principal and Federal Insurance Company as surety, was filed in this office to provide bond coverage for coal lease U-8319.

The bond has been examined, found to meet the requirements of the regulations in 43 CFR 3474.2(a), and is accepted effective as of the date filed.


Chief Minerals
Adjudication Section



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE
324 SOUTH STATE, SUITE 301
SALT LAKE CITY, UTAH 84111-2303

3400
U-53159
(U-942)

JUN 25 1985

DECISION

Beaver Creek Coal Company
555 Seventeenth Street
Denver, CO 80217

:
:
:

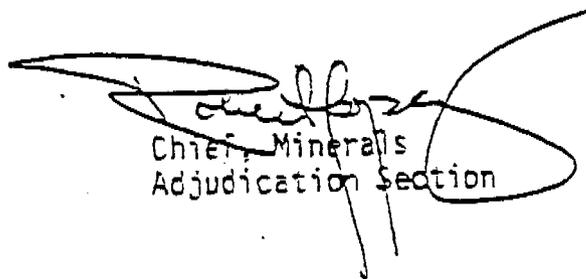
Coal
U-53159



Rider to Bond Accepted

On April 11, 1985, a rider to coal lease bond (No. 8094 25 99), with Beaver Creek Coal Company as principal and Federal Insurance Company as surety, covering coal lease U-53159 was filed.

The rider increases the coverage of this bond from \$10,000 to \$242,000. The rider has been examined, found to be satisfactory, and is hereby accepted effective the date of filing.


Chief, Minerals
Adjudication Section

1987

WATER MONITORING DATA

Beaver Creek Coal Company
Water Monitoring Report

2-1-W
Station #

Property: Gordon Creek, 2 & 7 Mine
 Location: #2 Sed. Pond
 Type: NPDES Discharge
 Frequency: Monthly

| Field Measurements | Date Sampled | | | | | | | | | | | | Mean |
|--------------------|--------------|-----|------|------|------|-----|-----|------|-----|-------|------|------|------|
| | 1/6 | 2/6 | 3/10 | 4/20 | 5/25 | 6/1 | 7/7 | 8/10 | 9/8 | 10/13 | 11/6 | 12/3 | |
| Flow [gpm] | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY | DRY |
| PH | | | | | | | | | | | | | |
| Sp. Cond. [ohm/cm] | | | | | | | | | | | | | |
| Temp. [C °] | | | | | | | | | | | | | |

| Lab [Mg/l] Measurements | Date Sampled | | | | | | | | | | | | Mean |
|-------------------------------|--------------|--|--|--|--|--|--|--|--|--|--|--|------|
| | | | | | | | | | | | | | |
| TSet.S | | | | | | | | | | | | | |
| TSS | | | | | | | | | | | | | |
| TDS | | | | | | | | | | | | | |
| CaCO ₃ | | | | | | | | | | | | | |
| A CaCO ₃ | | | | | | | | | | | | | |
| CO ₃ ⁻² | | | | | | | | | | | | | |
| Ca | | | | | | | | | | | | | |
| Cl ⁻ | | | | | | | | | | | | | |
| Fe | | | | | | | | | | | | | |
| Mg | | | | | | | | | | | | | |
| Mn | | | | | | | | | | | | | |
| K | | | | | | | | | | | | | |
| Na | | | | | | | | | | | | | |
| SO ₄ ⁻² | | | | | | | | | | | | | |
| Cat-Anion | | | | | | | | | | | | | |
| Oil & G. | | | | | | | | | | | | | |
| HCO ₃ | | | | | | | | | | | | | |

~~Bicarbonate~~

Beaver Creek Coal Company
Water Monitoring Report

2-2-W
Station #

Property: 2 & 7 Mine
 Location: N. Fk. Gordon Creek
 Type: Per. Stream
 Frequency: Monthly - Quarterly

| Field Measurements | Date Sampled | | | | | | | | | | | | Mean |
|--------------------|--------------|-----|------|------|------|-----|-----|------|-------|-------|------|------|--------|
| | 1/6 | 2/6 | 3/10 | 4/16 | 5/25 | 6/1 | 7/7 | 8/10 | 9/8 | 10/13 | 11/6 | 12/3 | |
| Flow [gpm] | 196 | 62 | 129 | 480 | 540 | 300 | 142 | 87.5 | 164.3 | 197 | 184 | 190 | 222.65 |
| PH | 8.1 | 8 | 8.1 | 8.1 | 8.1 | NT | 8.2 | NT | NT | 8.0 | NT | NT | 8.1 |
| Sp. Con. [ohm/cm] | 655 | 690 | 640 | 520 | 460 | NT | 490 | NT | NT | 640 | NT | NT | 584 |
| Temp. [C°] | 1° | 1° | 2° | 4° | 6° | NT | 16° | NT | NT | 9° | NT | NT | 5.7° |
| Dis. O [Mg/l] | NT | NT | NT | NT | 12 | NT | NA | NT | NT | 13 | NT | 13 | 12.9 |

| Laboratory Measurements | Date Sampled | | | | Mean |
|-------------------------------|--------------|---------|--------|----------|-------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| [Mg/l] | | | | | |
| TSS | 7.3 | 34 | 40 | 4.8 | 21.2 |
| TDS | 446 | 272 | 292 | 345 | 338.7 |
| CaCO ₃ | 300 | 255 | 275 | 325 | 288.8 |
| A CaCO ₃ | 399 | 227 | 211 | 248 | 246.2 |
| CO ₃ ⁻² | 0 | 0 | 0 | 0 | 0 |
| Ca | 13 | 58 | 60 | 58 | 47 |
| Cl ⁻ | .06 | 6 | 11 | 10 | 7.1 |
| Fe | .50 | .58 | .50 | .05 | .39 |
| Mg | 3 | 27 | 30 | 43 | 25.1 |
| Mn | <.02 | <.02 | .03 | .02 | .02 |
| K | 8 | 1 | 2 | 3 | 3.5 |
| Na | 115 | 4 | 5 | 6 | 32 |
| SO ₄ ⁻² | 21 | 41 | 58 | 77 | 46.9 |
| Cat-Anion | .12% | 2.02% | .52% | .22% | .72% |
| Oil & G. | NT | NT | NT | <1.0 | <1.0 |
| HCO ₃ | 78 | 277 | 257 | 58 | 167.7 |

Beaver Creek Coal Company
Water Monitoring Report

2-3-W
Station #

Property: 2 & 7 Mine
 Location: Lower Beaver Creek
 Type: Per. Stream
 Frequency: Monthly - Bi-annually

Date Sampled:

| Field Measurements | Date Sampled | | | | | | | | | | | | Mean |
|--------------------|--------------|-----|------|------|------|------|-----|------|-----|-------|------|------|--------|
| | 1/6 | 2/6 | 3/10 | 4/20 | 5/25 | 6/18 | 7/7 | 8/2 | 9/8 | 10/24 | 11/6 | 12/3 | |
| Flow [gpm] | NA | NA | NA | NA | 560 | 164 | 385 | 64.8 | 47 | 116 | 80 | 86.7 | 187.93 |
| PH | | | | | 8.1 | NT | 8.1 | NT | NT | NT | NT | NT | 8.1 |
| Sp. Cond. [ohm/cm] | | | | | 460 | NT | 290 | NT | NT | NT | NT | NT | 375 |
| Temp. [C°] | | | | | 6 | NT | 16 | NT | NT | NT | NT | NT | 11 |
| Dis. O. [Mg/l] | | | | | 12 | NT | NT | NT | NT | NT | NT | 11 | 11.5 |

Date Sampled

| Laboratory Measurements [mg/l] | Date Sampled | | Mean |
|--|--------------|--------|------|
| | 5/25/87 | 7/7/87 | |
| Total Suspended Solids | 508 | 52 | 280 |
| Total Dissolved Solids | 222 | 254 | 238 |
| Total Hardness [as CaCO ₃] | 210 | 240 | 225 |
| Acidity [CaCO ₃] | 195 | 223 | 209 |
| Carbonate [CO ₃ ⁻²] | 0 | 0 | 0 |
| Bicarbonate [HC ₃ ⁻¹] | 238 | 271 | 254 |
| Calcium [Ca] | 74 | 81 | 77.5 |
| Chloride [Cl ⁻] | 4 | 6 | 5 |
| Iron [Fe] | 6.5 | 06 | 3.5 |
| Magnesium [Mg] | 6 | 9 | 7.5 |
| Total Manganese [Mn] | .26 | < .02 | .14 |
| Potassium [K] | 1 | 1 | 1 |
| Sodium [Na] | 3 | 4 | 3.5 |
| Sulfate [SO ₄ ⁻²] | 17 | 21 | 19 |
| Cation - Anion Balance | 0 | .30% | .30% |

Beaver Creek Coal Company
Water Monitoring Report

2-4-W
Station #

Property: 2 & 7 Mine
 Location: Upper Beaver Creek
 Type: Per. Stream
 Frequency: Monthly - Bi-annually

| Field Measurements | Date Sampled | | | | | | | | | | | | Mean |
|--------------------|--------------|-----|------|------|------|-----|-----|------|-----|-------|-------|------|-------|
| | 1/6 | 2/6 | 3/10 | 4/20 | 5/25 | 6/1 | 7/7 | 8/10 | 9/8 | 10/13 | 11/16 | 12/3 | |
| Flow [gpm] | NA | NA | NA | NA | 460 | 0 | 118 | 37 | 26 | 92 | 65 | 78.8 | 109.6 |
| PH | | | | | 8.2 | 8.1 | 8 | NT | NT | NT | NT | NT | 8.1 |
| Sp. Con. [ohm/cm] | | | | | 400 | NT | 400 | NT | NT | NT | NT | NT | 400 |
| Temp. [C°] | | | | | 4 | NT | 16 | NT | NT | NT | NT | NT | 10 |
| Dis. O. [Mg/l] | | | | | 12 | NT | NT | NT | NT | NT | NT | 13 | 12.5 |

| Laboratory Measurements [mg/l] | Date Sampled | | Mean |
|--|--------------|--------|-------|
| | 5/25/87 | 7/7/87 | |
| Total Suspended Solids | 94 | 17 | 55 |
| Total Dissolved Solids | 186 | 266 | 226 |
| Total Hardness [as CaCO ₃] | 181 | 259 | 220 |
| Acidity [CaCO ₃] | 172 | 253 | 212.5 |
| Carbonate [CO ₃ ⁻²] | 0 | 0 | 0 |
| Bicarbonate [HC ₃ ⁻¹] | 210 | 308 | 259 |
| Calcim [Ca] | 59 | 84 | 72 |
| Chloride [Cl ⁻] | 4 | 5 | 4.5 |
| Iron [Fe] | 1.24 | <.05 | .62 |
| Magnesium [Mg] | .07 | 12 | 6 |
| Total Manganese [Mn] | 8 | <.02 | 4 |
| Potassium [K] | 1 | 1 | 1 |
| Sodium [Na] | 3 | 4 | 3.5 |
| Sulfate [SO ₄ ⁻²] | 9 | 8 | 8.5 |
| Cation - Anion Balance | .40% | .09% | 245% |

Beaver Creek Coal Company
Water Monitoring Report

2-5-W
Station #

Property: 2 & 7 Mine
 Location: Jewkes Spring
 Type: Spring
 Frequency: Bi-annual

| Field Measurements: | Date Sampled | | Mean |
|---------------------|--------------|--------|------|
| | 5/25/87 | 7/7/87 | |
| Flow [gpm] | 62 | 87 | 78.5 |
| PH | 7.5 | 8.1 | 7.8 |
| Temperature [C°] | 6 | 14 | 10 |
| Sp. Cond. [ohms/cm] | 490 | 390 | 440 |

| Laboratory Measurements [mg/l] | Date Sampled | | Mean |
|--|--------------|--------|------|
| | 5/25/87 | 7/7/87 | |
| Total Suspended Solids | 31 | 45 | 38 |
| Total Dissolved Solids | 240 | 279 | 255 |
| Total Hardness [as CaCO ₃] | 224 | 270 | 248 |
| Acidity [CaCO ₃] | 208 | 244 | 226 |
| Carbonate [CO ₃ ⁻²] | 0 | 0 | 0 |
| Bicarbonate [HC ₃ ⁻¹] | 254 | 298 | 276 |
| Calcim [Ca] | 71 | 84 | 77.5 |
| Chloride [Cl ⁻] | 5 | 6 | 5.5 |
| Iron [Fe] | .39 | 1.72 | 1.05 |
| Magnesium [Mg] | 11 | 15 | 13 |
| Total Manganese [Mn] | .02 | .02 | .02 |
| Potassium [K] | 2 | 1 | 1.5 |
| Sodium [Na] | 5 | 3 | 4 |
| Sulfate [SO ₄ ⁻²] | 21 | 25 | 23 |
| Cation - Anion Balance | .32% | .09% | .20% |

Beaver Creek Coal Company
Water Monitoring Report

2-6-W
Station #

Property: 2 & 7 Mine
 Location: Gunnison Spring
 Type: Spring
 Frequency: Bi-annual

| Field Measurements: | Date Sampled | | Mean |
|-----------------------|--------------|--------|------|
| | 5/25/87 | 7/7/87 | |
| Flow [gpm] | 72 | 9.7 | 41 |
| PH | 8.1 | 8 | 8.05 |
| Temperature [C°] | 6 | 16 | 11 |
| Spec. Cond. [ohms/cm] | 400 | 340 | 370 |

| Laboratory Measurements [mg/l] | Date Sampled | | Mean |
|--|--------------|--------|-------|
| | 5/25/87 | 7/7/87 | |
| Total Suspended Solids | 256 | 36 | 148 |
| Total Dissolved Solids | 208 | 250 | 227 |
| Total Hardness [as CaCO ₃] | 198 | 234 | 216 |
| Acidity [CaCO ₃] | 184 | 209 | 198.5 |
| Carbonate [CO ₃ ⁻²] | 0 | 0 | 0 |
| Bicarbonate [HC ₃ ⁻¹] | 224 | 255 | 234 |
| Calcium [Ca] | 64 | 84 | 74 |
| Chloride [Cl ⁻] | 4 | 10 | 7 |
| Iron [Fe] | 7.99 | .35 | 4.2 |
| Magnesium [Mg] | 9 | 6 | 7.5 |
| Total Manganese [Mn] | .18 | <.02 | .10 |
| Potassium [K] | 1 | 1 | 1 |
| Sodium [Na] | 3 | 4 | 3.5 |
| Sulfate [SO ₄ ⁻²] | 16 | 21 | 18.5 |
| Cation - Anion Balance | 0% | 0% | 0% |

Beaver Creek Coal Company

Water Monitoring Report

2-7-W
Station #

Property: 2 & 7 Mine
 Location: Lt. Fork Bryner Above #7 Mine
 Type: Eph. Stream
 Frequency: Quarterly

| Field Measurements | Date Sampled | | | | Mean |
|---------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| Flow [gpm] | 2.1 | .75 | 4.5 | DRY | 2.45 |
| PH | 7.9 | 7.8 | 7.8 | | 7.8 |
| Sp. Cond. [ohms/cm] | 1090 | 1160 | 990 | | 1090 |
| Temp. [C°] | 3 | 5 | 16 | | 6 |

| Lab Measurements | Date Sampled | | | | Mean |
|-------------------------------|--------------|---------|--------|----------|--------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| [Mg/l] | | | | DRY | |
| TSS | 37 | 30 | 284 | | 117 |
| TDS | 712 | 706 | 672 | | 896.66 |
| CaCO ₃ | 444 | 648 | 589 | | 560.33 |
| A CaCO ₃ | 640 | 453 | 391 | | 494.66 |
| CO ₃ ⁻² | 0 | 0 | 0 | | 0 |
| Ca | 87 | 176 | 95 | | 119.33 |
| Cl ⁻ | 22 | 22 | 26 | | 23.33 |
| Fe | 1.94 | .50 | .33 | | .92 |
| Mg | 103 | 51 | 85 | | 79.66 |
| Mn | .10 | .02 | .04 | | .05 |
| K | 10 | 9 | 9 | | 8.66 |
| Na | 13 | 13 | 13 | | 13 |
| SO ₄ ⁻² | 213 | 214 | 210 | | 212 |
| Cat-Anion | 1.13% | 1.25% | 1.29% | | 1.20% |
| HCO ₃ | 541 | 552 | 476 | | 523 |

Disturbed

Beaver Creek Coal Company

Water Monitoring Report

2-8-W
Station #

Property: 2 & 7 Mine
 Location: Rt. Fork Bryner Above #2 Mine
 Type: Eph. Stream
 Frequency: Quarterly

| Field Measurements | Date Sampled | | | | Mean |
|---------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| Flow [gpm] | FROZEN | 9.5 | .2 | 4.9 | 4.86 |
| PH | | 8 | 8.1 | 8.1 | 8.1 |
| Sp. Cond. [ohms/cm] | | 681 | 590 | 290 | 520 |
| Temp. [C°] | | 6 | 18 | 8 | 11 |

| Laboratory Measurements | Date Sampled | | | | Mean |
|-------------------------------|--------------|---------|--------|----------|-------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| [Mg/l] | FROZEN | | | | |
| TSS | | 34 | 134 | 60 | 76 |
| TDS | | 374 | 353 | 333 | 353.3 |
| CaCO ₃ | | 370 | 298 | 315 | 328 |
| A CaCO ₃ | | 302 | 254 | < 1 | 185.6 |
| CO ₃ ⁻² | | 0 | 0 | 0 | 0 |
| Ca | | 78 | 93 | 71 | 80.6 |
| Cl ⁻ | | 7 | 11 | 10 | 9.3 |
| Fe | | .27 | 3.40 | .67 | 1.44 |
| Mg | | 43 | 16 | 33 | 32.11 |
| Mn | | .04 | .21 | .02 | .09 |
| K | | 4 | 5 | 7 | 5.3 |
| Na | | 7 | 14 | 6 | 9 |
| SO ₄ ⁻² | | 74 | 62 | 40 | 57.66 |
| Cat-Anion | | .13% | 00% | .90% | .51% |
| HCO ₃ | | 368 | 310 | 338 | 338 |

Beaver Creek Coal Company
Water Monitoring Report

2-9-W
Station #

Property: 2 & 7 Mine
 Location: Bryner Canyon Below #2 Mine
 Type: Eph. Stream
 Frequency: Quarterly

| Field Measurements | Date Sampled | | | | Mean |
|---------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| Flow [gpm] | DRY | DRY | DRY | DRY | |
| PH | | | | | |
| Sp. Cond. [ohms/cm] | | | | | |
| Temp. [C°] | | | | | |

| Laboratory Measurements | Date Sampled | | | | Mean |
|-------------------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/7/87 | 10/13/87 | |
| [Mg/l] | DRY | DRY | DRY | DRY | |
| TSS | | | | | |
| TDS | | | | | |
| CaCO ₃ | | | | | |
| A CaCO ₃ | | | | | |
| CO ₃ ⁻² | | | | | |
| Ca | | | | | |
| Cl ⁻ | | | | | |
| Fe | | | | | |
| Mg | | | | | |
| Mn | | | | | |
| K | | | | | |
| Na | | | | | |
| SO ₄ ⁻² | | | | | |
| Cat-Anion | | | | | |
| Oil & G. | | | | | |

Beaver Creek Coal Company
Water Monitoring Report

2-10-W
Station #

Property: 2 & 7 Mine
 Location: Inflow to Sed. Pond 7A
 Type: Eph. Stream
 Frequency: Quarterly

| Field Measurements | Date Sampled | | | | Mean |
|---------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/8/87 | 10/13/87 | |
| Flow [gpm] | DRY | 9 | DRY | DRY | 9 |
| PH | | 8 | | | 8 |
| Sp. Cond. [ohms/cm] | | 948 | | | 948 |
| Temp. [C°] | | 6 | | | 6 |

| Lab Measurements | Date Sampled | | | | Mean |
|-------------------------------|--------------|---------|--------|----------|------|
| | 2/6/87 | 5/18/87 | 7/8/87 | 10/13/87 | |
| [Mg/l] | DRY | | DRY | DRY | |
| TSS | | 948 | | | 94 |
| TDS | | 581 | | | 581 |
| CaCO ₃ | | 518 | | | 518 |
| A CaCO ₃ | | 341 | | | 341 |
| CO ₃ ⁻² | | 0 | | | 0 |
| Ca | | 109 | | | 109 |
| Cl ⁻ | | 30 | | | 30 |
| Fe | | .36 | | | .36 |
| Mg | | 59 | | | 59 |
| Mn | | .02 | | | .02 |
| K | | 2 | | | 2 |
| Na | | 12 | | | 12 |
| SO ₄ ⁻² | | 165 | | | 165 |
| Cat-Anion | | .91% | | | .91% |
| HCO ₃ | | 415 | | | 415 |



Date: January 26, 1987
Subject: Certification of Sediment Ponds

From/Location: D.W. Guy
To/Location: File

I, Dan W. Guy, a registered professional engineer State of Utah No. 4548, do hereby certify that the sediment control pond at the Gordon Creek No. 2 Mine (designated Pond No. 2) has been constructed in accordance with the plan and design criteria set forth in the approved Mining and Reclamation Plan.



