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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

November 27, 1995

Joyce Jane Boyer
43 West Paula Circle
Sandy UT 84070

RE: Well Information, Boyer Mine Site, ACT/043/008, Folder #2, Carbon County, Utah

Dear Joyce,

Enclosed is information found in the Boyer Mine plan regarding the existing well at the site.

If you have any additional questions about water rights, may I suggest that you contact:

Robert Morgan, State Engineer
Utah Division of Water Rights
1636 West North Temple
Salt Lake City, Utah 84114

Please call if you need any other information.

Sincerely,

J. Randall Harden, P.E.
Sr. Reclamation Engineer

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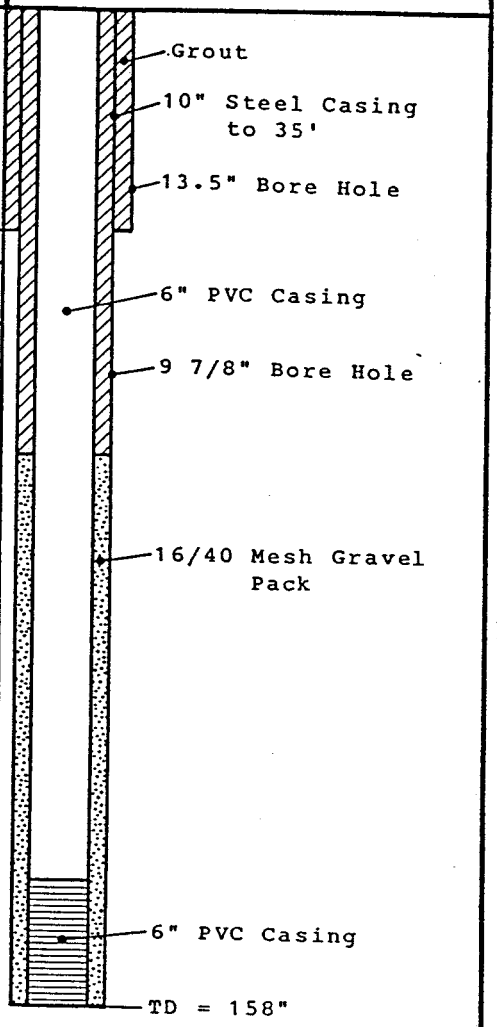
GEOLOGIC LOG

DEPTH (ft.)	SAMPLED INTERVAL	PERCENT RECOVERY	SPT BLOWS/6"	GRAPHIC LOG	DESCRIPTION
10	Unknown	Unknown	Not Applicable		Alluvium (0-35')
20					
30					Brown Clay (34-35')
40					Gray Sandstone (35-40')
50					Brown Clayey Sandstone (40-50')
60					Coal (50-56')
70					Gray Clay with Sandstone Stringers (56-75')
80					Gray Clay (75-85')
90					
100					Gray to Black Clay with Sandstone Stringers (85-120')
110					
120					Fine-Grained Gray Sandstone (120-158')
130					
140					(Note: Water present from 76-127' while drilling)
150					
160					

WELL CONSTRUCTION DETAILS



EarthFax Engineering Inc.

EarthFax PROJECT NO. C-30

SUMMIT COAL CO.

BOYER MINE NEW WELL

GROUND SURFACE ELEV. = ~ 6230'

Form 115—3M—12-60

New Well

Examined ____
Recorded: B. C. ____ F. B. ____
Inspection Sheet ____
Copied ____

REPORT OF WELL DRILLER
STATE OF UTAH

Application No. 87-35-01 MW
Claim No. ____
Coordinate No. ____

GENERAL STATEMENT: Report of well driller is hereby made and filed with the State Engineer, in accordance with the laws of Utah. (This report shall be filed with the State Engineer within 30 days after the completion or abandonment of the well. Failure to file such reports constitutes a misdemeanor.)