Utah Registration Number
(Seal) Signature/Date



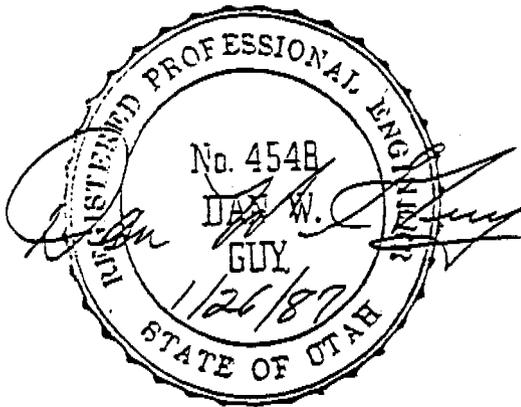
Date: January 26, 1987

Subject: Certification of Sediment Ponds

From/Location: D.W. Guy

To/Location: File

I, Dan W. Guy, a registered professional engineer State of Utah No. 4548, do hereby certify that the sediment control pond at the Gordon Creek No. 2/7 Mine (designated Pond No. 7A) has been constructed in accordance with the plan and design criteria set forth in the approved Mining and Reclamation Plan.

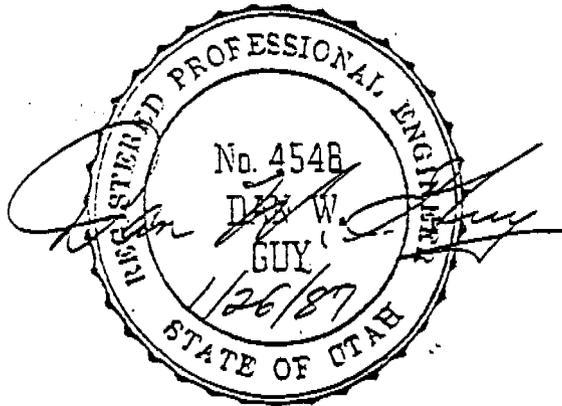


Utah Registration Number
(Seal) Signature/Date



Date: January 26, 1987
Subject: Certification of Sediment Ponds
From/Location: D.W. Guy
To/Location: File

I, Dan W. Guy, a registered professional engineer State of Utah No. 4548, do hereby certify that the water storage pond at the Sweets Canyon Water Truck Fill Area has been constructed in accordance with the plan and design criteria set forth in the approved Mining and Reclamation Plan.



Utah Registration Number
(Seal) Signature/Date

1987

PRECIPITATION DATA

BEAVER CREEK COAL COMPANY

RAIN GAUGE CHART

LOCATION #2 Mine

| DATE | GAUGE READING | TIME INTERVAL | MEASURED BY | REMARKS |
|---------|---------------|---------------|-------------|---------|
| 5/11/87 | 0 | 2:00 P.M | LR | |
| 5/11/87 | 0 | 10:35 am | LR | |
| 5/12/87 | 0 | 1:00 PM | LR | |
| 5/13/87 | .48 | 9:20 am | LR | |
| 5/18/87 | .40 | 12 - 15 PM | LR | |
| 5/26/87 | 1.10 | 8 AM | LR | |
| 5/27/87 | .35 | 2:30 PM | LR | |
| 5/28/87 | 0 | 1:00 PM | LR | |
| 5/29/87 | 0 | 1:00 PM | LR | |
| 6/1/87 | 0 | 1:00 PM | LR | |
| 6/2/87 | 0 | 1:00 PM | LR | |
| 6/3/87 | 0 | 2:00 PM | LR | |
| 6/8/87 | .82 | 6:00 AM | LR | |
| 6/9/87 | .63 | 6:00 AM | LR | |
| 6/10/87 | .05 | 7:30 AM | LR | |
| 6/11/87 | 0 | 7:30 AM | LR | |
| 6/15/87 | 0 | 12:00 PM | LR | |
| 6/16/87 | 0 | 1:00 PM | LR | |
| 6/17/87 | 0 | 1:00 PM | LR | |
| 6/18/87 | 0 | 7:30 AM | LR | |
| 6/22/87 | 0 | 6:00 AM | LR | |
| 6/23/87 | 0 | 6:00 AM | LR | |
| 6/24/87 | 0 | 6:00 AM | LR | |
| 6/25/87 | 0 | 12:00 PM | LR | |
| 6/29/87 | 0.11 | 6:30 AM | LR | |
| 6/30/87 | .41 | 7:00 AM | LR | |

BEAVER CREEK COAL COMPANY
RAIN GAUGE CHART

LOCATION #2 mine

| DATE | GAUGE READING | TIME INTERVAL | MEASURED BY | REMARKS |
|---------|---------------|---------------|-------------|---------|
| 7-1-87 | 0 | 7:30 AM | LQ | |
| 7-2-87 | 0 | 7:30 AM | LQ | |
| 7-6-87 | 0 | 7:30 AM | LQ | |
| 7-7-87 | 0 | 1:00 PM | LQ | |
| 7-13-87 | 1.05 | 1:00 PM | LQ | |
| 7-14-87 | 0 | 2:00 PM | LQ | |
| 7-15-87 | 0 | 2:30 PM | LQ | |
| 7-16-87 | 0 | 2:00 PM | LQ | |
| 7-20-87 | .26 | 12:15 PM | LQ | |
| 7-21-87 | .19 | 11:30 AM | LQ | |
| 7-28-87 | .04 | 3:00 PM | LQ | |
| 7-30-87 | 1.07 | 9:00 AM | JB | |
| 8-3-87 | 0 | 3:00 PM | LQ | |
| 8-4-87 | 0 | 2:00 PM | LQ | |
| 8-5-87 | 0 | 4:00 PM | LQ | |
| 8-6-87 | 0 | 4:00 PM | LQ | |
| 8-9-87 | .75 | 8:00 PM | JB | |
| 8-17-87 | 0 | 7:AM | LQ | |
| 8-18-87 | 0 | 7:AM | LQ | |
| 8-19-87 | 0 | 1-PM | LQ | |
| 8-20-87 | 0 | 1-PM | LQ | |
| 8-24-87 | .21 | 5 PM | LQ | |
| 8-25-87 | .10 | 5 PM | LQ | |
| 8-26-87 | 0 | 5:30 PM | LQ | |
| 8-27-87 | 0 | 5:00 PM | LQ | |
| 9-14-87 | .33 | 1:30 PM | LQ | |

**BEAVER CREEK COAL COMPANY
RAIN GAUGE CHART**

LOCATION #7 Mine

| DATE | GAUGE READING | TIME INTERVAL | MEASURED BY | REMARKS |
|---------|---------------|---------------|-------------|---------|
| 5/11/87 | 0 | 1:50 PM | JR | |
| 5/11/87 | 0 | 10:30 am | JR | |
| 5/12/87 | 0 | 12:55 am | JR | |
| 5/13/87 | .45 | 8:15 am | JR | |
| 5/18/87 | .40 | 12:15 PM | LQ | |
| 5/26/87 | 1.05 | 8: AM | LQ | |
| 5/27/87 | .35 | 2:30 PM | LQ | |
| 5/28/87 | 0 | 1:00 PM | LQ | |
| 5/29/87 | 0 | 1:00 PM | LQ | |
| 6/1/87 | 0 | 1:00 PM | LQ | |
| 6/1/87 | 0 | 1:00 PM | LQ | |
| 6/1/87 | 0 | 1:00 PM | LQ | |
| 6/1/87 | 0 | 1:00 PM | LQ | |
| 6/1/87 | 0 | 1:00 PM | LQ | |
| 6/8/87 | .72 | 6: AM | LQ | |
| 6/9/87 | .63 | 6:00 AM | J.B. | |
| 6/10/87 | .03 | 7:030 AM | LQ | |
| 6/11/87 | 0 | 7:30 AM | LQ | |
| 6/15/87 | 0 | 12:00 PM | LQ | |
| 6/16/87 | 0 | 1:00 PM | LQ | |
| 6/17/87 | 0 | 1:00 PM | LQ | |
| 6/18/87 | 0 | 7:30 AM | LQ | |
| 6/22/87 | 0 | 6:00 AM | LQ | |
| 6/23/87 | 0 | 6:00 AM | LQ | |
| 6/24/87 | 0 | 6:00 AM | LQ | |
| 6/25/87 | 0 | 12:00 PM | LQ | |
| 6/29/87 | 0.15 | 6:30 AM | LQ | |
| 6/30/87 | .35 | 7:00 AM | LQ | |

BEAVER CREEK COAL COMPANY

RAIN GAUGE-CHART

LOCATION #7 mine

| DATE | GAUGE READING | TIME INTERVAL | MEASURED BY | REMARKS |
|---------|---------------|---------------|-------------|---------|
| 7-1-87 | 0 | 7:30 AM | LQ | |
| 7-2-87 | 0 | 7:30 AM | LQ | |
| 7-6-87 | 0 | 7:30 AM | LQ | |
| 7-7-87 | 0 | 1:00 PM | LQ | |
| 7-13-87 | 1.04 | 1:00 PM | LQ | |
| 7-14-87 | 0 | 2:00 PM | LQ | |
| 7-15-87 | 0 | 2:30 PM | LQ | |
| 7-16-87 | 0 | 2:00 PM | LQ | |
| 7-20-87 | .18 | 12:15 PM | LQ | |
| 7-21-87 | .20 | 11:30 AM | LQ | |
| 7-22-87 | .05 | 3:00 PM | LQ | |
| 7-23-87 | .85 | 9:00 PM | JB | |
| 7-30-87 | .83 | 2:30 PM | LQ | |
| 8-3-87 | 0 | 3:00 PM | LQ | |
| 8-4-87 | 0 | 2:00 PM | LQ | |
| 8-5-87 | 0 | 4:00 PM | LQ | |
| 8-6-87 | 0 | 4:00 PM | LQ | |
| 8-9-87 | .65 | 8:00 PM | JB | |
| 8-17-87 | 0 | 7: AM | LQ | |
| 8-18-87 | 0 | 7: AM | LQ | |
| 8-19-87 | 0 | 1: PM | LQ | |
| 8-20-87 | 0 | 1: PM | LQ | |
| 8-24-87 | .19 | 5: PM | LQ | |
| 8-25-87 | .11 | 5: PM | LQ | |
| 8-26-87 | 0 | 5:30 PM | LQ | |
| 8-27-87 | 0 | 5:00 PM | LQ | |
| 8-31-87 | .09 | 1:30 PM | LQ | |

1987

SUBSIDENCE MONITORING REPORT

A&W SURVEYING

317 SOUTH 2ND WEST - PRICE, UTAH - (801) 637-3686

SUBSIDENCE MONITORING
FOR
GORDON CREEK #2 MINE & BEAVER CREEK

| STATION | ORIG. ELEV. | SURVEY ELEV. | | CHANGES | |
|---------|-------------|--------------|----------|---------|--------|
| | 7/29/86 | 10/27/86 | 8/16/87 | LATEST | ACC. |
| SWEETS | 9174.513 | 9174.513 | 9174.513 | - | - |
| "H" | 8849.120 | 8849.120 | 8849.120 | - | - |
| "A" | 8653.167 | 8653.510 | 8653.553 | 0.043 | 0.386 |
| "B" | 8241.927 | 8242.048 | 8241.862 | -0.186 | -0.065 |
| B-1 | 8542.205 | 8542.053 | 8542.250 | 0.197 | 0.045 |
| B-2 | 8557.768 | 8557.610 | 8557.780 | 0.170 | 0.012 |
| B-3 | 8571.868 | 8571.696 | 8571.837 | 0.141 | -0.031 |
| B-4 | 8594.970 | 8594.822 | 8594.959 | 0.137 | -0.011 |
| B-5 | 8590.990 | 8590.851 | 8590.997 | 0.146 | 0.007 |
| B-6 | 8652.996 | 8652.852 | 8652.947 | 0.095 | -0.049 |
| B-7 | 8635.952 | 8635.884 | 8635.894 | 0.010 | -0.058 |
| B-8 | 8893.432 | 8893.356 | 8893.395 | 0.039 | -0.037 |
| B-9 | 8409.744 | 8409.870 | 8409.843 | -0.027 | 0.099 |
| B-10 | 8792.567 | 8792.619 | 8792.108 | -0.511 | -0.459 |

A&W SURVEYING

317 SOUTH 2ND WEST - PRICE, UTAH - (801) 637-3686

SUBSIDENCE MONITORING
FOR
GORDON CREEK #7 MINE

| STATION | ORIG. ELEV. | SURVEY ELEV. | | | CHANGES | |
|---------|-------------|--------------|----------|----------|---------|--------|
| | 9/24/86 | 6/12/86 | 10/14/86 | 8/15/87 | LATEST | ACC. |
| SWEETS | 9174.513 | 9174.513 | 9174.513 | 9174.513 | - | - |
| "H" | 8849.120 | 8849.120 | 8849.120 | 8849.120 | - | - |
| "I" | 9040.049 | 9039.714 | 9039.697 | 9039.654 | -0.043 | -0.395 |
| Sub-1 | 8295.284 | 8295.278 | 8295.312 | 8295.376 | 0.064 | 0.092 |
| Sub-2 | 8416.227 | 8416.194 | 8416.206 | 8416.197 | -0.009 | -0.030 |
| Sub-4 | 9042.727 | 9042.740 | 9042.712 | 9042.751 | 0.039 | 0.024 |
| Sub-5 | 9220.773 | 9221.004 | 9221.044 | 9220.811 | -0.233 | 0.038 |
| Sub-6 | 8649.193 | 8646.524 | 8646.472 | 8646.450 | -0.022 | -2.743 |
| Sub-7 | 8724.159 | 8723.478 | 8723.318 | 8723.289 | -0.029 | -0.870 |
| Sub-8 | 8967.402 | 8966.790 | 8966.676 | 8966.622 | -0.054 | -0.780 |
| Sub-9 | 8901.147 | 8900.433 | 8900.008 | 8899.904 | -0.104 | -1.243 |
| Sub-10 | 8864.970 | 8864.087 | 8863.691 | 8863.620 | -0.071 | -1.350 |
| Sub-11 | 9050.850 | 9050.872 | 9050.720 | 9050.234 | -0.486 | -0.616 |
| Sub-12 | 8977.577 | 8977.526 | 8977.341 | 8975.913 | -1.428 | -1.664 |
| Sub-13 | 8887.506 | 8887.528 | 8887.329 | 8885.186 | -2.143 | -2.320 |
| Sub-14 | 9059.611 | 9059.614 | 9059.575 | 9059.692 | 0.117 | 0.081 |
| Sub-15 | 9000.420 | 9000.449 | 9000.371 | 9000.534 | 0.163 | 0.114 |
| Sub-17 | 8905.849 | 8905.630 | 8905.590 | 8905.736 | 0.146 | -0.113 |
| Sub-18 | 8662.317 | 8662.097 | 8662.031 | 8662.199 | 0.168 | -0.118 |
| Sub-19 | 9098.256 | 9097.999 | 9097.747 | 9097.502 | -0.245 | -0.754 |
| Sub-20 | 8908.330 | 8908.057 | 8908.060 | 8906.775 | -1.285 | -1.555 |
| Sub-21 | 8755.014 | 8754.819 | 8754.730 | 8754.599 | -0.131 | -0.415 |
| Sub-22 | 8757.128 | 8756.914 | 8756.907 | 8755.064 | -1.843 | -2.064 |
| Sub-23 | 8788.448 | 8788.409 | 8788.426 | 8788.407 | -0.019 | -0.041 |
| Sub-24 | 8762.659 | 8762.729 | 8762.599 | 8762.658 | 0.059 | -0.001 |

UPDATED MINE MAP

1987
VEGETATION DATA

VEGETATIVE MONITORING REPORT

BEAVER CREEK COAL COMPANY
ALL PROPERTIES

VEGETATIVE MONITORING REPORT
BEAVER CREEK COAL COMPANY
ALL PROPERTIES

SCOPE:

Beaver Creek Coal Company maintains 6 properties located over 4 locations in Carbon and Emery Counties in Southeastern Utah [see Figure 1 - Location Map]. Three properties have been totally reclaimed and three properties have had either interim or permanent reclamation over small isolated areas. This report deals with the success of the vegetation establishment on each site. An attempt was made to establish parameters of evaluation and identify potential problems so that corrective measures can be implemented where necessary.

METHODOLOGIES:

Two types of surveys were conducted depending on the year that reclamation was implemented and the monitoring schedule committed to in the respective MRP's. The two methods are: [1] Reconnaissance, and [2] Quantitative Sampling. A description of each is as follows:

- [1] Reconnaissance: Each reclamation site was surveyed and a complete ground survey was conducted. Qualitative observations were recorded. A species list was generated for the entire area. If the site encompassed more than one biom or major vegetative category, separate species lists were assembled by area. All species were noted, desirable as well as undesirable, which may

have been introduced either from adjacent areas or imported on to the site through the use of hay, straw or contaminated seed. A site specific map scaled at no greater than [1" = 50'] was utilized and all evidence of potential problems such as erosion, bare areas etc. were noted and located on the map. The use by domestic stock or wildlife was noted and categorized as to impacts and specific species which were utilized. A count of woody species [seedlings and saplings] was made and estimates of survival were recorded. A few random transects utilizing a 10 point frame were run to give tentative quantitative estimates of % cover as well as ocular estimates of species diversification.

The goal or objective of the reconnaissance survey is to identify potential problems early so that corrective actions can be expeditiously implemented.

[2] Quantitative Sampling: Quantitative sampling of vegetation involved point samples along 50 M transects. A random numbers table was used to determine the number of paces between transect lines. The direction of each transect was randomly selected by a hand-held compass. Compass headings that fell within the plot boundary and did not bisect other transects were used. Ten point samples were taken every 5 meters along each transect using a modified point frame. Recordings included plant species and vigor, litter, rock and bare ground. A species list and cover by species was thus generated.

A single tail t-test was used to determine the number of samples needed to satisfy a 90% confidence limit.

In addition, each area was inventoried for woody plant density; this was accomplished by : 1. a total count of all woody plants observed on the site. This method was employed only on small areas [less than 2 acres] on the larger units, and 2. actual counts of seedling and sapling planting were conducted and % survival was determined by dividing surviving plants by the original number planted. In the majority of cases the woody plant species were less than three years old, so that no minimum height requirement was implemented.

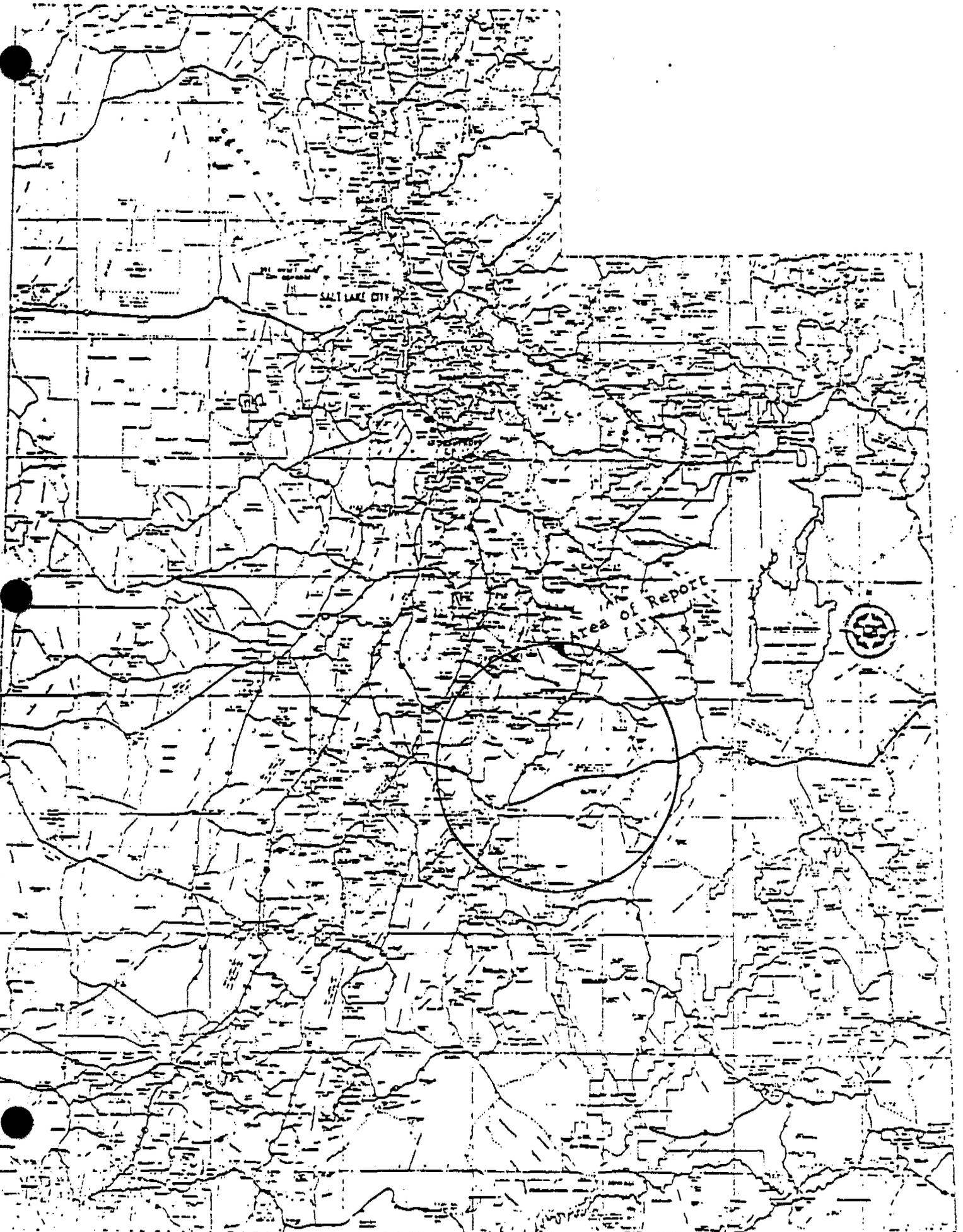
Stems per acre were determined by counting all stems in randomly placed 1 square meter plots located along each transect line. Use by domestic stock and or wildlife was noted as well as any problems observed such as erosion, high mortality, or areas which appear to be unsuccessful.

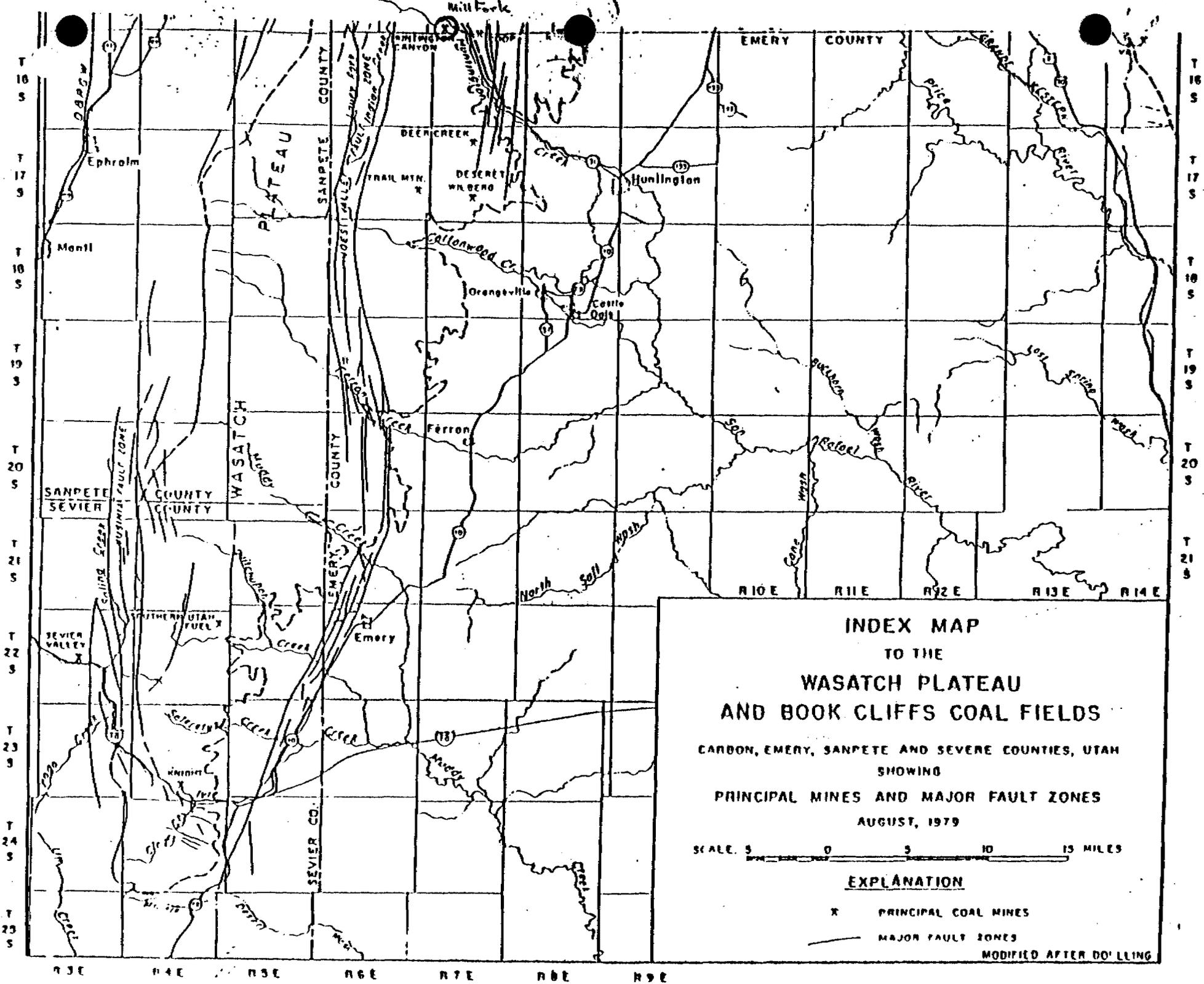
Quantitative sampling of the various reference areas was not implemented due to the relatively short time frame since reclamation was implemented.

Each site is discussed in brief. The following information will preview the survey data:

1. Year reclamation was implemented
2. Methodologies utilized
3. Seed mix used
4. Conclusions and recommendations

Figure 1





1987 VEGETATION SURVEY

#2 & 7 MINE

BEAVER CREEK COAL COMPANY

AREA III
#2 & 7 Mine

General Background

#2 & 7 Mines are both in operation as of this report. Extensive interim reclamation has gone on through the life of the operation and the majority of historic disturbance is well vegetated. Both mines share the same approximate location [see Figure 1 and Figure 3]. They are located at the head of Gordon Creek. The 7 Mine portal lies approximately $\frac{1}{4}$ mile above the 2 Mine portal, both portals linked by an overland conveyor and share a central loadout and office area.

Two small isolated locations have received permanent reclamation. These are: 1. The Old Fan Portal Area [approximately 1 acre] and 2. Shop Road Area [approximately $\frac{1}{2}$ acre].

The Old Fan Portal Area was reclaimed the fall of 1984. It lies between 7800' and 7875' in elevation on a southwest aspect [see Plate 3-1B]. The Shop Road Area was reclaimed the fall of 1986. It lies between 7940' and 7966' in elevation on a southwest aspect, but due to its proximity to the steep canyon opposing it, it is a more moist site [see Plate 3-1A].

Planting Methodologies

The reclamation - revegetation methodologies were the same for both locations.

The existing soil on-site was utilized due to the pre-law nature of the disturbance - no top soil had been saved. The areas were recontoured and scarified, then hydroseeded utilizing the approved seed mix [Attachment 3-3] with 500 lbs. per acre wood fiber mulch and 40 lbs. per acre Terra Tac AR. An overspray of 2000 lbs. per acre of wood fiber mulch, 60 lbs. per acre of Terra Tac AR and 100 lbs. per acre of 16-16-8 fertilizer was then applied. Seeding and mulching occurred in late September. Both sites were monitored for success during August of 1987. Seed mix Table 2.7.

OLD FAN PORTAL AREA
QUANTITATIVE SURVEY

A quantitative survey was conducted on this site. Table 2.7-1 is a complete species list. The site was in good condition with evidence of only moderate to light grazing by either wildlife or domestic stock. The results of the survey are summarized in Table 2.7-2 and 2.7-3. Examples of field notes are included as Attachment 2.7-1.

Table 2.7
SEED LIST

| <u>SPECIES</u> | <u>LBS. PLS/ACRE</u> |
|---|----------------------|
| Perennial Grasses | |
| Streambank wheatgrass <u>Agropyron riparium</u> | 3.5 |
| Bluebunch wheatgrass <u>Agropyron spicatum</u> | 2.0 |
| Slender wheatgrass <u>Agropyron trachycaulum</u> | 3.5 |
| Salina wildrye <u>Elymus salina</u> | 4.5 |
| Indian ricegrass <u>Oryzopsis hymenoides</u> | 2.0 |
| Forbs | |
| Cicer milkvetch <u>Astragalus cicer</u> | 2.0 |
| Little sunflower <u>Helianthella uniflora</u> | 2.0 |
| Rocky mountain penstemon <u>Penstemon strictus</u> | 0.25 |
| Shrubs | |
| Rubber rabbitbrush <u>Chrysothamnus nauseosus</u> | <u>0.5</u> |
| TOTAL | 18.75 |

Table 2.7-1

SPECIES LIST - OLD FAN PORTAL AREA

| <u>SYMBOL</u> | <u>SCIENTIFIC NAME</u> | <u>COMMON NAME</u> |
|-------------------|------------------------------|----------------------|
| AGCR | <i>Agropyron cristatum</i> | Crested wheatgrass |
| BRCA ⁵ | <i>Bromus carinatus</i> | Mountain brome |
| SIHYH | <i>Sitanion hystrix</i> | Squirreltail grass |
| AGSMS | <i>Agropyron smithii</i> | Western wheatgrass |
| AGSP ³ | <i>Agropyron spicatum</i> | Bluebunch wheatgrass |
| ORHYH | <i>Oryzopsis hystrix</i> | Indian ricegrass |
| ELYMU | <i>Elymus sp.</i> | Wildrye |
| BRAN | <i>Bromus anomalus</i> | Nodding brome |
| WYAM | <i>Wyethia amplexicaulis</i> | Mulesear dock |
| CIAR | <i>Cirsium arvense</i> | Canada thistle |
| ASCH ² | <i>Aster chilensis</i> | Pacific aster |
| SAKA | <i>Salsola Kali</i> | Russion thistle |
| PEPA | + <i>Penstemon palmeri</i> | Palmer penstemon |
| ASTRA | + <i>Astragalus sp.</i> | Milvetch |
| MEAR ⁴ | <i>Mentha aerensis</i> | Field mint |

Table 2.7-2
COVER BY SPECIES

| | |
|------------------------|---------------|
| AGSMS | 24 % |
| AGSP ³ | 3.5 % |
| AGCR | 4.5 % |
| AGSM | 2.25 % |
| ORHYH | 2.25 % |
| ELYMU | <u>1.25 %</u> |
| Total Vegetative Cover | 38.00 % |
| Litter | 28.00 % |
| Bare | 34.00 % |

Table 2.7-3
WOODY PLANT DENSITY
100% Inventory

| | | |
|---------------------------|---------------|----------|
| Populus Tremula | Quaking aspen | 3 |
| Rosa woodsii | Woods Rose | 5 |
| Symphoricarpos oreophilus | Snowberry | 1 |
| Artemisia tridentata | Big sage | 6 |
| Ribies sp. | Current | <u>2</u> |
| Total plants per acre | | 17 |

Conclusions:

There was no evidence of problems relevant to rodent or insect activities. Some minor rills [less than 4"] had developed adjacent to the highwall but were mending through natural processes. The straw berm was largely in tact but due to the success of the revegetation effort, it did not appear to be functioning.

EXAMPLE OF FIELD NOTES

SHOP ROAD AREA
RECONNAISSANCE SURVEY

A reconnaissance survey was conducted on this area. The reclamation is still in it's first year, and the survey was aimed at identifying potential problems and to make an educated estimate of preliminary success.

Conclusions:

Overall, the area looks outstanding with excellent species diversification as indicated on the attached species list [Table 7.2-4]. Vegetative cover is in excess of 25%. Considering that the vegetation is emergent in nature, the overall vegetative cover should easily exceed 50% by the end of the second growing season.

There was no evidence of adverse impacts resultant from insects or grazing activities. There was some minor damage as a result of rodent activity but appeared self healing in nature. The site appears stable.

An example of field notes are included as Attachment 7.2-2 and Plate 3.1-A shows the area as well as location points.

Table 7.2-4

SPECIES LIST - SHOP ROAD AREA

| <u>SYMBOL</u> | <u>SCIENTIFIC NAME</u> | <u>COMMON NAME</u> |
|-------------------|----------------------------------|---------------------------|
| BRAN | <i>Bromus anomalus</i> | Nodding brome |
| HORDE | <i>Hordeum</i> sp. | Wild barley |
| HEOCC | <i>Hedysarum occidentale</i> | Canyon western sweetvetch |
| BRCA ⁵ | <i>Bromus carinatus</i> | Mountain brome |
| POPR | <i>Poa pratensis</i> | Kentucky bluegrass |
| HEOCC | <i>Hedysarum occidentale</i> | Canyon western sweetvetch |
| FRVE | <i>Fragaria vesca</i> | Wild strawberry |
| ASCH ² | <i>Aster chilensis</i> | Pacific aster |
| CI | <i>Cirsium arvense</i> | Canada thistle |
| ACMI ² | <i>Achillea millefolium</i> | Common yarrow |
| RUOCM | <i>Rudbeckia occidentalis</i> | Mt. coneflower |
| VETH | <i>Verbascum thapsus</i> | Common mullein |
| RIBES | <i>Ribes</i> sp. | Currant |
| ROWO | <i>Rosa Woodsii</i> | Wood Rose |
| ARTR | <i>Artemisia tridentata</i> | Big sagebrush |
| RULE | <i>Rubus leucodermis</i> | Western raspberry |
| SYOR ² | <i>Symphoricarpus oreophilus</i> | Snowberry |
| SAMBU | <i>Sambucus</i> sp. | Elderberry |
| PORT | <i>Populus tremula</i> | Quaking aspen |
| PSME | <i>Pseudotsuga menziesii</i> | Douglas fir |

Company Name Beaver Crk

Date 8/14/87

Location 297 Mine

Site SHOP ROAD

Time 0900

Magnetic Heading _____

Transect # _____

Species vigor and/or % cover.

| Species | BR | | | Box Elder | | Rowo | Rose | | |
|---------|------------|-------|------|-----------|---------|------|--------------------|--|--|
| ARTR | Box Elder | | | BRM | Rowo | | Lamar yellow downy | | |
| | Sweetvetch | | | STHY | Fortail | | aspen | | |
| SHAW | GI | twigs | | Hoosford | | | Mullins tall stalk | | |
| water | | | | PSME | leafier | | | | |
| | SYOR | | | | current | | | | |
| Rasp | | | Wash | | | | | | |

Wooded vegetation invading road in areas
 woody species are prevalent
 Good species diversity

| | | | | | | | | | | |
|---|------|-------|------|------|------|------|------|---|---|------|
| ① | SHAW | MIST? | POPR | L | B | L | B | L | L | B |
| ② | POPR | L | POPR | POPR | POPR | POPR | POPR | L | | ROWO |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Comments & Observations low piles present, a small squirrel den in
The Road Act has a major deer corridor, flushed large deer, fox tracks

1987

PERMIT/ STIPULATION STATUS



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 18, 1988

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

Dear Mr. Guy:

Re: Review of Mid-Term Review Response, Gordon Creek #2 and 7 Mine,
ACT/007/016, Folder #2, Carbon County, Utah

Division Hydrologist Jim Fricke has reviewed the materials you submitted February 26, 1988, in response to the Division's latest letter on the Gordon Creek #2 and 7 Mine Mid-Term Review.

The Division appreciates the effort put into completing this submittal. However, there are a few items which still need correction as noted on the attached memorandum from Jim Fricke.

As a general observation, the package was in need of an overall edit of the text. To assist you in this we have attached a copy of the text with notations where editorial changes are needed to delete conflicting statements, or make obvious corrections.

Please feel free to contact Jim Fricke if you should have any questions about the technical or editorial changes needed. Please respond to these deficiencies no later than April 15, 1988.

Sincerely,

John J. Whitehead
Permit Supervisor
Reclamation Hydrologist

djh
Attachment(s)
cc: J. Fricke
B. Stettler
0800R/52



March 8, 1988

TO: John Whitehead, Permit Supervisor
FROM: James R. Fricke, Reclamation Hydrologist *JRF*
RE: Mid-Term Review, Beaver Creek Coal Company, Beaver Creek #2
and 7 Mine, ACT/007/016, Folder #2, Carbon County, Utah

The operator has responded (February 24, 1988) to most of the hydrology items noted in Deficiency Letter of January 11, 1988. The following requests must be addressed.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions-(JRF)

The operator has adequately responded to channel design requirements noted in the Mid-Term Review Deficiencies letter of December 31, 1987. However, Division riprap calculations support increasing the D₅₀ on the Gordon Creek diversion. The channel bed D₅₀ (section B-B' to section C-C') should be 1.0 feet, and the channel bank D₅₀ (same profile section) should be 2.0 feet. Appropriate modifications must be made to the gravel filter depth for the protective berm as well as channel bed and bank.

On page 7-131, the filter blanket depth conflicts with Table 7.22. The channel design for the Sub-3 drainage should include bottom width and depth of flow calculations. The Division recommends that two check dams should be installed in the Sub-3 channel.

The operator has proposed to route Bryner Canyon undisturbed drainage through the lower sediment pond. The lower sediment pond would not safely pass the design event (100 year, 24 hour). The Division recommends that the Bryner Canyon diversions bypass the sediment pond. The final reclamation plan should include modified disturbed area drainage and sediment control designs. The operator must justify, with pond calculations, the runoff control through the lower sediment pond.

Page 2
Memo to J. Whitehead
ACT/007/016
March 8, 1988

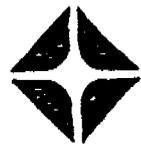
UMC 817.49 Hydrologic Balance: Permanent and Temporary
Impoundments-(JRF)

UMC 817.49(c) requires that permanent impoundments shall have 2:1 sideslopes and are stable. The pond cross-sections on Plate 3-1A do not meet the 2:1 criteria. The operator must address modifications to the pond sideslopes for stability and the slope criteria. The water quality analysis (Sweet's Pond) and a "signed" landowner consent letter should be submitted.

djh
0799R/46

BEAVER CREEK Coal Company

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



February 24, 1988

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

RE: Mid Term Review Defeciencies
Gordon Creek No. 2 and 7 Mines
ACT/007/016, #2
Carbon County, Utah

Dear Mr. Braxton:

Enclosed are three copies of the Beaver Creek Coal Company response to the No. 2 and 7 Mine Mid-Term Deficiency comments of 1/11/88. Also enclosed is a reviewer checklist for response locations.

All pages and plates are numbered, and should replace corresponding numbers in the previously submitted plan. Please note that a new section - "Reclamation Hydrology" - has been included with this submittal, and should be added to Chapter 7 of the plan.