(1) WELL OWNER:
Name SUMMIT COAL CO
Address COALVILLE UT

(2) LOCATION OF WELL:
County SUMMIT Ground Water Basin ____ (leave blank)
North 626 feet, East 240 feet from NE Corner
(South) (West)
of Section 36 T. 3 (N/S) R. 6 (E SLBM) (strike out words not needed) W USM

(3) NATURE OF WORK (check): New Well ☑
Replacement Well ☐ Deepening ☐ Repair ☐ Abandon ☐
If abandonment, describe material and procedure: ____

(4) NATURE OF USE (check): MONITORING well
Domestic ☐ Industrial ☐ Municipal ☐ Stockwater ☐
Irrigation ☐ Mining ☐ Other ☐ Test Well ☐

(5) TYPE OF CONSTRUCTION (check):
Rotary ☑ Dug ☐ Jetted ☐
Cable ☐ Driven ☐ Bored ☐

(6) CASING SCHEDULE: Threaded ☐ Welded ☐
10" Diam. from 0 feet to 35 feet Gage 14
" Diam. from ____ feet to ____ feet Gage ____
6" PLASTIC Diam. from 0 feet to 150 feet Gage ____
New ☑ Reject ☐ Used ☐

(7) PERFORATIONS: Perforated? Yes ☑ No ☐
Type of perforator used ____
Size of perforations .040 inches by .010 inches
perforations from 138 feet to 158 feet
perforations from ____ feet to ____ feet
perforations from ____ feet to ____ feet
perforations from ____ feet to ____ feet
perforations from ____ feet to ____ feet

(8) SCREENS: Well screen installed? Yes ☐ No ☑
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ Set from ____ ft. to ____
Diam. ____ Slot size ____ Set from ____ ft. to ____

(9) CONSTRUCTION:
Was well gravel packed? Yes ☐ No ☑ Size of gravel: ____
Gravel placed from ____ feet to ____ feet
Was a surface seal provided? Yes ☑ No ☐
To what depth? 0-80 feet Cement
Material used in seal: ____
Did any strata contain unusable water? Yes ☐ No ☑
Type of water: ____ Depth of strata ____
Method of sealing strata off: ____

Was surface casing used? Yes ☑ No ☐
Was it cemented in place? Yes ☑ No ☐

(10) WATER LEVELS:
Static level 57 feet below land surface Date 3-2-87
Artesian pressure ____ lbs. per square inch Date ____
Artesian water flows ____ feet above land surface Date ____

LOG RECEIVED:
MAR 25 1987
WATER RIGHTS
SALT LAKE

(11) FLOWING WELL:
Controlled by (check) Valve ☐
Cap ☐ Plug ☐ No Control ☐
Does well leak around casing? Yes ☐ No ☑

(12) WELL TESTS: Drawdown is the distance in feet the water level is lowered below static level.
Was a pump test made? Yes ☑ No ☐ If so, by whom? M&S DRILLING
Yield: 7 gal./min. with ____ feet drawdown after 1 hours
" ____ " ____ " ____ " ____ "
" ____ " ____ " ____ " ____ "
Bailer test ____ gal./min. with ____ feet drawdown after ____ hours
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? No ☑ Yes ☐

(13) WELL LOG: Diameter of well 9" inches
Depth drilled 158 feet. Depth of completed well 158 feet.

NOTE: Place an "X" in the space or combination of spaces needed to designate the material or combination of materials encountered in each depth interval. Under REMARKS make any desirable notes as to occurrence of water and the color, size, nature, etc., of material encountered in each depth interval. Use additional sheet if needed.

DEPTH From	DEPTH To	Clay	Silt	Sand	Gravel	Cobbles	Boulders	Hardpan	Conglomerate	Bedrock	Other	REMARKS
0	35				✓				✓			GRAY SAN DSTOIE
35	40											BROWN CLAY SANDSTONE
40	60											SHALE & COAL
60	66											GRAY SHALE, SANDSTON
66	75											GRAY CLAY
75	85											GRAY SHALE WET
85	120											
120	158											GRAY SANDSTONE WET

Work started Feb 5, 19 87 Completed 3-2, 19 87

(14) PUMP:
Manufacturer's Name ____
Type: ____ H. P. ____
Depth to pump or bowles ____ feet

Well Driller's Statement:
This well was drilled under my supervision, and this report is true to the best of my knowledge and belief.
Name M&S Drilling Co (Person, firm, or corporation) (Type or print)
Address Box 906 Duchesne UT
(Signed) Owen R. Yeme (Well Driller)
License No. 511 Date 3-4, 19 87

USE OTHER SIDE FOR ADDITIONAL REMARKS

Table 4-25. Results of water-quality analyses of samples collected from the New Well.