If you need anything further, please let me know.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

cc: Johnny Coffey
Jay Marshall
Allen Childs
File



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-536-5340

August 31, 1987

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

Dear Mr. Guy:

Re: Follow Up to Mid-Term Review, Beaver Creek Coal Company, Gordon Creek #2 and #7 Mine, ACT/007/016, Folder #2, Carbon County, Utah

This letter is a follow-up to the Division's May 28, 1987 Mid-Term Review letter, and to Wayne Hedberg's July 15, 1987 letter regarding the deletion of a portion of the Gordon Creek #2 and 7 haul road from the permit area.

The July 15, 1987 letter gave final approval for the haul road deletion based on the materials from Beaver Creek Coal Company which included Plate 1-1, dated June 18, 1987. The problems regarding Plate 1-1 noted in the Mid-Term Review letter are still apparent in the revised Plate 1-1 submitted by Beaver Creek Coal Company to the Division on June 18, 1987.

In your response to the Gordon Creek #2 and 7 Mid-Term letter, please assure that Plate 1-1 is revised to address the concerns noted in that review. In fact, it is recommended that revised Plate 1-1 become the permit area map and be labelled as such, and Figure 1-2 be deleted from the plan.

Please feel free to call me if you have any questions on this matter.

Sincerely,

John J. Whitehead

djh
cc: W. Hedberg
P. Grubaugh-Littig
W. Malencik
0800R/43



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

150 West North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

June 11, 1987

TO: Coal File
FROM: James R. Fricke, Reclamation Hydrologist *JRF*
RE: Amended Mid-Term Review Document, Beaver Creek Coal
Company, Gordon Creek No. 2 and No. 7 Mine, ACT/007/016,
Folder #2, Carbon County, Utah.

This memo and the enclosed letter to Beaver Creek Coal Company supercedes the May 28, 1987 letter, UMC 817.44 has been edited, please use the enclosed document as the original.

pb
Enclosure
cc: P. A. Rutledge, OSMRE
L. Braxton
Tech Review Team

1193R-19



STATE OF UTAH
 NATURAL RESOURCES
 Oil, Gas & Mining

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

W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

May 28, 1987

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

Dan
 Dear Mr. Guy:

Re: Mid-Term Review, Beaver Creek Coal Company, Gordon Creek No. 2 and No. 7 Mine, ACT/D07/C16, Folder #2, Carbon County, Utah

The Division has recently received comments from the Office of Surface Mining regarding the Gordon Creek #2 and #7 Mine Mid-Term Review. In addition, the Division Technical Staff has reviewed the response Beaver Creek Coal provided to the Mid-Term Review comments compiled previously by the Division. Attached are the remaining items which must be addressed to finalize the Mid-Term Review for the Gordon Creek #2 and #7 Mines.

Please accept my apology for the duration of this review. We are currently attempting to achieve better and more timely coordination with the Office of Surface Mining on mid-term reviews.

Would you please provide a complete response to the items noted on the attached list by June 26, 1987.

Sincerely,

Lowell

Lowell P. Braxton
 Administrator
 Mineral Resource Development
 and Reclamation Program

JJW/pb
 Attachment(s)
 cc: P. A. Rutledge, OSMRE
 L. Braxton
 Tech Review Team
 0800R-52

DRAFT

Memorandum

TO: Allen D. Klein, Acting Chief
Division of Federal Programs

FROM: Robert H. Hagen, Director
Albuquerque Field Office

SUBJECT: Midterm Review of Gordon Creek Nos. 2 and 7

In response to a memo dated February 20, 1985, from Richard Holbrook, requesting assistance for a midterm permit review of the Beaver Creek Coal Company's Gordon Creek Nos. 2 and 7 Mines, the Albuquerque Field Office (AFO) has conducted a thorough review of the inspection file. Results of the review indicate that the permittee is generally in compliance with his approved mine reclamation plan (MRP), but the permittee has not properly implemented several permitting requirements or special conditions required when the permit was issued in August 1984.

Recent inspections conducted by the Utah Division of Oil, Gas and Mining (DOG M) indicate that the continuous recording gauging stations on Beaver Creek have not been operational for many months each year. This monitoring is required as part of the mitigation measures to allow Beaver Creek Coal Company/ (BCCC) to conduct mining beneath Beaver Creek. The AFO requests that the continuous monitoring program be reviewed to determine whether operation of the gauging stations must be done during winter months to achieve an adequate record of stream quantity and quality through 1994 as required by DOGM.

Mass movement has been noted by DOGM inspectors above Portal No. 7. Apparently, the movement has occurred in the fore part of 1987. Special Condition No. 7 requires BCCC to notify DOGM of the problem and submit mitigation plans within 30 days of their notice. Plans have apparently not been submitted to date by BCCC.

Several other Special Conditions of the permit issued in August 1984 apparently have not been addressed to date by BCCC. Special Condition No. 5 required the permittee to establish riparian areas at the adjacent Gordon Creek No. 3 Mine to compensate for the loss of wildlife habitat at Gordon Creek No. 2 Mine. This wildlife mitigation plan has not been properly implemented because only a small plot on Gordon Creek No. 3 has been developed. The AFO requests that the wildlife mitigation plan be evaluated to establish the need for full implementation of the plan.

Special Condition No. 10 concerns alteration of existing power poles to comply with raptor-proof design standards specified by the U.S. Fish and Wildlife Service. The permittee may not have complied with this condition. The AFO requests that the present power line be evaluated to determine its adherence to the raptor-proof design standards.

FP
Special Condition No. 11 requires the permittee to survey the proposed mine site for canyon sweet-vetch. Apparently, the survey was never conducted. The AFO requests that an evaluation of this condition be done to determine if there still is a need to conduct the survey at this late date.



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202



March 10, 1987

Dr. Dianne Nielson, Director
Utah Division of Oil Gas and Mining
355 West North Temple
3 Traid Center, Suite
Salt Lake City, Utah 84180-1203

Dear Dr. Nielson:

The Federal Programs Division (FPD) has completed a mid-term review of the Gordon Creek No. 2 and No. 7 permit UT-010 (State permit ACT/007/016), and the proposed mine No. 8 entry, and administrative record on file at our office. We have notified the Albuquerque Field Office, Bureau of Land Management (BLM), U.S. Fish and Wildlife Service, and the U.S. Forest Service - Manti-LaSal by transmittal memorandum of February 20, 1987 of their opportunity for comment. Comments were requested to be submitted by March 15, 1987. Any comments received from these agencies will be forwarded to your office.

The Federal permit approved on August 27, 1987 has twelve Special Conditions binding upon the Federal permit approval. FPD's midterm review indicates that permit conditions Numbers 1, 2, 6, 8 and 9 have been satisfied. The last paragraph of permit condition Number 8 and the last part of condition Number 5 are ongoing and; therefore, cannot totally be removed from further permitting actions. Other permit conditions that are entirely worded as "ongoing" type conditions are conditions Numbers 3, 4, 7, and 12. The status of each of these conditions are addressed below.

Stipulation No. 3:

It is assumed that there has not been any inflows of "in-mine" water greater than or equal to 1 gpm, as OSMRE has not received any of the required monitoring data. The company is assumed to be in compliance with this condition. The Division of Oil Gas and Mining (DOG M) is asked to inform FPD if DOGM is aware that this is not a factual assumption.

Stipulation No. 4:

The permittee is presently monitoring sampling sites 2-10-W and 2-11-W. DOGM comments of January 29, 1986 and FPD letter of January 28, 1986 address these sampling sites. Monitoring frequency has been revised to

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MAR 11 1987

ALBUQUERQUE FIELD OFFICE

be conducted quarterly at station 2-10-W for flow and quality when pond discharge occurs and monthly at station 2-11-W (upper sediment pond) for all parameters listed in table 7-B of the MRP.

Stipulation No. 7:

There has not been any mass movement of material in the mine permit area to date; therefore, the company has not been required to submit a mitigation plan for such slide areas.

Stipulation No. 12:

DOGM has to date ensured that no less than four feet of non toxic and non acid forming-materials will be used to cover all coal seams. This was exemplified by DOGM's letter of November 13, 1986 approving the abatement of NOV N-85-17-01 and DOGM completeness review comments of January 21, 1986 (page 8). The company is presently in compliance with this aspect of Stipulation No. 12. Additionally, the requirement to cover all highwalls to the maximum extent possible using all spoil material available has also been enforced by DOGM as exemplified in DOGM completeness comments of January 21, 1986 (pages 3 and 7).

OSMRE records do not indicate that Special Federal Conditions Numbers 5, 10, and 11 have been satisfied. The following discussion itemizes the status of these conditions. If DOGM's review indicates that these discussions are in error, please notify FPD so that corrections may be made.

Stipulation No. 5:

DOGM's technical analysis, page 28; states that "to partially mitigate the loss of wildlife habitat caused by construction of the Southwest Lease pad area, the applicant will establish approximately four areas of riparian area at the Gordon Creek #3 mine site in the fall of 1984". FPD could ascertain that only 0.5 acre of riparian habitat was reconstructed by the riparian reclamation project (See Item 3 of Bureau of Land Management (BLM) letter of March 28, 1986). If additional acreage (3.5 acres) remains to be reclaimed, prior to July 1, 1987, the company must identify when and where the habitat reconstruction will occur.

Stipulation No. 10:

FPD is aware of several instances that newly added power poles were required to be installed in accordance with raptor proof designs; however, there has not been any information submitted to indicate that existing power poles were ever modified to meet the requirement of this condition. The company should notify FPD if existing power poles have been modified; otherwise, such raptor proof modifications must be made before July 1, 1987.

Stipulation No. 11:

FPD is not aware of any surveys being conducted at the site for Hedysarum occidentale var. canone (canyon sweet-vetch). It is unclear if such surveys were overlooked by the operator or if they were not needed because site redisturbance has not occurred. This needs to be clarified.

Lastly, in accordance with DOGM midterm review comment UMC 782.15, please have the operator submit a map that clearly identifies the current locations of the permit boundary, leased Federal coal, and unleased Federal coal. The map should identify the appropriate Federal coal lease number for each area. Mine areas #2, #7, and #8 should be identified. If any proposal for expansion of the mine plan area in the near future is to be forthcoming, the proposed area should also be noted on the map.

If you have any questions concerning this mid-term review, please contact Vernon Maldonado or Richard Holbrook at (303) 844-2451.

Sincerely,

Ramvir Singh

for Allen D. Klein
Acting Chief
Federal Programs Division

cc: OSMRE - AFO
Lowell Braxton - DOGM

1343M

The AFO requests that a field review to Gordon Creek Nos. 2 and 7 Mines be jointly conducted by the Technical Assistance Division, the AFO, and the DOGM permitting personnel in April 1987 to reach a consensus on methods to gain compliance with the MRP in order to avoid enforcement problems with the existing MRP. It is suggested that the field reviews for Castle Gate-Price River and Price River-Willow Creek be conducted at this time also.

Please contact John C. Kathmann at FTS 474-6515 to arrange the site visit.

JOHN (MisternRev) 2

ev:03/20/87

FILE CODE PERMITTING - MIDTERM FY-87 UTAH

BEAVER CREEK Coal Company

Post Office Box 1378

Price, Utah 84501

Telephone 801 637-5050



May 22, 1986

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

Re: Mid-Term Review
Gordon Creek No.2 Mine Permit
ACT/007/016 #2
Carbon County, Utah

Dear Mr. Braxton:

Enclosed are three copies of a response cross-reference for the
No.2 and 7 Mine Mid-Term Review Plans submitted on May 19, 1986.

If you have any questions, or need any further information, please
let me know.

Respectfully,

Dan W. Guy,
Manager Permitting/Compliance

DWG/rs

cc: Jay Marshall

File 4-P-5-1-1



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 24, 1986

Mr. Dan W. Guy, Manager
Permitting and Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dan
Dear Mr. ~~Guy~~:

RE: Mid-Term Review, Gordon Creek #2 Mine Permit, ACT/007/016,
#2, Carbon County, Utah

Pursuant to UMC 788.11, the Division is initiating the mid-term review of the Gordon Creek #2 permit. Enclosed are the initial concerns and questions which have been identified to date.

As a point of clarification, the reference to the #2 Mine permit includes the Gordon Creek #2 Mine as well as the Southwest Lease (or #7 Mine).

Further review and an onsite visit will be incorporated in this review sometime during the summer of 1986.

Your response to the enclosed questions and concerns is requested by May 9, 1986 in order to allow the mid-term review to proceed.

Thank you for your cooperation in this matter. Please contact me or John Whitehead if you should have any questions on this.

Sincerely,

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

JJW/btb
Enclosures

cc: Technical Review Team
9294R-52

MID-TERM REVIEW

Beaver Creek Coal Company
Gordon Creek #2 Mine
ACT/007/016, Carbon County, Utah

March 24, 1986

UMC 771.23 Permit Applications: General Requirements for Format
and Contents - PGL and JJW

(b) and (e) Maps and Plans

The information included on all of the maps must be current and presented clearly and concisely in a consolidated format. All maps must include:

1. consolidated format (title block);
2. scale and north arrow;
3. date drawn, date of flight for drawing;
4. date revised (clearly shown on drawing);
5. certification by a professional engineer (if necessary);
 - A. stamp of the professional engineer
 - B. signature of the professional engineer
 - C. date map was certified
6. permit area must be clearly shown on maps @ a scale of 1" = 500'. No maps may be at a scale smaller than 1" = 2,000';
7. incidental boundary changes must be shown on all updated maps;
8. the property boundary, lease boundary and permit boundary must be shown on all of the maps. The uniformity of map scales, where feasible, will be helpful;
9. mine operations (or mine sequence) maps must be updated for each seam of the mine;
10. surface facilities maps must be updated to reflect current status (i.e., Sweets Canyon water fill-up area).

In reviewing the recent #8 Mine revision, it was apparent that with the existing Gordon Creek #2 Mining and Reclamation Plan (MRP) split into three separate documents (#2 Mine plan, #7 Mine plan, #8 Mine revision) that contradictions and clarity have become a problem. All three documents should be consolidated into one current, clear and concise plan to alleviate the above-noted problems.

UMC 782.15 Right of Entry - JW

In reviewing the legal description and right of entry for the permit area, the legal right of entry for portions of the SW1/4 of Section 17, Township 13 South, Range 8 East must be demonstrated.

Additionally, coal ownership information references Federal Coal Lease U-47975. This is an incorrect lease reference. Appropriate maps and text must be corrected.

UMC 783.12 General Environmental Resources Information - PGL

(a) The size, sequence and timing of the subareas must be updated in Plates 3-3, 3-4 and 3-5.

UMC 783.15 Ground-Water Information - RVS

The permittee indicates mining and boreholes have encountered ground water (Gordon Creek #2 MRP, Section 7.1.2.2, pages 7-6 and 7-7 and Section 6.4.1.1, page 6-14; Gordon Creek #2 MRP, Southwest Lease, Section 7.1.2.2, page 7-6).

(a) Accordingly, the permittee must provide a site specific description of the ground-water hydrology of the mine plan and adjacent area that incorporates data collected since permit approval (e.g., seep and spring inventory described on page 7-13, Gordon Creek #2 MRP, Southwest Lease; borehole monitoring described on page 6-14, Gordon Creek #2 MRP; mine inflows as described under Stipulation 817.52-(1)-JW in the Gordon Creek #2 MRP) and includes:

1. depth below the surface and horizontal extent of the water table and aquifers;
2. lithology and thickness of aquifers; and
3. quality of subsurface water.

(b) Moreover, the MRP shall contain additional site specific information which describes the recharge, storage and discharge characteristics of aquifers and the quality and quantity of ground water, according to the parameters and in the detail required by the Division (i.e., see examples listed given above, and Division Water Monitoring Guidelines, January 1986).

UMC 784.20 Subsidence Control Plan - RVS

The permittee must provide a map that indicates the location of renewable resource lands. In particular, areas of ground-water recharge.

(a)(2) The permittee must provide previously collected subsidence monitoring data and an attendant description of the extent to which planned subsidence is intended.

UMC 783.24 Maps: General Requirements - PGL

(c) The boundaries of all areas proposed to be affected over the estimated total life of the underground coal mining activities, with a description of the size, sequence and timing of the subareas for which it is anticipated as additional permits will be sought must be provided. This should entail the affected areas for #2, #7 and #8.

The water truck fill up area must be shown on a surface facilities maps.

UMC 784.13 Reclamation Plan: General Requirements - PGL

(b)(2) The updated reclamation cost estimate for the #2 complex must be included in the MRP.

(b)(3) A "quantified" plan for backfilling and grading must be submitted. How much material will be needed to achieve the postmining contours? Where will the material come from? The Huntington #4 reclamation backfilling plan did not work as stated. Therefore, quantities must be given. Vague statements must be deleted.

UMC 784.23 Operation Plan: Maps and Plans - PGL

(b)(2) The area of land to be affected within the proposed mine plan area (combining #2, #7 and #8) according to the sequence of mining must be updated in the mine plan.

UMC 784.24 Transportation Facilities - PGL

The addition of the haul road from Consumers Canyon to the mine site must be included in the permit area (maps). There have been incidental boundary changes (with drainage plans) submitted since the permit was issued. This information must be included.

General Comments:

1. Maps must be updated. See mid-term maps update.
2. All information since permit issuance must be included in the updated MRP (i.e., revisions, boundary changes, mining over Beaver Creek, etc.).
3. Combine Gordon Creek #2, #7 and #8.
4. Updating language in the permit (e.g., if future dates were alluded to and the work has been performed, change).
5. The operating tonnages for the #2 Mine complex (#2, #7, #8) will they remain the same as stated in the original MRP, annual production? Change if needed.
6. Mine operations update (sequence) Plates 3-3, 3-4 and 3-5.

Specific Comments by Page:

Page 3-33 - coal must be covered with at least four feet of incombustible material, not three feet as stated on page 3-33.

Page 3-58 - the backfilling and grading plan must be quantified. How much material will be moved? The Huntington #4 reclamation had to be revised due to finding rock ledges that were through to be backfill sources. Therefore, the backfilling and grading plan at the #2 Mine must be revised and quantified. The postmining topography shown on 3-7a should demonstrate quantities in cross sections.

Page 3-5 - the road section in Gordon Creek #2 and #7 should be revised to show where road areas are included in the permit.

Page 3-3 and 3-13 - Gordon Creek #2, it is stated that additional disturbances are not planned, but happened. Please clarify.

Page 3-78 - the updated performance bond calculations must be included in the revised MRP.

Page 3-11 - the MRP states that additional culverts will be installed by July 30 (no year indicated). Language such as this should be updated and/or deleted.

Page 3-6 - typical road reclamation; Figure 3-9 needs cross sections.

The monitoring of the side canyon slides (slumps) at Gordon Creek #7 must be submitted (visual inspections).

UMC 817.13-.15 Casing and Sealing of Exposed Underground Openings -
RVS

The permittee indicates mining has encountered ground water (Gordon Creek #2 MRP, Section 7.1.2.2, page 7-6; Gordon Creek #2 MRP, Southwest Lease, Section 7.1.2.2, pages 7-6 and 7-11). Inasmuch as mining has encountered ground water, the permittee must incorporate a drain pipe into the permanent portal closure design to prevent portal seal "blow out." The Division recommends permanent sealing of the lowest portal include installation of a two inch diameter drainage pipe through the concrete block seal to the portal entrance.

The permittee states on page 3-55 of the Gordon Creek #2 MRP that a "block seal" will be placed "20 to 50 feet inby the portal." Alternatively, the permittee states on page 3-37 of the Gordon Creek #2 MRP, Southwest Lease, that a "block seal" will be placed "20 to 450 feet inby the portal." The Division requires concrete block seals to be installed a minimum of 25 feet inby portal entrances.

The permittee does not describe, in either the Gordon Creek #2 MRP or Gordon Creek #2 MRP, Southwest Lease, procedures for temporarily sealing portals or boreholes. This must be provided.

UMC 817.41 Hydrologic Balance - JW

Reclamation of the water truck fill up area at Sweets Canyon has not been addressed. Specifics on permanent reclamation of this area must be given.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions - TM

Included within the #2, #7 and #8 Mine permits, the applicant has committed to restore all mine sites to rock-lined natural drainages upon completion of mining. Erosion controls will be used below backfill areas to minimize washing of fill materials. Diversions will be removed during backfilling and grading (pages 3-58 through 3-60, Gordon Creek #2 MRP). All channels will be riprapped to eliminate erosion and cutting of the side slopes. The sediment ponds will be the last to be removed. Upon removal of the ponds, water will flow into Bryner Canyon. All material will be mulched to prevent erosion. The drainage diversions will be filled with bermed material. Restored drainages will be riprapped using the +18 inch rock removed from backfilling operations (pages 3-65 and 3-65, Gordon Creek #2 MRP).

The following plates were given as references to describe postmining drainage at the Gordon Creek #2, #7 and #8 Mines.

Gordon Creek #2

Plate 3-7, Gordon Creek #2 Postmining Topography
Plate 3-8, Cross Sections A-A, B-B, C-C
Plate 3-8a, Cross Sections of Bryner Canyon and Bryner Canyon Diversion

Gordon Creek #7

Plate 3-7a, Southwest Lease Postmining Topography
Plate 3-8a, Gordon Creek #2 Mine Southwest Lease Proposed and Reclaimed Cross Sections

Gordon Creek #8

Plate 3-2b, #8 Mine Postmining Topography

The applicant needs to submit additional cross sections, plans and calculations for restoration of the postmining drainage. Since the applicant plans to reclaim drainage on the #2 Mine pad and the #7 Mine pad, as well as reclaim drainage associated with the #8 Mine access road disturbance, the following informational needs apply to all of the above sites.

The applicant must submit the following cross sections, plans and calculations for the restoration of the postmining drainage. this must include:

- A. The longitudinal profile and cross section (channel and floodplain cross section, scale one inch = two feet) of all reclaimed postmining drainages. The longitudinal profile must show specific areas to be riprapped based on supporting calculations for riprap sizing.
- B. The predicted flows and velocities for all reaches of the reclaimed drainages based on the channel size designed to carry the 100-year, 24-hour storm event or a channel with the same geomorphic characteristics and a capacity equivalent (based on a site verification) to that of the unmodified stream channel immediately upstream and downstream from the proposed channel.

- C. The protective measures for restored channels (i.e., riprap, vegetation, energy dissipators, etc.). Riprap, filter blankets and energy dissipators must be sized using standard engineering practices. Supporting calculations must be included in all submittals. The exact location of these protective measures must be placed on the appropriate plate.
- D. Measures to restore a pattern of riffles, pools and drops rather than uniform depth that approximates natural stream channel characteristics.
- E. The applicant must also address critical areas of slope change, transition zones from undisturbed drainages to reclaimed mine pads and the specific measures incorporated into the reclamation plan to handle these problem areas (i.e., energy dissipators, designed riprap installation drop structures, etc.). All structures must be designed using standard engineering practices. This discussion should include measures to be implemented to handle springs and seeps from the highwalls at the #7 and #8 mines site.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges - RVS

The permittee indicates mining has encountered ground water (Gordon Creek #2 MRP, Section 7.1.2.2, page 7-6; Gordon Creek #2 MRP, Southwest Lease, Section 7.1.2.2, pages 7-6 and 7-11). Hence, the potential exists for gravity discharge of water following mine closure. The permittee must commit to monitor postmining gravity discharges and provide treatment, if necessary, to satisfy applicable state and federal effluent limitations for the period of discharge.

UMC 817.111-.113 Revegetation

UMC 817.97 Protection of Fish, Wildlife and Related Environmental Values - KMM

Proposed channel restorations in Bryner Canyon are limited to grading and riprap. Drainage from seeps are, and will be, channeled in riprapped diversion ditches. The operator should consider using vegetation to blend these channels into the surrounding area. Vegetation diversity could be increased along these reclaimed drainage channels and in seep areas by substituting willows, hawthorn, chokecherry or other tree or shrub species for some of the plantings planned for the Oak Shrubland revegetation.

How will the water truck filling pond be reclaimed? Can reclamation of this pond be beneficial to wildlife?

UMC 817.115 Revegetation: Grazing - KMM

The operator must clarify whether grazing may be permitted two years after reclamation or if it will be excluded until vegetation is well established.

UMC 817.116 Revegetation: Standards For Success - KMM

The operator should consider consolidating the revegetation plans for the three areas of the #2 Mine permit. While revegetation techniques and materials are similar for the three areas, success monitoring could be simplified by developing a coherent plan.

Proposed vegetation success standards should be reviewed. Planting rate cannot be used for woody plant density measurement and confidence limits and significance levels are more stringent than required in Utah's regulations.

The operator must include a detailed monitoring plan and schedule. Early monitoring will not only identify problem areas which may need supplemental revegetation treatment but will also identify as early as possible the beginning of the "period of extended responsibility" which starts when ground cover equals the approved standard (UMC 817.116[b][1]).

0715R



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

77-3-1-6
Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

400 State Office Building - Salt Lake City, UT 84114 - 801-533-5771

August 27, 1984

Mr. J. A. Herickhoff
General Manager
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Herickhoff:

RE: State Permit Approval, Beaver Creek Coal Company, Gordon
Creek #2 Mine, ACT/007/016, #2, #4 and #6, Carbon County,
Utah

The Division has received a signed copy of the Office of Surface Mining's permit with conditions for the above referenced mine, thereby indicating that Beaver Creek Coal Company accepts and will comply with all conditions and time frames set forth in the permit. A signed and executed bond in the amount of \$461,638.50 and payable to both the State of Utah and the United States of America has also been received.

Therefore, the State of Utah hereby issues Final Permit Approval for the Gordon Creek #2 Mine at this time. Consider this letter to be the Permanent Coal Regulatory Program Permit for the above referenced mine. This permit is issued in conjunction with the special conditions contained in Attachment A of the Federal Permit UT-0010, 8/84 and the additional permit conditions required by the Utah Coal Mining and Reclamation Permanent Program, Chapter I (UCA 40-10-1 et seq.), Section UMC 786.29 (appended to this letter). Please assure that all conditions with time deadlines for completion are fulfilled utilizing the August 27, 1984 as the permit approval date.

Page Two

Mr. J. A. Herickhoff

ACT/007/016

August 27, 1984

The Division greatly appreciates the cooperation and enthusiasm your staff has shown in working with us during the permitting process, and we look forward to dealing with your company in the future.

Best regards,



Dianne R. Nielson
Director

MMB:btb

cc: Dan Guy
Robert Hagen
Allen Klein
Steve Manger
Ron Daniels
Jim Smith
Mary Boucek
Joe Helfrich
Steve Cox

88130-50 & 51

UNC 786.29 Conditions Of Permits: Environment, Public Health, And Safety.

Each permit issued by the Division shall ensure and contain specific conditions requiring that the-

(a) Permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from non-compliance with any term or conditions of the permit, including, but not limited to:

(1) Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;

(2) Immediate implementation of measures necessary to comply; and

(3) Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the non-compliance.

(b) The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed in the course of treatment or control of waters or emissions to the air in the manner required by Subchapter K of this Chapter, the regulatory program, and which prevents violation of any other applicable State or Federal law.

(c) The permittee shall conduct its operations-

(1) In accordance with any measures specified in the permit as necessary to prevent significant, imminent environmental harm to the health or safety of the public; and,

(2) Utilizing any methods specified in the permit by the Division in approving alternative methods of compliance with the performance standards of the Act and the regulatory program, in accordance with the provisions of the Act, UNC 786.19(m), and Subchapter K.



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

Aug 27, 1984

Mr. Herickhoff
Beaver Creek Coal Company
P.O. Box AU
Price, Utah 84501

Dear Mr. Herickhoff:

Enclosed is the Gordon Creek No. 2 Mine permit with conditions. This permit will become effective only when the Office of Surface Mining (OSM) has received a copy of the bond in the amount of \$461,638.00 payable to both the State of Utah and the United States of America and OSM has received a copy of this permit signed and dated by the permittee.

Please read the permit to be sure you understand the requirements and conditions. Pursuant to 30 CFR 775.11, Beaver Creek Coal Company will have 30 days from the date of official notification to appeal the Director's decision on the application.

Also enclosed is a copy of the newspaper notice we are sending to the The Sun-Advocate, Carbon County, Utah to be published as soon as possible. When published, this notice will constitute official notification of our action. Any person with an interest which is or may be adversely affected may request a hearing on the reasons for the final decision within 30 days from the date that notice is published.

The permit has been provided in duplicate, so you can retain one copy with original signatures and return one copy with original signatures to us as an expressed acknowledgement that you have read and understood it. The complete decision package is available upon request.

The Assistant Secretary for Land and Minerals Management approved the mining plan on August 24, 1984. The enclosed permit has been determined to be consistent with this plan.

If you have any questions, please feel free to call either me at (303) 844-5656 or Mark Humphrey at (303) 844-3806.

Sincerely,



Allen D. Klein
Administrator
Western Technical Center

Enclosures

cc: Mr. Jackson Moffitt
Bureau of Land Management, (MMS)

Mr. Gene Nodine
Bureau of Land Management

Dr. Dianne Nielson
Utah Division Of Oil Gas and Mining

Mr. Robert Hagen
Albuquerque Field Office
Office of Surface Mining

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING

This permit, UT-0010, 8/84 which incorporates Utah Permit ACT/007/016, is issued for the United States of America by the Office of Surface Mining (OSM) to:

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

for the Gordon Creek No.2 Mine. Beaver Creek Coal Company is the lessee of Federal coal lease U8319 and U-47975. The permit is not valid until a performance bond is filed with the OSM in the amount of \$461,638.00, payable to the United States of America and the State of Utah, and the OSM has received a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq., hereafter referred to as SMCRA, and the Federal coal leases issued pursuant to the Mineral Leasing Act of February 15, 1920, as amended, 30 U.S.C. 181 et seq., the Federal Coal Leasing Amendments Act of 1976, as amended 30 U.S.C. 201 et seq. and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of September 7, 1947, as amended, 30 U.S.C. 351 et seq. This permit is also subject to all regulations of the Secretary of the Interior including, but not limited to, 30 CFR Chapter VII and 43 CFR Part 3400, and to all regulations of the Secretary of Energy promulgated pursuant to Section 302 of the Department of Energy Organization Act of 1977, 42 U.S.C. 7152, which are now in force or, except as expressly limited herein, hereafter in force, and all such regulations are made a part hereof.

Sec. 2 The permittee is authorized to conduct surface coal mining and reclamation operations on Federal lands (as shown on ownership map) within the permit area at the Gordon Creek No. 2 Mine situated in the State of Utah, Carbon County, and located:

T. 13 S., R. 7 E., S.L.M.; sec. 12, E1/2, E1/2W1/2; sec. 13, E1/2, E1/2W1/2, sec. 24, N1/2NE1/4, NE1/4NW1/4;

T. 13 S., R. 8 E., S.L.M.; sec. 7, lots 3 and 4, SE1/4SW1/4; sec. 17, SW1/4SW1/4, Portions of NW1/4SW1/4, Portions of SE1/4SW1/4, Portions of NW1/4SW1/4; sec. 18 lots 1, 2, 3, and 4, E1/2W1/2, W1/2E1/2, E1/2SE1/4, SE1/4NE1/4; sec. 19, lots 1, 2, and 3, NE1/4, E1/2NW1/4, NE1/4SW1/4, NW1/4SE1/4;

and to conduct surface coal mining and reclamation operations on the foregoing described property subject to the conditions of the leases, the approved mining plan, and Utah State permit ACT/007/016, issued concurrently with this permit (UT-0010, 8/84), including all conditions, and all other applicable conditions, laws and regulations.

Sec. 3

This permit is issued for a term of 5 years commencing on the date the permit is signed by the permittee, except that this permit will terminate if the permittee has not begun the surface coal mining and reclamation operations covered herein within 3 years of the effective date.

Sec. 4

The permit rights may not be transferred, assigned, or sold without the approval of the Director, OSM. Request for transfer, assignment, or sale of permit rights must be done in accordance with 30 CFR 740.13(e).

Sec. 5

The permittee shall allow the authorized representatives of the Secretary, including, but not limited to, inspectors, fee compliance officers, and the Utah Division of Oil, Gas, and Mining without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:

- a. Have the rights of entry provided for in 30 CFR 842.13 and UMC 842.13; and,
- b. Be accompanied by private persons for the purpose of conducting an inspection in accordance with 30 CFR 842 and UMC 842 when the inspection is in response to an alleged violation reported by the private person.

Sec. 6

The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated as within the permit area on the maps submitted in the mining plan and permit application and approved for the term of the permit and which are subject to the bond.

Sec. 7

The permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of this permit, including, but not limited to:

- a. Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;
- b. Immediate implementation of measures necessary to comply; and
- c. Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

- Sec. 8 The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program and which prevents violation of any other applicable State or Federal law.
- Sec. 9 The permittee shall conduct its operations:
- a. In accordance with any measures specified in the permit as necessary to prevent significant, imminent environmental harm to the health or safety of the public; and
 - b. Utilizing any methods specified within the permit by Utah Division of Oil, Gas, and Mining and OSM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program, the Federal Lands Program, UMC 786.19(m), and Subchapter K.
- Sec. 10 The permittee shall provide the names, addresses, and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 11 The permittee shall comply with the provisions of the Water Pollution Control Act (33 U.S.C. 1151 et seq.) and the Clean Air Act (42 U.S.C. 7401 et seq.).
- Sec. 12 Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 13 If during the course of mining operations previously unidentified cultural resources are discovered, the applicant shall ensure that the site(s) is not disturbed and shall notify OSM. The operator shall ensure that the resource(s) is properly evaluated in terms of National Register Eligibility Criteria (36 CFR 60.6). Should a resource be found eligible for listing in consultation with the OSM, the land managing agency (if the site is located on Federal Lands), and the State Historic Preservation Officer (SHPO), the operator shall confer with and obtain the approval of these agencies concerning the development and implementation of mitigation measures.

Sec. 14 APPEALS - The lessee shall have the right to appeal:
(a) under 30 CFR 775 from actions or decisions of any official of OSM; (b) under 43 CFR 3000.4 from an action or decision of any official of the Bureau of Land Management; (c) under 30 CFR 290 from an action, order, or decision of any official of the Branch of Solid Minerals; or (d) under applicable regulations from any action or decision of any other official of the Department of the Interior arising in connection with this permit.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and of performance set out in the leases, Utah State permit (ACT/007/016) and this permit, the permittee shall comply with the special conditions of Utah State permit (ACT/007/016) and the conditions appended hereto as Attachment A.

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

THE UNITED STATES OF AMERICA

By:

Allen D. Klein

8/27/84
Date

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

John Henrich
Authorized Representative of
the Permittee

8-27-84
Date

Attachment A

Special Conditions

1. The permittee shall, within 30 days of the effective date of this permit, provide acceptable measures (accompanied by supporting calculations) which will be used for erosion protection for undisturbed ditch DU-3. If the regulatory authority notifies the permittee that these measures are not acceptable, the permittee must submit revised plans within 30 days of notification, and adequate protection measures for DU-3 must be in place within 90 days of approval.
2. Based on the results of the bedrock study the permittee has performed, the permittee will submit design and installation measures, within 30 days of the effective date of this permit, for the erosion protection measures in the Bryner Canyon bypass ditch and the disturbed area ditch which parallels it at the points identified in the compliance section of UMC 817.47. The design and installation measures submitted will contain flow velocity calculations, riprap sizing and depth of placement, channel bedding or lining materials to be used under the riprap and drawings showing configuration, location and size of gabions if used. If the regulatory authority notifies the permittee that the design and installation measures submitted are not adequate, the permittee shall submit revised plans within 30 days of notification and within 120 days of such notification shall achieve compliance with the applicable standards.
3. The permittee shall monitor all inflows of 1 gpm or greater in the "in-mine" water monitoring program. If more than 1 gpm or larger inflow occurs within 100 feet in any direction from the source of the flow, the permittee will forward to the regulatory authority information outlining the number, source area, flow rate and locations of such inflows. The number and location of sampling points at the multiple inflow areas will then be determined by the regulatory authority.
4. The permittee shall quarterly monitor sampling sites 2-10-W and 2-11-W and utilize the field measurements and chemical parameters on page 7-83 of the Gordon Creek PAP.

5. The permittee shall establish a riparian area at the Gordon Creek #3 Minesite not only under BLM, USFS and DWR permits, but also as part of the wildlife mitigation plan for the Gordon Creek #2 Mine, and shall abide by the provisions of the October 13, 1983, Division of Wildlife Resources Certificate of Registration.
6. The permittee shall amend the statement on page 10-18 of the Southwest Lease PAP to show that Beaver Creek Coal Company had permits from U.S. Fish and Wildlife Service and Division of Wildlife Resources for removal of one nest in the area of exploration.
7. If there is mass movement of material in the mine permit area, the permittee will notify the Division immediately and within 30 days of such notice submit mitigation plans for the slide area. Within 60 days of such notice, the permittee shall achieve compliance with the applicable standards.
8. Before further secondary mining takes place inside of a 20 degree angle of draw measured from vertical on each bank of the Beaver Creek, the permittee must demonstrate through submittal of sufficient technical information and analysis, subject to regulatory authority approval, that Beaver Creek is not likely to be affected by subsidence.

In addition, prior to September 1, 1984, the permittee shall submit to the regulatory authority for approval, a plan to mitigate adverse subsidence effects to Beaver Creek in the event subsidence effects do occur.

At such time that the permittee or the regulatory authority determines that subsidence within the permit area has adversely affected Beaver Creek, the permittee shall notify the regulatory authority in writing, concerning the kind and extent of the damage, and begin implementation of the approved mitigation plan as directed by the regulatory authority.
9. The permittee shall contribute, based upon one year's net water depletion to the Colorado River due to the permittee's operation, to the U.S. Fish and Wildlife Service's (Endangered Species Office) study of endangered fish species in the Colorado River.

10. The permittee shall, in consultation with the U.S. Fish and Wildlife Service, modify the existing power poles and lines servicing the Southwest Lease area within 30 days of the effective date of this permit, to the raptor proof design standards specified by the Fish and Wildlife Service.
11. Before any site redisturbance occurs, the permittee must conduct a survey, under the supervision of the regulatory authority, of the areas to be redisturbed. The survey shall identify and record locations of individuals and populations of Hedysarum occidentale var. canone (canyon sweet-vetch). If canyon sweet-vetch is found in portions of the permit area to be redisturbed, the permittee must develop and submit a mitigation plan for regulatory authority approval and after approval implement this plan before redisturbance occurs.
12. The permittee shall use all spoil material available in the permit area and any other reasonably available spoil material to cover all highwalls to the maximum extent possible. The permittee shall cover all coal seams and any toxic or acid-forming material with no less than four feet of non toxic, and non acid-forming material.

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
NOTICE OF A DECISION AND AVAILABILITY
OF BOTH A TECHNICAL ANALYSIS AND AN
ENVIRONMENTAL ASSESSMENT FOR
BEAVER CREEK COAL COMPANY
PERMANENT PROGRAM PERMIT
GORDON CREEK NO. 2 MINE
CARBON COUNTY, UTAH

The United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement (OSM), has approved, with conditions, a 5-year permit for Beaver Creek Coal Company to mine coal at its Gordon Creek No. 2 Mine.

The Gordon Creek No. 2 underground coal mine is located in Carbon County, Utah, located approximately 20 miles northwest of Price, Utah. The mine has been in operation since 1969. The proposed permit area will cover approximately 2300 acres, approximately 20.81 acres of which have been disturbed to date. Maximum mine production is at a rate of 10.58 million tons of coal over 14 years.

Any person with an interest which is or may be adversely affected by this Federal permit approval action may request an adjudicatory hearing on the final decision within 30 days after publication of this notice, in accordance with Section 514(c) of the Surface Mining Control and Reclamation Act (SMCRA). Any hearing will be governed by provisions of 5 U.S.C. Section 554. A petition for review of the OSM decision should be submitted to:

Hearings Division
Office of Hearings and Appeals
U.S. Department of the Interior
4015 Wilson Boulevard
Arlington, Virginia 22203

Pursuant to 40 C.F.R. Sections 1501.4(c) and 1506.6, notice is hereby given that Utah Division of Oil, Gas, and Mining has completed a technical analysis (TA) for the mining and reclamation plan (mining plan) for the Gordon Creek No. 2 Mine, Carbon, Utah. OSM has supplemented this TA with its own environmental assessment (EA). OSM's recommendation to approve Beaver Creek Coal Company mining plan and the permit application with conditions is in accordance with Sections 510 and 523 of SMCRA. OSM's analysis is that no significant environmental impacts would result from such approval. For information or clarification concerning the approval of the Gordon Creek No. 2 Mine plan, please contact Mark Humphrey or Walter Swain at (303) 844-3806, Office of Surface Mining, Denver, Colorado.