Parameter / Date	4/2/87	6/6/87	7/31/87	9/29/87
Field Measurements				
Temperature (°C)	13.5	11.7	22.2	15.3
pH (units)	8.64	8.30	7.94	8.00
Specific conductance (umhos/cm at 25°C)	880	800	1075	1320
Laboratory Measurements				
Aluminum (mg/l)	<0.01	<0.01	<0.01	<0.1
Ammonia (mg/l)	0.68	0.63	1.18	2.38
Arsenic (mg/l)	<0.01	<0.01	<0.01	<0.01
Barium (mg/l)	0.065	0.020	0.030	0.018
Bicarbonate (mg/l)	426	445	417	407
Boron (mg/l)	0.28	0.28	0.157	0.18
Cadmium (mg/l)	<0.01	<0.01	<0.01	<0.01
Carbonate (mg/l)	6.5	0	2.1	0
Calcium (mg/l)	22.7	36.1	16.6	27.8
Chloride (mg/l)	84.6	86.6	115	157
Chromium (mg/l)	<0.01	<0.01	<0.01	<0.01
Copper (mg/l)	0.015	<0.01	<0.01	<0.01
Fluoride (mg/l)	3.35	2.76	2.74	0.98
Hardness, total (mg/l $CaCO_3$)	70	92	34.1	65
Iron, dissolved (mg/l)	<0.01	0.075	0.28	<0.01
Lead (mg/l)	<0.01	0.022	0.010	<0.01
Magnesium (mg/l)	3.2	2.1	3.5	7.1
Manganese (mg/l)	0.032	<0.01	0.025	0.062
Mercury (mg/l)	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (mg/l)	<0.01	<0.01	<0.01	<0.01
Nickel (mg/l)	<0.01	<0.01	0.020	<0.01
Nitrate (mg/l N)	0.010	0.020	<0.01	0.050
Nitrite (mg/l N)	0.026	0.009	<0.005	0.0078
Phosphate (mg/l)	0.070	0.024	<0.01	0.022
Potassium (mg/l)	3.4	3.7	NA	4.2
Selenium (mg/l)	<0.002	<0.002	<0.002	<0.002
Sodium (mg/l)	180	195	216	230
Solids, dissolved (mg/l)	525	587	625	767
Sulfate (mg/l)	10.6	27	58	67
Sulfide (mg/l)	<0.1	NA	<0.01	<0.01
Zinc, total (mg/l)	0.060	0.043	0.16	<0.01

NA = Not Analysed

Table 4-25. Results of water-quality analyses from the New Well. (continued)

Parameter / Date	11/30/87	1/29/88
Field Measurements		
Temperature (°C)	10.4	NA
pH (units)	7.92	NA
Specific conductance (umhos/cm at 25°C)	1230	NA
Laboratory Measurements		
Aluminum (mg/l)	<0.1	<0.1
Ammonia (mg/l)	1.15	3.96
Arsenic (mg/l)	0.012	0.011
Barium (mg/l)	0.052	0.118
Bicarbonate (mg/l)	380	407
Boron (mg/l)	0.21	0.15
Cadmium (mg/l)	<0.01	<0.01
Carbonate (mg/l)	0	0
Calcium (mg/l)	46.4	48.2
Chloride (mg/l)	205	227
Chromium (mg/l)	<0.01	<0.01
Copper (mg/l)	<0.01	<0.01
Fluoride (mg/l)	0.88	1.72
Hardness, total (mg/l $CaCO_3$)	180	200
Iron, dissolved (mg/l)	<0.01	<0.01
Lead (mg/l)	0.032	<0.01
Magnesium (mg/l)	15.2	15.5
Manganese (mg/l)	0.020	0.038
Mercury (mg/l)	<0.0002	<0.0002
Molybdenum (mg/l)	<0.01	<0.01
Nickel (mg/l)	<0.01	0.020
Nitrate (mg/l N)	<0.01	<0.01
Nitrite (mg/l N)	0.011	<0.005
Phosphate (mg/l)	<0.01	<0.01
Potassium (mg/l)	5.3	4.9
Selenium (mg/l)	0.0022	<0.002
Sodium (mg/l)	266	273
Solids, dissolved (mg/l)	900	905
Sulfate (mg/l)	86	149
Sulfide (mg/l)	<0.1	<0.1
Zinc, total (mg/l)	0.26	0.075

NA = Not Analysed

APPENDIX 7 B

BOYER MINE WELL

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

January 12, 1987

Mr. Robert Morgan
Utah Division of Water Rights
1636 West North Temple
Salt Lake City, Utah 84114

Reference: Permit for Monitoring Well - Boyer Mine, Summit Coal Company, Summit County, Utah

Dear Mr. Morgan:

Summit Coal Company is hereby applying for a permit to drill a monitoring well on the Boyer Mine property. The proposed well location is in the NE¼NE¼, Sec. 36, T3N, R6E, SLBM, which is on the minesite (permit) area north of Highway U-133 in the Chalk Creek drainage of Summit County, as shown on the attached map.