Both the TA and the EA are available for public review at the following locations:

Office of Surface Mining Reclamation and Enforcement
Western Technical Center
1020 15th Street
Denver, Colorado 80202

Office of Surface Mining Reclamation and Enforcement
Enforcement and Inspection
219 Central Avenue, NW., Room 216
Albuquerque, New Mexico 87102

Utah Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114



5 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-536-5340

March 11, 1985

CERTIFIED RETURN RECEIPT REQUESTED
P-396-996-948

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

Dear Mr. Guy,

Re: Review of February 13, 1985, submittal for Special
Conditions 1 and 2, Gordon Creek No. 2, ACT/007/016,
Folder No. 2 and 4, Carbon County, Utah

The material you submitted in response to the Division's deficiency letter of January 18, 1985 is complete and adequate to respond to Special Conditions 1 and 2 contained in the Gordon Creek No. 2 permit.

Thank you for your cooperation in this matter.

Sincerely,

L. P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

JH:jvb

cc: A. Klein
M. Humphrey
S. Cox
J. Whitehead
T. Wright

9294R-6



State Office Building • Salt Lake City, UT 84114 • 801-533-5771

February 1, 1985

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

Dan
Dear Mr. Guy:

6
Re: Special Condition No. 2, Beaver Creek Coal Company, Gordon Creek
No. 2 Mine, ACT/007/016, #2, Carbon County, Utah

During the Division's comparison of the updated Mining and Reclamation Plan copies with the old copies on file, it was noted that Special Condition No. 2 to the Gordon Creek #2 permit has not been addressed. As you will recall, this condition required that the statement on page 10-18 of the Southwest Lease MRP be amended to show that Beaver Creek Coal Company had permits from the USFWS and DWR for removal of one nest in the area of exploration.

The Division has completed its comparison of the new MRP copies and no longer has a need for the old copies. These may be picked up the next time you are in the office or the old copies can be sent to your office in Price. Please notify the Division if you want these old volumes sent to you.

Your prompt correction of page 10-18 of the Southwest Lease MRP will be most appreciated. Eleven (11) copies of the amended page will suffice.

Sincerely,

Mary M. Boucek

Mary M. Boucek
Permit Supervisor/
Reclamation Biologist

jvb
cc: S. Cox
D119R-3

10.5 Mitigation and Management Plans (continued) -7

Lease that may be in a location that will inhibit wildlife migration will follow specifications that will accommodate wildlife passage. Also, the overland conveyor from the proposed portal to the No. 2 Mine load-out area is designed to accommodate the passage of deer.

Minimizing disturbance to the Aspen Woodland habitat is the proposed mitigation for impacts to the Williamson Sapsucker. Beaver Creek estimates that 1.7 acres out of a total 534 acres of Aspen Woodland which occurs within the permit area will be disturbed. This corresponds to 0.3 percent of the total habitat type that will be disturbed.

Ultimately, permanent reclamation to return the area of disturbance to its pre-mining land use is the most important mitigative effort. Section 10.5.1 of the Gordon Creek No. 2 Mine Permanent Program Application discusses specific wildlife enhancement alternatives to be used. The permanent revegetation plan provides a variety of species that will increase habitat diversity providing nutritional and cover benefits for wildlife.

Two additional mitigation measures are being implemented under the BLM exploration permit (3400, U-8319, U-066) that preceded this application as well as permits from DWR (Beaver Creek Coal Company Certificate of Registration) and FWS (83-12) for removal of one nest in the area of exploration (discussed in Section 10.4). These procedures are discussed in the paragraphs below.

Special Condition
No. 6

Two artificial nests will also be established up Bryner Canyon from the proposed disturbance. The nests will be

APPENDIX 6

SPECIAL CONDITION NO. 8

MINING BENEATH BEAVER CREEK



April 1, 1985

Mr. Dan W. Guy, Manager
Permitting and Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

RE: Proposed Second Mining, Gordon Creek #2 Mine, ACT/007/016,
#2, Carbon County, Utah.

The Division has reviewed the material submitted on March 28, 1985 regarding Beaver Creek Coal Company's (BCCC) proposal to reduce the pillar size in the area currently being mined under Beaver Creek.

Based on the detailed subsurface information provided, the Division has determined it is extremely unlikely that subsidence impacts would cause any material damage to Beaver Creek. The Division's finding is based on the following.

Borehole lithologic data derived from the #7 Mine and #2 Mine were correlated and projected to the area of proposed second mining in the #2 Mine, a distance of approximately 3,500 feet. Minor lithologic variation along the correlated section indicate a similar roof and floor lithologies occur in the #2 Mine. Accordingly, the uniaxial strength of roof and floor lithologies in the #2 Mine are assumed to be similar.

Safety factors of 2.4 and 17.56 were calculated for pillars and roof rock, respectively. These values incorporate uniaxial strength data that were correlated from the #7 Mine as described above and are considered conservative for mining.

A maximum subsidence value of 5.85 feet based on complete pillar recovery, was calculated for the entire area of proposed second mining. This value is considered excessive because complete pillar recovery is not proposed.

April 1, 1985

BCCC's proposal is hereby approved subject to the conditions noted below.

Pursuant to UMC 817.126(a), BCCC is hereby directed to undertake and commit in writing to the following mitigation measures in addition to those proposed to date by BCCC which include the Gordon Creek #2 Mining and Reclamation Plan (MRP) and submittals dated March 20 and 28.

1. Streamflow data from the two continuous gage stations on Beaver Creek will be compiled and portrayed in a graphical format for flow seasons of 1984 and all subsequent years and submitted to the Division annually beginning January 31, 1985 and January 31 of each year after.
2. BCCC shall not mine the Hiawatha seam underneath Beaver Creek without specific Division approval to do so.
3. BCCC shall perform an aquatic baseline study of the stretch of creek where pillar sizes are to be reduced during the summer of 1984. This will assess the diversity and size of the benthic invertebrate and fishery populations present.
4. BCCC shall compile material submitted March 7, March 20 and March 28 and include the three preceding directives of this letter and submit 14 copies of this to the Division for inclusion as Appendix to the approved MRP.

Thank you for your cooperation on this matter. It is my hope that in any future request, appropriate lead time for data gathering and Division review can be observed by BCCC to avoid the crises approach to review which has characterized this issue.

Sincerely,



Lowell P. Staxton
Administrator

Mineral Resource Development
and Reclamation Program

JW/STD

cc: Allen Klein
Walt Swain

copies 12 + 13

Wayne Hedberg
John Whitehead



State Office Building - Salt Lake City, UT 84114 • 801-533-5771

September 5, 1984

Mr. Dan W. Guy, Manager
Permitting and Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Dan Guy:

RE: Special Condition No. 8, Beaver Creek Coal Company, Gordon
Creek #2 Mine, ACT/D07/016, #2, Carbon County, Utah

The Division of Oil, Gas and Mining hereby extends the
deadline for the above referenced special condition from
September 1, 1984 to October 1, 1984 to allow for the
previously intended time frame to develop the plan required by
the condition.

Best regards,

Dianne R. Nielson
Director

MMB/dtd

cc: Allen Klein
Steve Manger
Jim Smith
Mary Boucek
Steve Cox

88130-61



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

JUN 13 1985

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

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

Dear Mr. Guy:

The Office of Surface Mining (OSM) has received a check for \$1,125.00 from Beaver Creek Coal Company (BCCC) payable to OSM in response to Federal permit UT-010 condition No. 9. The check should have been made payable to the U.S. Fish and Wildlife Service (FWS). OSM does not have the facilities to process contributions for the FWS conservation fund for endangered fish in the Colorado River. We are returning the check and requesting that a new check be reissued payable to the U.S. Fish and Wildlife Service and sent to the following individual:

Mr. G.L. Buterbaugh
Regional Director
U.S. Fish and Wildlife Service
P.O. Box 35486, DFC
Denver, Colorado 80225

Copies of BCCC's transmittal letter and check should be sent to OSM and Utah Division of Oil, Gas and Mining. If you have any questions, contact Mark Humphrey at (303) 844-3806.

Sincerely,

Allen D. Klein
Allen D. Klein
Administrator
Western Technical Center

cc: Bob Hagen, OSM-AFO
Dianne Nielson, DOGM

*Copies sent 6/20/85, to:
Allen D. Klein, O.S.M.
Lowell P. Branton, D.O.S.*



United States Department of the Interior
FISH AND WILDLIFE SERVICE

MAILING ADDRESS:

Post Office Box 26486
Denver Federal Center
Denver, Colorado 80226

STREET LOCATION:

134 Union Blvd.
Lafayette, Colorado 80226

IN REPLY REFER TO:

FA/SE/OSM
Gordon Creek No. 2 Mine (6-5-84-0023)

JUL 1 1985

Mr. Dan Guy
Beaver Creek Coal Company
P.O. Box AU
Price, UT 84501

Dear Mr. Guy:

This acknowledges receipt of your company's check for \$1,125.00 dated June 20, 1985, for the conservation of endangered fishes in the Upper Colorado River Basin in compliance with Condition No. 9 of the Office of Surface Mining's Federal permit UT-010. This contribution satisfies your commitment identified in our Gordon Creek No. 2 Mine biological opinion dated August 13, 1984.

Sincerely yours,

JOHN L. SPINKS, JR.

Acting Regional Director

cc: Administrator, OSM, Denver, CO

bcc: Frank Dunkle, Special Assistant to RD
Don Rodgers FA
Field Supervisor, Salt Lake City (SE)
Field Supervisor, Grand Junction (SE)

1987

MODIFICATIONS / AMENDMENTS



W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 2, 1988

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Approval of PAP Amendment, Request to Revise Water Monitoring Plan, Beaver Creek Coal Company, Gordon Creek #2 and 7 Mine, ACT/007/016-87E, Folder No. 2, Carbon County, Utah

The Division received Beaver Creek Coal Company's (BCCC's) conditional approval response on February 12, 1988. The response was reviewed by James Fricke, Reclamation Hydrologist, and has been determined adequate for final approval. This letter will serve as the Division's final approval for this permit change application. Beaver Creek Coal Company has now provided all of the information required by this office to finalize this permitting action.

The Division will forward extra copies of the approved plans to the appropriate state and federal agencies to update file copies of BCCC's approved mining and reclamation plan. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

Attachment

cc: R. Hagen

G. Morris

P. Rutledge

J. Whitehead

J. Fricke

P.F.O.

8992R/32



February 29, 1988

TO: John Whitehead, Permit Supervisor
FROM: James R. Fricke, Reclamation Hydrologist *JRF*
RE: Water Monitoring Amendment, Beaver Creek Coal Company,
Beaver Creek #2 and #7 Mine, ACT/007/016-87E, Folder
#2, Carbon County, Utah

Synopsis

The operator has adequately addressed (letter of February 5, 1988) the Division's concerns (letter of November 16, 1987) for the water monitoring amendment.

Analysis

Total Settleable Solids will be analyzed at NPDES stations. Oil and Grease will be analyzed at NPDES stations and 2-1-W.

Recommendations

The Division should approve the amendment.

djh
0798R/47

BEAVER CREEK Coal Company

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



February 5, 1988

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

Attn: Mr. D. Wayne Hedberg:

Re: Water Monitoring Amendment
Gordon Creek No. 2/7 Mines
ACT/007/016-87E, #2
Carbon County, Utah

Dear Mr. Braxton:

Enclosed are 14 copies of the amended water monitoring plan for the Gordon Creek No. 2/7 Mines.. This submittal reflects the changes requested in Mr. Hedberg's letter of November 16, 1987. All sheets are numbered and should replace corresponding sheets in the plan. The previously submitted 14 copies of the Water Monitoring Map will not change as a result of this submittal.

If you need any further information, please let me know.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/rs

cc: J.L. Coffey
File

Water quality samples will be collected quarterly at sample locations 2-1-W, 2-2-W, 2-7-W, 2-8-W, and 2-9-W and 2-10-W. Samples will be analyzed for parameters tested in Table 7-18. The sampling programs provide information on seasonal flow and water quality on intermittent and ephemeral streams that have a potential to be affected by mine discharge and surface disturbance. Stations 2-2-W and 2-9-W will also be monitored quarterly for oil and grease, since they are below the active mine site.

In addition, discharge from the NPDES monitoring point, 2-1-W, will be sampled monthly for flow, pH, TDS, TSS, Iron, Manganese and Oil and Grease, according to NPDES permit monitoring requirements.

A discussion of surface water monitoring locations, type, frequency and flow device may be found in Table 7-17. A map of the monitoring locations is provided on Plate 7-2. Sample points 2-3-W and 2-4-W are continuous stream gauging stations located on Beaver Creek at downstream and upstream points respectively. The gauges are operated through the flow season from about May through November. The stream and stilling wells are frozen throughout the Winter. The gauges are serviced monthly at which time the water is analyzed in the field for pH, temperature and specific conductance. In addition, samples will be taken bi-annually for chemical analyses on stations 2-3-W, 2-4-W, 2-5-W, and 2-6-W. Analyses will be for parameters listed in Table 7-18.

Note; Total Settleable Solids will not be tested at non-NPDES stations; however, the requirements of UMC 817.46 (u) will be met for sediment pond removal.

Property: _____
 Date Sampled: _____ Date Analyzed: _____
 Station: _____
 Location: _____
 Type: _____
 Frequency: _____

Field Measurements:

Water Level or Flow : _____
 PH : _____
 Specific Conductivity : _____ (ohms/cm)
 Temperature : _____ (°C)
 Dissolve Oxygen : _____ (ppm)
 (Perennial streams only)

Laboratory Measurements (mg/l):

** Total Settleable Solids: _____
 Total Suspended Solids : _____
 Total Dissolved Solids : _____
 Total Hardness (as CaCO₃): _____
 Acidity (CaCO₃) : _____
 *Carbonate (CO₃⁻²) : _____
 *Bicarbonate (HC)₃⁻¹) : _____
 *Calcium (Ca) : _____
 Chloride (Cl⁻) : _____
 Iron (Fe) : _____
 *Magnesium (Mg) : _____
 *Total Manganese (Mn) : _____
 *Potassium (K) : _____
 *Sodium (Na) : _____
 *Sulfate (SO₄⁻²) : _____
 *** Oil & Grease : _____
 Cation - Anion Balance : _____

* Dissolved Form
 ** NPDES Samples only
 *** Designated Samples Only



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

35 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 30, 1987

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Final Approval of PAP Amendment, BLM Approved Plans for Underground Development, First South Entries to Access #8 Mine Block, Beaver Creek Coal Company, Gordon Creek #2 and #7 Mine, ACT/007/016-87A, Folder No. 3, Carbon County, Utah

The Division received Beaver Creek Coal Company's (BCCC) conditional approval response to the PAP amendment referenced above on December 3, 1987. The latest response was reviewed by Richard V. Smith, Division Geologist. This letter will serve as the Division's final approval for this permit change application. Beaver Creek Coal Company has now adequately addressed all of the conditions required by this office to finalize this permitting action.

The Division will forward the extra copies of the approved plans to the appropriate state and federal agencies to update the file copies of BCCC's approved mining and reclamation plan permit application.

Thank you for your cooperation in completing this permitting action. As always, please call should you have questions or need additional information pertaining to this review.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

cc: M. Bailey R. Hagen
 P. Rutledge J. Whitehead
 R. Smith P.F.O.

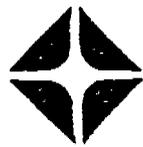
8992R/33

BEAVER CREEK Coal Company

Post Office Box 1378

Price, Utah 84501

Telephone 801 637-5050



December 3, 1987

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

Attn: Mr. D. Wayne Hedberg:

Re: Approval of PAP Amendment
BLM Approval/1st South Entries
Gordon Creek No. 7 Mine
ACT/007/016-87A, #3
Carbon County, Utah

Dear Mr. Braxton:

Enclosed are 14 copies each of the revised text for the mine plans as requested in Mr. Hedberg's approval letter of June 24, 1987. One set is entitled "Gordon Creek No. 2 Mine Application - Southeast Lease", in the upper left corner. These sheets should be inserted into the presently approved plan in the Southwest lease volume.

The other set has "Gordon Creek No. 2 and No. 7 Mines" in the upper left corner. These sheets should be inserted into the recently submitted 3 volume set on Gordon Creek No. 2 and No. 7 Mines, presently under review for the mid-term.

If you have any questions, or need any further information, please let me know.

Respectfully,

Dan W. Guy
Manager Compliance and Permitting

DWG/rs

cc: J.L. Coffey
R.J. Marshall
File

station and will continue for a period of at least one (1) year thereafter or longer if substantial subsidence continues to occur.

This plan will be confined to the area of mining in the Gordon Creek No. 2 Mine Modification area, and will continue for a period of one (1) year after cessation of mining in this area. Reports of monitoring will be sent to the regulatory authority on a yearly basis.

Bryner Canyon

On June 24, 1987, an amendment was approved to allow possible room development off of the 1st South area beneath the upper end of Bryner Canyon. The following commitments were made by Beaver Creek Coal Company in connection with this approval:

- 1) The only change from the original approved mining plan is the projected rooms to be driven north of the proposed No. 8 Mine Access off of the 1st South Entries. These rooms are projected for potential rock storage area in the event we do put in rock slopes to access the No. 8 Mine area. We have drilled the faulted area and are presently evaluating the feasibility of putting in such slopes:
- 2) In the event the rock slopes are not put in, the projected storage rooms will not be cut as shown. If the slopes are installed, the rock would be disposed of in the projected room

area. In either event, the projected storage area pillars will not be pulled; therefore, no adverse affects to the Bryner channel area are anticipated;

- 3) In the event the rooms are mined, Beaver Creek Coal Company will add one or more subsidence monitoring stations in the Bryner Canyon stream channel area, and monitor the station(s) in accordance with the approved plan. Furthermore, Beaver Creek Coal Company will commit to remedy and repair, within 30 days of observation, any subsidence-induced damage to the Bryner Canyon stream channel in this area, to assure a stable, permanent stream bed and bank.

The monitoring stations shall be laid out in three lines as straight as possible, depending on given surface conditions and with stations spaced at regular intervals of not more than 1000 feet. One line of stations will be installed along the main entries. Two additional lines of stations will be installed perpendicular to this center line above the active mining area and between the surface limits of expected subsidence. (See Plate 3-3a.)

All northing, easting, and elevation coordinates, using the two base stations as reference stations for all such stations, have been established by the use of a one-second theodolite and a six-mile electronic distance meter. Multiple readings were taken to ensure accuracy. The elevations will be redetermined at nominal one (1) year intervals, depending upon accessibility, while mining is taking place within 500 feet of a station and will continue for a period of at least one (1) year thereafter, or longer if substantial subsidence continues to occur. Monitoring will be accomplished by either conventional transit survey or by aerial survey, using accepted techniques.

This plan will be confined to the area of mining in the No. 7 Mine area and will continue for a period of one (1) year after cessation of mining in this area. Reports of monitoring will be sent to the regulatory authority on a yearly basis.

Bryner Canyon

On June 24, 1987, an amendment was approved to allow possible room development off of the 1st South area beneath the upper end of Bryner Canyon. The following commitments were made by Beaver Creek Coal Company in connection with this approval:

- 1) The only change from the original approved mining plan is the projected rooms to be driven north of the proposed No. 8 Mine Access off of the 1st South Entries. These rooms are projected for potential rock storage area in the event we do put in rock slopes to access the No. 8 Mine area. We have drilled the faulted area and are presently evaluating the feasibility of putting in such slopes;
- 2) In the event the rock slopes are not put in, the projected storage rooms will not be cut as shown. If the slopes are installed, the rock would be disposed of in the projected room area. In either event, the projected storage area pillars will not be pulled; therefore, no adverse affects to the Bryner channel area are anticipated;
- 3) In the event the rooms are mined, Beaver Creek Coal Company will add one or more subsidence monitoring stations in the Bryner Canyon stream channel area, and monitor the station(s) in accordance with the approved plan. Furthermore, Beaver Creek Coal Company will commit to remedy and repair, within 30 days of observation, any subsidence-induced damage to the Bryner Canyon stream channel in this area, to assure a stable, permanent stream bed and bank.



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

June 24, 1987

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Approval of PAP Amendment, BLM Approval/Development of 1st South Entries to Access No. 8 Mine Block, Beaver Creek Coal Company, Gordon Creek #2 & 7 Mines, ACT/007/016-87A, Folder #3, Carbon County, Utah

The Division received a letter from Beaver Creek Coal Company on March 18, 1987 committing to monitor subsidence and to repair any damage to the Bryner Canyon streambed within 30-days of occurrence. The operator's subsidence monitoring and mitigation plan for the Left Fork of Bryner Canyon is now adequate. This commitment must be incorporated into the approved permit application package (PAP) to complete this permitting action.

As a condition to this approval, the Division requests fourteen (14) copies of the appropriately revised text to be formatted for direct insertion into the approved PAP on file with the respective agencies. If possible, please provide these copies by July 13, 1987.

Thank you for your cooperation and patience in completing this permitting action. Please contact me or John Whitehead, should you have any questions or concerns.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

Attachments

cc: P. Rutledge J. Fricke
 R. Hagen J. Whitehead
 L. Berggren P.F.O.
 L. Braxton

8992R/55



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

June 11, 1987

TO: Coal File

From: James R. Fricke, Reclamation Hydrologist *JRF*

RE: Amendment to Develop First South Entries to Access No. 8
Mine Block, Gordon Creek No. 2/7 Mines, Folder No. 2,
ACT/007/016-87A, Carbon County, Utah.

The operator's subsidence monitoring and mitigation plan for the Left Fork of Bryner Canyon is adequate. In a March 16, 1987 letter to the Division, the operator committed to monitoring for subsidence and repairing any damage to the Bryner Canyon streambed within 30 days of occurrence.

pb
cc: J. Whitehead
R. Smith
W. Hedberg

1193R-20

BEAVER CREEK Coal Company



MAR 18 1987

DIVISION OF
OIL, GAS & MINING

March 16, 1987

Mr. John Whitehead
Permit Supervisor
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Amendment to Develop First South
Entries to Access #8 Mine Block
Gordon Creek No. 2/7 Mines
ACT/007/016 - #2
Carbon County, Utah

Dear Mr. Whitehead:

In reference to your letter of February 27, 1987 and our subsequent phone conversation on March 3, 1987, Beaver Creek Coal Co. is submitting the following additional information concerning the proposed mining amendment:

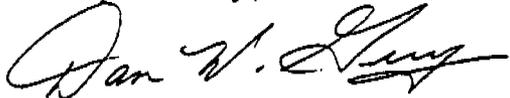
- 1) The only change from the original approved mining plan is the projected rooms to be driven north of the proposed No. 8 Mine Access off of the 1st South Entries. These rooms are projected for potential rock storage area in the event we do put in rock slopes to access the No. 8 Mine area. We have drilled the faulted area and are presently evaluating the feasibility of putting in such slopes;
- 2) In the event the rock slopes are not put in, the projected storage rooms will not be cut as shown. If the slopes are installed, the rock would be disposed of in the projected room area. In either event, the projected storage area pillars will not be pulled; therefore, no adverse affects to the Bryner channel area are anticipated;
- 3) In the event the rooms are mined, Beaver Creek Coal Company will add one or more subsidence monitoring stations in the Bryner Canyon stream channel area, and monitor the station(s)

March 16, 1987
Page Two

in accordance with the approved plan. Furthermore, Beaver Creek Coal Company will commit to remedy and repair, within 30 days of observation, any subsidence-induced damage to the Bryner Canyon stream channel in this area, to assure a stable, permanent stream bed and bank.

If you have any questions, or need any further information, please let me know.

Respectfully,



Dan W. Guy,
Manager Permitting/Compliance

DWG/rs

cc: Jay Marshall
File



February 27, 1987

CERTIFIED RETURN RECEIPT REQUESTED
(P 402 458 626)

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

Dear Mr. Guy:

Re: Areas of Concern, Amendment to Develop First South Entries to Access #8 Mine Block, Beaver Creek Coal Company, Gordon Creek #2 Mine, ACT/007/D16, Folder #2, Carbon County, Utah

The Division has received a copy of the Bureau of Land Management's approval dated December 30, 1986, to develop entries in the #7 Mine block's First South, to access the #8 Mine block. Since these entries will be driven in an area with 100-150 feet of cover, and since Bryner Creek will be undermined, the following issues must be resolved before the Division's approval of this change can be given.

Serious doubt exists as to if the area underneath the stream channel should undergo secondary mining. It would appear that subsidence of the stream channel would potentially induce headcutting upstream of the subsidence. Depending on the severity of the subsidence, the cost of repairs could influence the economic viability of coal recovery.

Beaver Creek Coal Company must specify what measures will be taken and commit to remedy and repair, within 30 days of observation, any subsidence-induced damage to the Bryner Canyon stream channel to assure a stable, permanent stream bed and bank.

Page 2
Mr. Dan Guy
ACT/007/016
February 27, 1987

The subsidence monitoring program will need to be updated to include measurements to identify subsidence induced impacts to the stream channel. The Gordon Creek #2/7 Mine plan must be updated to reflect the changes in mine sequence proposed herein.

Your response to these concerns will be required before the Division can proceed with this review.

Sincerely,

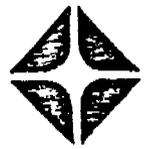


John J. Whitehead
Permit Supervisor/
Reclamation Hydrologist

djh
cc: Allen Klein, OSM
Jim Fricke
Wayne Hedberg
Rick Smith
0800R/53

BEAVER CREEK Coal Company

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



December 15, 1986

Mr. Allen L. Vance
Bureau of Land Management
Price River Resource Area
900 North 700 East
Price, Utah 84501

Re: First South to Eight Mine

Dear Allen:

Please note on the enclosed map the proposed development in first south. It is planned to develop first south seven cross cuts to the south then turn east and develop to the fault separating #7 mine from the #8 mine block. Once the fault is encountered it will be drilled and studied for possible underground access to #8 mine.

If the decision is made to access #8 mine from underground an area for rock storage will be necessary. The smaller 60' by 60' pillars will be developed for this use. The area where these smaller pillars are to be developed is under 150' of cover and would not be totally extracted in order to prevent subsidence. The entries around the small pillars would be backfilled with rock generated from the slopes.

If you have any questions, please contact me.

Sincerely,

R. Jay Marshall
R. Jay Marshall
Engineering Supervisor

Enclosure

cc. Dan Meadors
Bill Wagener
John Perla
John Brasher
File 8-4-2 ✓
IBM #8blmltr



36 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

July 15, 1987

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Final Approval of PAP Amendment, Second Request to Delete
Portion of Gordon Creek Road From Permit Area, Beaver Creek Coal
Company, Gordon Creek No. 2 and 7 Mines, ACT/007/016-87B, Folder
No. 3, Carbon County, Utah

The Division received your conditional approval response to the MRP amendment on June 25, 1987. The revised plans and maps have been forwarded to the respective agencies to update all appropriate copies of the approved Permit Application Package (PAP). This letter will serve as the Division's final approval for this permit amendment. Beaver Creek Coal Company has now adequately addressed all of the conditions required by this office to complete this permitting action.

Thank you for your cooperation and prompt response in completing this permitting activity. As always, please call should you have questions or need additional information.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

cc: P. Rutledge L. Braxton
 R. Hagen J. Whitehead
 J. Frandsen P.F.O.

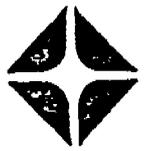
8992R/22

BEAVER CREEK Coal Company

Post Office Box 1378

Price, Utah 84501

Telephone 801 637-5050



June 18, 1987

Mr. D. Wayne Hedberg
Data Management Coordinator
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Gordon Creek Road Amendment
Gordon Creek No. 2/7 Mines
ACT/007/016-87B, #3
Carbon County, Utah

Dear Mr. Hedberg:

Per your request, I have enclosed 14 copies of the approved/revised permit area map for the Gordon Creek #2/7 Mines. Also enclosed are 14 copies of revised pages for the MRP, deleting the haul road description from Sweet's Canyon to the mine gate.

I appreciate your cooperation in the review and approval of this amendment.

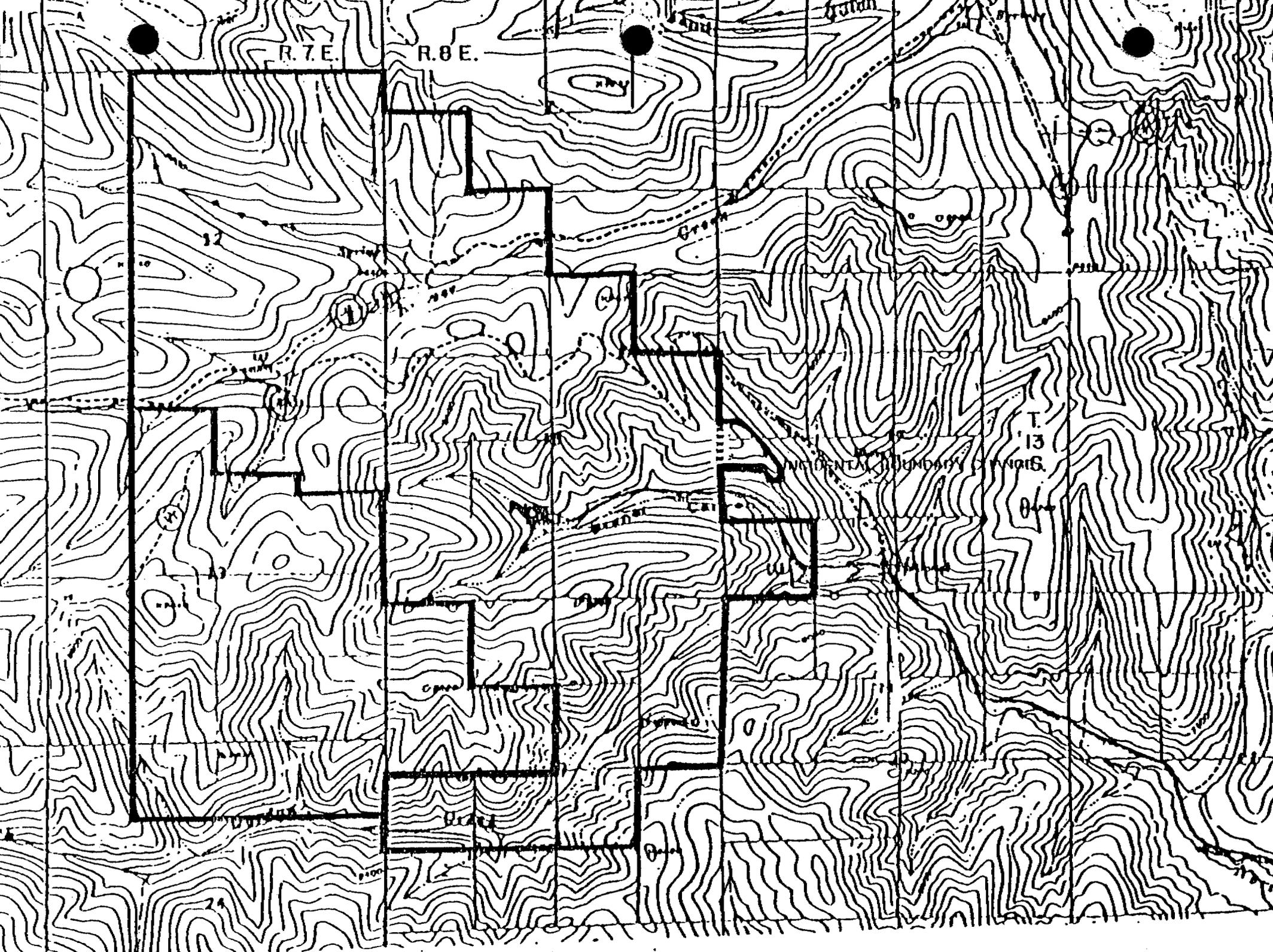
Respectfully,

Dan W. Guy
Director Permitting/Compliance

DWG/rs

Enclosures

cc: R.J. Marshall
File



R. 7 E.

R. 8 E.

T. 13

WESTERN BOUNDARY OF ILLINOIS

480 volts. The substation includes transformers for operation of the main fan, outside belt drives, and outside lighting. The substation is served and maintained according to MSHA Regulations. (1984).

(g) Diversions - One culvert diversion is in place on the west end of the No. 2 Mine yard. This diverts natural drainage from the right fork of Bryner Canyon under the disturbed area. (1985).

(h) Main Road - This Class I road is used for all access to and from the mine site, including coal haulage. The road is approximately 2000 feet long from the load-out to the mine gate. This is a gravel surfaced road crowned in the middle and sloped slightly toward each side where a conveyance ditch is maintained to carry runoff to the culverts and catch basin below. The road is regularly maintained to provide safe access for men and material to the mine as well as providing for safe, efficient coal haulage. The road joins the Gordon Creek County Road at the mine gate. The Gordon Creek road is gravel surfaced for approximately 11.5 miles and is paved for the last 1.5 miles to the east where it joins with U.S. Highway Nos. 50 and 6. (1969).

(i) Upper Bench Access Road - This is a short road (539 feet long) from the main portal to the west portals, it is used only for men and material access with no coal haulage. This road is bermed on the south side for safety and runoff control. (1969).

(j) No. 7 Mine Access Road - This road was discussed under Section 3.2.1.

(k) Water Supply System - Water for the bath houses is pumped from the water system in Sweet's Canyon to



W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

June 9, 1987

Mr. Dan W. Guy, Manager
Permitting & Compliance
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Conditional Approval, PAP Amendment, Second Request to Delete Portion of Gordon Creek (County)/Mine Access Road from Permit Area, Beaver Creek Coal Company, Gordon Creek #2 & 7 Mines, ACT/007/016-87B, Folder #3, Carbon County, Utah

The Division has completed the review of your latest request to delete a portion of the Gordon Creek/Mine Access road from the Gordon Creek #2 & 7 mine permit area. The request was received on May 20, 1987 and was reviewed by reclamation engineer Pamela Grubaugh-Littig.

It is the Division's opinion that Beaver Creek Coal Company has now provided sufficient justification to verify that the section of road in question should be severed from the mine permit area. This is a reversal of the Division's previous determination dated February 12, 1987, when this issue was originally submitted and reviewed. Please refer to the attached technical review memoranda for the basis of the Division's final decision on this request for change.

As a condition to issuance of final approval, the Division requests fourteen (14) copies of the approved/revised permit area map at a scale of 1 inch = 500 feet. The revised maps should be dated and numbered accordingly. If possible, please provide these copies by July 3, 1987

Thank you for your cooperation in completing this permitting action. As always, please call should you have any questions or concerns.

Sincerely,

D. Wayne Hedberg
Data Management Coordinator

djh

Attachments

cc: P. Rutledge J. Fricke
R. Hagen J. Whitehead
L. Berggren P.F.O.
L. Braxton

8992R/50

BEAVER CREEK Coal Company

Post Office Box 1378

Price, Utah 84501

Telephone 801-637-5050



May 14, 1987

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

Re: MRP Amendment
Gordon Creek Mine
Access Haul Road
Gordon Creek No. 2/7 Mines
ACT/007/016, #3 & #4
Carbon County, Utah

Dear Mr. Braxton:

Beaver Creek Coal Company is hereby requesting approval of an amendment to the approved Mining and Reclamation Plan for its Gordon Creek No. 2/7 Mines. It is our wish to amend the permit boundary by deleting that portion of the Gordon Creek (County) Road from Consumers Canyon to our mine gate.

The road section in question was added to our permit area at the insistence of the O.S.M. enforcement group during the Mine Plan review; however, as the O.S.M. Technical Staff reached the late (and therefore, critical) stages of the review, they were informed by Carbon County Commissioner, Lee Semken, that this is considered a county road to our gate. At this point, the Technical Staff reviewer, Mark Humphrey, said it would be best to leave it in the plan until it was approved, and then request a change. This would minimize delays in the approval process. He also said O.S.M. would not require any reclamation plans on this portion of the road.

Our request for deletion of this portion of the road from our permit area is based on the following:

- 1) Carbon County considers this a county (public) road to our gate;
- 2) The D.O.G.M. has determined that the Gordon Creek Road meets the criteria for designation as a public road; (See appendix III, attached).
- 3) The addition of this road to the permit area was based on an enforcement question, which was resolved after the addition had been made.

- 4) This portion of the road was not required to be included in the reclamation plan or bond.

Attached Appendix I is a map showing the portion of the road proposed to be deleted from our permit area, along with proposed text and figure corrections to be placed in the MRP upon approval.

The basis for our request is that the Gordon Creek Road (including this upper portion) does in fact meet each of the U.D.O.G. & M. criteria for a public road as defined in the attached Appendix II.

The following is an explanation of how each of the criterion are met, supported by attached documentation in Appendix III.

"A public road is one which:"

1. "is classified as a public use road by the subject public body;"
The attached letter from Carbon County will verify that the Gordon Creek Road is a public use road (Appendix III, Exhibit A).
2. "is constructed similarly to similarly classified roads;"
The attached Exhibit A will also verify an opinion by the County that the Gordon Creek Road is constructed similarly to other public use (county) roads.
3. "is publicly funded, with public funding determined by the following criteria:
 - a. Constructed and/or maintained by the public body;
or,
 - b. An agreement, at the public body's insistence, provides for the construction and maintenance by the operator wherein the public body retains control over the construction and/or maintenance and some public funds are expended through the exercise of that control."

Attached Exhibit B. (Appendix III) is a maintenance agreement between Beaver Creek Coal Company and Carbon County, wherein it shows that Beaver Creek will maintain the Gordon Creek Road, the County will provide some public funds (material), and the County will retain control of the road.

May 14, 1987
Page Three

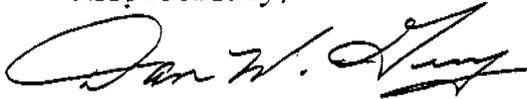
4. "has substantial (more than incidental) public use;
i.e. the road:
 - a. is used by the public for access, and
 - b. provides access to sites other than the permit area, and
 - c. the operator does not have the authority to deny public access at any time."

Exhibit C. (Appendix III) is a list of regular users of the Gordon Creek Road. Many of these people use the road to access rangeland and cabin sites in the Beaver Creek area, which is beyond our permit area. The Sweet's Canyon area is used by landowners for access to their trailer houses in the canyon. A public parking and turnaround area below our mine gate is used for sportsmen and sightseers parking and, most recently, as a construction staging area by AML during reclamation activities in the canyon. Beaver Creek Coal Company does not restrict travel on any portion of the public use part of the road at any time during the year. Locked gates are maintained only at our permit boundaries which are private property, and do not affect general public use of the Gordon Creek Road up to our gate.

It is our hope that the above explanation and attached documentation is adequate to show that this upper portion of the Gordon Creek Road should be designated as public road, and removed from our permit area.

If you have any questions, or need any further information, please let me know.