The proposed well will be 8" in diameter with a 6" casing as shown on the attached well specification sheet. These specifications will be followed as closely as possible, depending on site conditions. The well is estimated to be 150' to 200' deep, depending on location of the water bearing strata.

The purpose of the well is to allow for pump testing and ground water monitoring as required by the Utah "Regulations Pertaining to Surface Effects of Underground Coal Mining Activities", administered by the Division of Oil, Gas and Mining.

If the well tests are successful, and the water quality proves to be adequate, it is proposed to later utilize the well to supply water to the mining operation. Water usage is not expected to exceed 20 gpm for the mine. A copy of a water right certificate for the mine is enclosed. A change application will be filed to allow for diversion of water at this point.

Summit Coal Company, in cooperation with the Division of Oil, Gas and Mining, is prepared to initiate the drilling of this well immediately upon your approval of this permit. If you have any questions, or need any further information, please let me know.

Sincerely,

Dan W. Guy

Dan W. Guy, President
Blackhawk Engineering Company

Enclosure

cc: Mr. William Blonquist, President, Summit Coal Company
Mr. Rick Summers, Division of Oil, Gas and Mining

SPECIFICATION FOR THE CONSTRUCTION OF
GROUNDWATER MONITORING WELL
AT THE BOYER MINE
UPTON, UTAH

1.0 SCOPE

This specification covers the drilling and construction of a monitoring well to be located at the site of the Boyer Mine located near Upton, Utah. The drilling contractor shall provide all of the goods and services called for in this specification except as otherwise noted.

2.0 DEFINITION OF TERMS

Whenever used in this specification or in other contract documents associated herewith, the following terms shall have the meanings indicated, and these shall be applicable to both the singular and plural and masculine and feminine thereof:

Agreement. The written agreement between the Boyer Mine and the Drilling Contractor for performance of the work covered by this specification.

Change Order. A written order to the Drilling Contractor signed by Boyer Mine personnel authorizing an addition, deletion, or revision of the work, or an adjustment of the contract price or the contract time issued after execution of the agreement.

Contract Documents. The agreement, specifications, addenda (whether or not issued prior to execution of the agreement), and modifications.

Contract Price. The total moneys payable to the drilling contractor under the contract documents.

Contract Time. The number of calendar days stated in the agreement for completion of the work.

Drilling Contractor. The person, firm, or corporation with whom Grand County has executed the agreement.

Engineer. Boyer Mine and its duly authorized representatives.

Modification. (a) A written amendment of the contract documents signed by both parties, (b) a change order, (c) a written clarification or interpretation issued by the Engineer or his agent as may be necessary, or (d) a written order for a minor change or alteration of the work issued by the Engineer or his representative as may be necessary. A modification may be issued

only after execution of the agreement.

Project. The entire construction to be performed as provided in this specification.

Subcontractor. An individual, firm, or corporation having a direct contract with the drilling contractor or with any other subcontractor for the performance of any part of the work at the site.

Work. Any and all obligations, duties, and responsibilities necessary to the successful completion of the project assigned to or undertaken by the drilling contractor under the contract documents, including the furnishing of all labor, materials, equipment, and other incidentals.

3.0 SAFETY AND PROTECTION

3.1 General. The drilling contractor shall be responsible for maintaining and supervising all safety precautions and programs in connection with this project. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to (1) all employees on the project and other persons who may be affected thereby, (2) all materials or equipment to be incorporated therein, whether in storage on or off site, and (3) other property at the site or adjacent thereto, including roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

The drilling contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary barricades, signs, flags, lights, and other safegaurds to prevent injury to workmen and others on or about the construction site. Any barricades directed by the engineer to be erected shall be equipped with a flasher-type light approved by the Utah Department of Transportation.

3.2 Drilling Contractor's Safety Representative. The drilling contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents and enforcement of safety plans. This person shall be the drilling contractor's superintendent unless otherwise designated in writing by the drilling contractor to the engineer.