Respectfully,



Dan W. Guy
Manager Permitting and Compliance

DWG/rs

cc: R.J. Marshall
W.S. Wagener
← File

GORDON CREEK NO. 2/7 MINES

NOTIFICATIONS

P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Helper Associates
c/o S.V. Litizzette
178 South Main Street
Helper, Utah 84526

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
Carbon County, Utah

Dear Mr. Litizzette:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
~~File~~ 4-E-3-5
File

P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Mr. Carl Nyman
4260 Olympus View Drive
Salt Lake City, Utah 84117

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Carbon County, Utah

Dear Mr. Nyman:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

G. Pete & Betty Ray Frandsen
9267 Tortelline Drive
Sandy, Utah 84070

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Carbon County, Utah

Dear Mr. & Mrs. Frandsen:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Wasatch Coal Company
c/o George N. Cannan Co.
Mtg. Rep.
1322 Chandler Dr.
Salt Lake City, Utah 84103

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Carbon County, Utah

Dear Sir:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Milton A. Oman
717 Continental Bank Bldg.
Salt Lake City, Utah 84100

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Carbon County, Utah

Dear Mr. Oman:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

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



March 20, 1986

Mr. Eldred E. Pierce, Jr.
Rt. #1, Box 143
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Carbon County, Utah

Dear Mr. Pierce:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

March 20, 1986

Calvin K. Jacob & Sons
Partnership
754 S. Cherry Drive
Orem, Utah 84057

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Mr. Jacob:

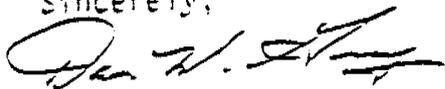
You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,



D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

March 20, 1986

Mr. Movell A. Jewkes
c/o Rees Llewellyn
2588 Elizabeth
Salt Lake City, Utah 84101

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No. 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Mr. Jewkes:

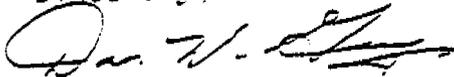
You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,



D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Ms. Margaret Pierce Grant
c/o Catherine Jewkes
730 N. 4th East
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Gordon Creek No.3 Mine
INA/007/017
Carbon County, Utah

Dear Ms. Grant:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

Beaver Creek Coal Company,
P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

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

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No. 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Sir:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

Beaver Creek Coal
P.O. Box 1376
Price, Utah 84501
Telephone 801 637-5050



March 20, 1986

Carbon County
Courthouse Building
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Sir:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

P.O. Box 1378
Price, Utah 84501
Telephone 801 637-5050

March 20, 1986

Catherine Pierce Jewkes
730 North 4th East
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Ms. Jewkes:

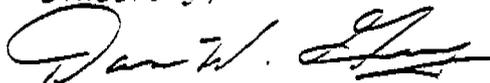
You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,



D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File



March 20, 1986

Ms. Peggy Ann Pierce
c/o Catherine Jewkes
730 N. 4th East
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No 2 Mine
ACT/006/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah

Dear Ms Pierce:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

A handwritten signature in dark ink, appearing to read "D.W. Guy".

D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

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



March 20, 1986

United States of America
Bureau of Land Management
Moab District Office
Price River Resource Area
P.O. Drawer AB
Price, Utah 84501

Re: Surface Owner Notification
of Underground Mining Activities
Gordon Creek No. 2 Mine
ACT/007/016
Gordon Creek No. 3 Mine
INA/007/017
Carbon County, Utah
Huntington Canyon No 4 Mine
INA/015/004
Emery County, Utah

Dear Sirs:

You are the surface owner of record of lands situated above, or adjacent to, Beaver Creek Coal Company mining operations.

This letter is to notify you that Beaver Creek Coal Company has conducted or may conduct underground mining in the future beneath, or adjacent to, these properties.

As with any underground operation, there is a remote possibility of subsidence from this mining. Beaver Creek Coal Company will be monitoring subsidence and hydrology on areas that could possibly be affected by its mining activities. This may require that our monitoring personnel have access onto your property for performance of this work.

If you have any questions, or need any further information, please let me know.

Sincerely,

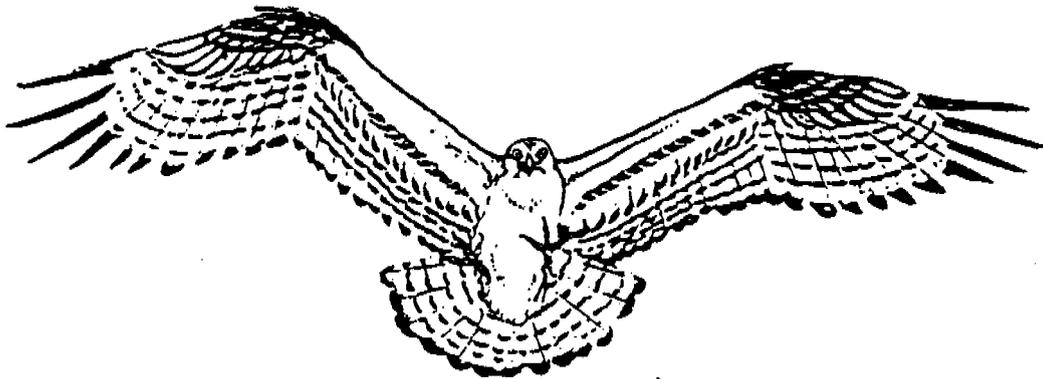
D.W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Lowell Braxton, DOGM
Dave Lof, DOGM
Jay Marshall, BCCC
File 4-E-3-5
File

1987
RAPTOR SURVEY
AND
MONITORING REPORT

RAPTOR SURVEY
AND
MONITORING REPORT FOR 1987
Beaver Creek Coal Company



Prepared by

E.I.S.

Raptor Survey and Monitoring Report for 1987

Scope:

The following report is based on a helicopter survey conducted in April-May of 1987 by various coal companies in cooperation with the Utah Division of Wildlife Resources.

Methodology:

The information is referenced by nest location numbers which correspond to official nest designations as listed by both the federal and state Wildlife agencies. In addition to the official inventory, E.I.S. personnel monitored raptor sightings at all properties during the nesting period. As a result of this monitoring activity, three significant sightings were made and reported to either Miles Moretti or Larry Dalton of the Utah Division of Wildlife Resources. These observations were: [1] possible Peregrine Falcon sighting #2 Mine Area ridge separating Beaver Creek and Gordon Creek drainages, [2] paired Bald Eagles below #3 & 6 Mine adjacent to Gordon Creek Haul Road [feeding on road kill deer].

In addition to the reported sighting of T & E species, there were 12 sightings of Redtail hawks, 3 sightings of a Sharpshin hawks, 3 sightings of a Goshawk and 5 unidentified raptors in the mine area. The relocated nests in the upper end of Gordon Creek Canyon appeared to be abandoned and not being utilized during the 1987 nesting season.

Results:

A map of each property is attached with the nest locations indicated and the corresponding number identity. Tables R-1, R-2, R-3 and R-4 list each property and a summation of nest sights and/or monitoring sightings.

Recommendations:

Based on a meeting with Larry Dalton of the Utah Division of Wildlife Resources and the attached correspondance, Appendix R-1, the practice of an annual raptor survey should be discontinued. The survey utilizing a helicopter is a cooperative function of the wildlife agencies and the company, and as such should only be conducted under conditions which warrant this type of activity. The Utah Division of Oil, Gas and Mining have set standards and procedures for this type of inventory [see Appendix R-2]. Unless Beaver Creek Coal anticipates the type of activities outlined in Appendix R-2, an annual survey appears to be be redundant at best, and could be considered harrassment of raptors at worst.

TABLE R-1

Huntington Canyon #4 Mine

| <u>Species</u> | <u>Year</u> | <u>Map I.D. Number</u> |
|----------------|-------------|------------------------|
| Unknown Buteo | 1981 | 168 |
| Unknown Buteo | 1981 | 169 |
| Unknown Buteo | 1981 | 170 |
| Unknown Buteo | 1981 | 171 |
| Unknown Buteo | 1987 | 271 |
| Unknown Buteo | 1987 | 272 |

TABLE R-2

Gordon Creek 3 & 6 Mine Permit Area

No known nest sites within 1 mile of existing permit area.

TABLE R-3

CV Spur Permit Area

No known nest sites within 1 mile of existing permit area.

TABLE R-4

Gordon Creek #2 & #7 Mine

No nest sites within $\frac{1}{2}$ mile, however, there is one raptor site near the southern boundary of the Location Map Plate 1-1.

| <u>Species</u> | <u>Year</u> | <u>Map I.D. Number</u> |
|----------------|-------------|------------------------|
| Unknown Buteo | 1987 | 327 |

APPENDIX R-1



Eastern Region • 455 West Railroad Avenue • Price, UT 84501-2829 • 801-637-3310

March 23, 1988

Mr. Melvin A. Coonrod
Environmental Industrial Supply
P.O. Box 258
Elmo, UT 84521

Dear Mel:

In regards to Beaver Creek Coal Company's request for you to assist them at conducting an annual raptor survey, the following is offered for your consideration.

Annual surveys for permitted facilities are not normally required. Where raptor nests are known to exist within one-half mile of surface disturbed areas/facilities, annual monitoring to determine the status of just those nests was recommended during the first 5-year permit period. Once the impacts, if any, from a coal facility on a raptor nest are established, monitoring could be discontinued.

From a planning perspective, there is value for a coal company to conduct at least one permit-wide survey every five years on their actively mined property. This would facilitate future and appropriately timed surface disturbing developments. When adequate historical data is not available and a new surface disturbing development is planned at a coal mining complex, a raptor survey within one-half mile radius of such may be recommended.

Personnel conducting a survey during the raptor breeding season, which lies between early February and mid August, and who approach within one-half mile of a nest are required to secure a "Certificate of Registration" from the Division. Survey work that is accurate and comprehensive always results in disturbance (harassment) to the birds. Such is not allowed without appropriate authorization. A certificate of registration will only be issued to a qualified raptor ecologist and for a specific survey area. Additionally, the survey technique will require Division approval before the certificate is issued. Generally speaking, precipitous terrain will require use of a helicopter during mid May and a biologically trained backup observer must accompany the raptor ecologist. Survey of arboreal areas can be conducted on-the-ground by a raptor ecologist. On-the-ground survey must occur prior to leaf-out.

Mel, adequate baseline raptor data exists for Beaver Creek's Trail Mountain and Huntington Canyon (Mill Fork) properties due to an intense helicopter survey in May of 1987. Also, the Mill Fork properties have undergone final

Mel Coonrod
Page 2
March 23, 1988

reclamation. No raptor survey work is needed in association with the Castle Valley loadout project due to a lack of raptor nesting habitat and the already existing facility. The 3/6 mines in the Gordon Creek area (Coal Canyon) have also undergone final reclamation, thus no raptor survey is needed. The 2/7 mines in the Gordon Creek area remain in an actively developing mining project. The small amount of precipitous terrain associated with the permit area has potential for raptor nests. Also, the arboreal areas on that permit tract have a potential for raptor nests. Neither setting has been adequately surveyed in recent years. If the company has plans to expand into undisturbed areas, a comprehensive survey during this spring (1988) would behoove their interests. If no such plans exist or have potential to arise, there is no justification for a survey.

I hope this assessment will provide the needed guidance for Beaver Creek Coal Company's decision. If a decision to conduct inventory is made, a helicopter doing such work will be in the area in May. Coordination with DOGM (AMR Program) and possibly Castle Gate Coal Company could reduce cost for such an inventory. Please advise if I can be of further assistance.

Thank you for an opportunity to provide comment.

Sincerely,



Larry B. Dalton, Resource Analyst
Southeastern Region

LBD/dd

cc: Darrell Nish, DWR
Randy Radant, DWR
Lowell Braxton, DOGM
Clark Johnson, USFWS

APPENDIX R-2

Utah Division of Oil, Gas and Mining
Standards and Procedures for Raptor Surveys

The following should be considered a supplement to the Division's Fish and Wildlife Information Guidelines and will be incorporated into those guidelines when they are revised.

Before the Survey:

1. Consult with the Division to determine if a survey is necessary. This contact may be part of the normal wildlife consultation process for permit submission. If a survey is required, the following are general guidelines for surveys:
 - a. New mine permit or activity involving long term disturbance: The minimum requirement for baseline information is a survey of suitable habitat within a .5 mile radius of surface disturbing construction or operations activities. Surface disturbance includes potential areas of subsidence on cliffs.

A baseline survey of the entire permit area is recommended to prevent delays for clearances on amendments and permit renewals and may be required by the Division. Follow-ups on baseline surveys may be required for five year permit renewals.
 - b. Short term disturbances, e.g. small construction projects or exploration: If disturbance is to occur in the breeding season of February 15 to July 15, survey suitable habitat within .5 mile radius of the disturbance. If there will be no disturbance during the breeding season, surveys can usually be limited to the actual disturbance site.
 - c. Monitoring: Monitoring studies (i.e. methods, locations, scheduling) should be developed on a site by site basis. Except for special situations, survey flights are not required of the entire permit area or of all known nests. Monitoring will usually include reporting on known and new nests in the .5 mile buffer area around disturbances.
2. Contact (a) the Resource Analyst at the appropriate regional office of the Utah Division of Wildlife Resources; (b) the Field Supervisor, U.S. Fish and Wildlife Service, RM 2060, 1745 W. 1700 So., Salt Lake City, Utah 84104; and (c) the office of the appropriate federal land management agency, if applicable, for their most recent data on area raptors.

These state and federal agencies share information on raptors but one or more may have different data if recent work has been done by an agency.

Baseline Survey:

1. In most cases a helicopter is necessary for a baseline survey of cliff raptor habitat or any large scale survey of tree nesting species. Fixed wing aircraft cannot, generally, fly slow and close enough for an adequate survey. Ground monitoring may be useful after nest areas are identified but should not be considered a substitute for baseline data collection from a helicopter.

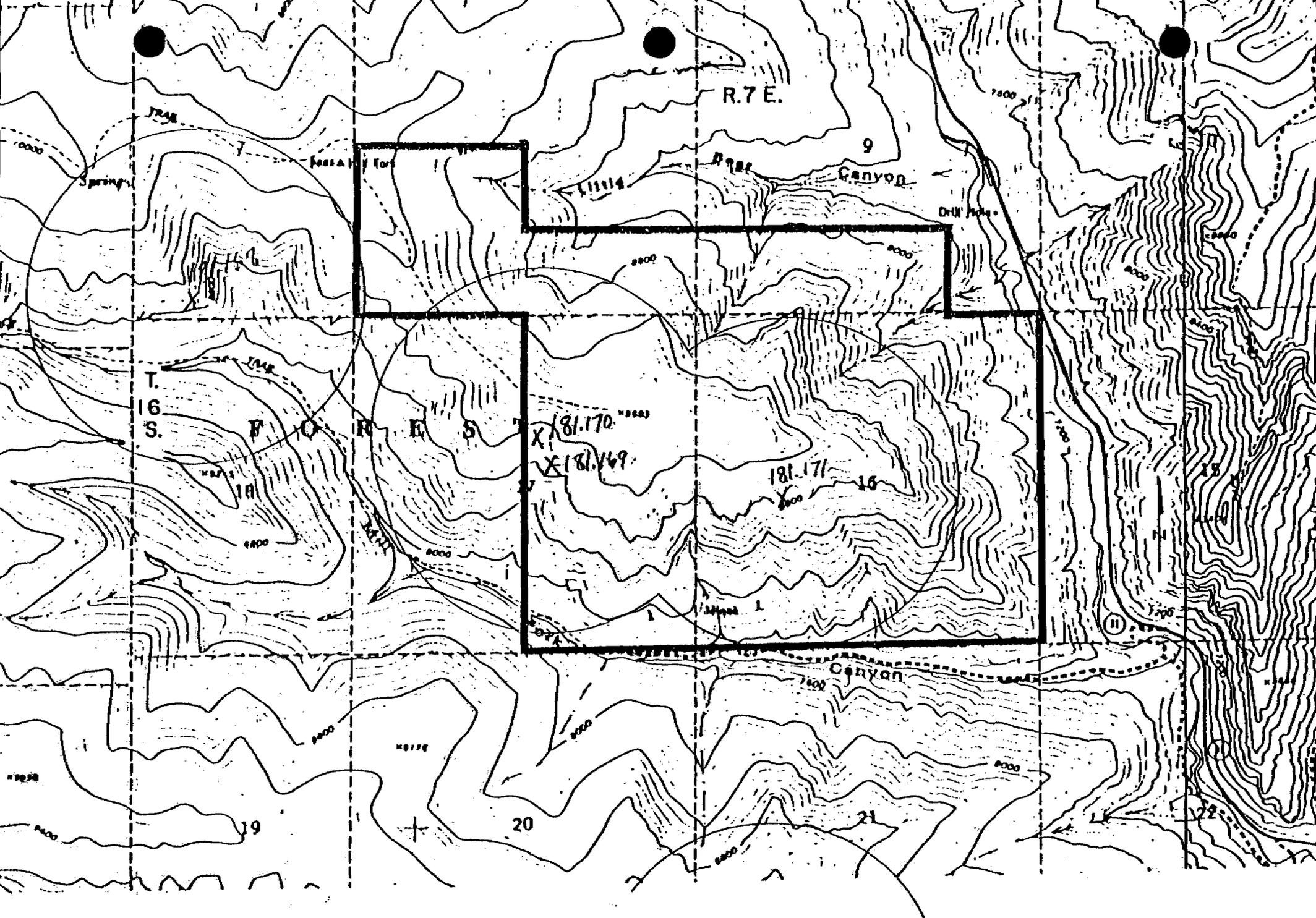


FIGURE I-2. Huntington Canyon No.4 Mine Permit Area

187.271
 X 187.272

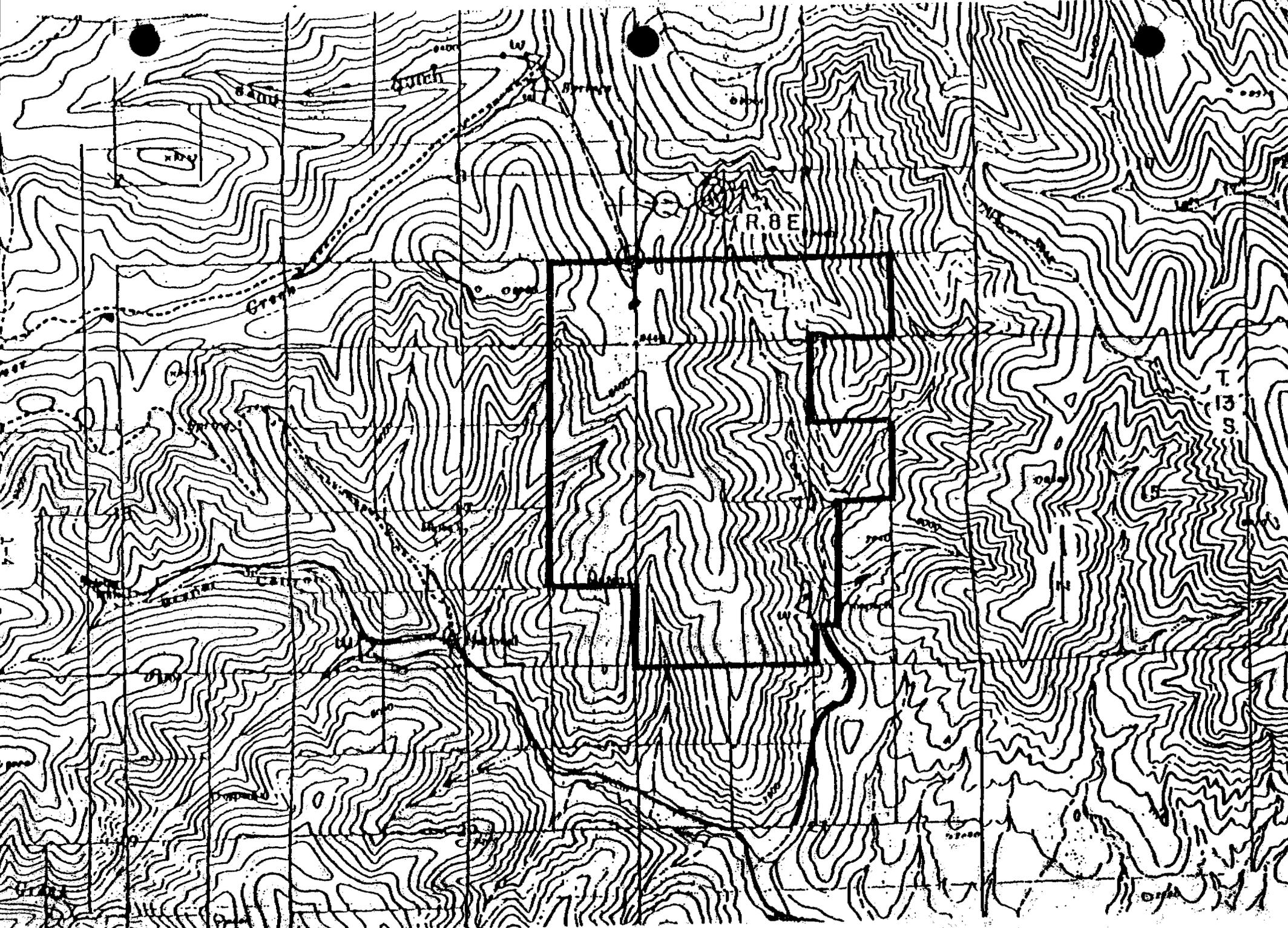


FIGURE I-2 Gordon Creek No 3 & 6 Mines Permill Area.

No nests on this map