3.3 Emergencies. In emergencies affecting the safety of persons or the work on property at the site or adjacent thereto, the drilling contractor, without special instruction or authorization from the engineer, is obligated to act, at his discretion,

to prevent threatened damage, injury, or loss. He shall give the engineer prompt written notice of any significant changes in the work or deviations from the contract documents caused thereby, and a change order shall thereupon be issued covering the changes and deviations involved.

4.0 SUBCONTRACTS

The drilling contractor shall not employ any subcontractor (whether initially or as a substitute) against whom the engineer may have reasonable objection, nor shall the drilling contractor be required to employ any subcontractor against whom he has reasonable objection. The drilling contractor shall not make any substitution for any subcontractor who has been accepted by the engineer unless the engineer determines that there is good cause for doing so.

The drilling contractor shall be fully responsible for all acts and omissions of his subcontractor and of persons directly or indirectly employed by them and of persons for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the contract documents shall create any contractural relationship between any subcontractor and the engineer or any obligations on the part of the engineer to pay or to see to the payment of any moneys due any subcontractor, except as may otherwise be required by law.

The drilling contractor agrees to specifically bind every subcontractor to all of the applicable terms and conditions of the contract documents. Every subcontractor, by undertaking to perform any of the work, shall thereby automatically be deemed bound by such terms and conditions.

5.0 WARRANTY AND GUARANTEE

The drilling contractor warrants and guarantees to the engineer that all materials and equipment shall be new unless otherwise specified and that all work shall be of good quality and free from faults or defects and in accordance with the requirements of the contract documents. All unsatisfactory, faulty, or defective work and all work not conforming to the requirements of the contract documents shall be considered defective. All defective work, whether or not in place, may be rejected.

If required by the engineer prior to approval of final payment, the drilling contractor shall promptly, without cost to the engineer, either correct any defective work, whether or not fabricated, installed, or completed, or, if the work has been rejected by the engineer, remove it from the site and replace it with nondefective work. If the drilling contractor does not

correct such defective work or remove and replace such rejected work within a reasonable time, as required by written notice from the engineer, the engineer may have the deficiency corrected or the rejected work removed and replaced. All direct and indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by the drilling contractor, and an appropriate change order shall be issued deducting all such costs from the contract price. The drilling contractor shall also bear the expense of making good all work of others destroyed or damaged by his correction, removal, or replacement of his defective work.

6.0 INSURANCE

The drilling contractor shall provide the following minimum insurance coverage during performance of the work:

Workers' Compensation - Including coverage for Occupational Disease.

Workers' Compensation	Statutory Benefits
Employer's Liability	$100,000

Comprehensive General Liability - Including (1) coverage for Contractural Liability assumed by the drilling contractor under Indemnity Provisions, (2) coverage for Premises/Operation, and (3) coverage for Complete Independent Contractors.

Bodily Injury	$500,000 each occurrence $500,000 aggregate
Property Damage	$500,000 each occurrence $500,000 aggregate

Comprehensive Automobile Liability - Including coverage for Owned, Hired, and Non-Owned Automobiles.

Bodily Injury	$500,000 each person $500,000 each accident

The drilling contractor shall provide proof of insurance at the beginning of the work.

7.0 INDEMNIFICATION

The drilling contractor shall indemnify and hold harmless Grand County and their agents and employees from and against all claims, damages, losses, and expenses (including attorney's fees) arising out of or from the performance of the work, providing that any such claim, damage, loss, or expense (1) is

attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (2) is caused in whole or in part by any negligent act or omission of the drilling contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

8.0 CLEANING UP

The drilling contractor shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the work, and at the completion of the work at each well site, shall remove all waste materials, rubbish, and debris from an about that site as well as tools, construction equipment and machinery, and surplus materials, leaving the site clean. The drilling contractor shall restore to their original conditions those portions of the site not designated for alteration by the contract documents.

9.0 ENGINEER'S RIGHT TO STOP OR SUSPEND WORK

If the work is defective, or the drilling contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the drilling contractor fails to make prompt payments to subcontractors or for labor, materials, or equipment, the engineer may order the drilling contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated.

The engineer may, at any time and without cause, suspend the work or any portion thereof for a period of not more than 90 days by notice inquantity and -quality data. Utilizing the site-specific and regional data, existing conditions were established and future hydrologic consequences of mining were projected. Reports were prepared for submission to State and Federal regulatory agencies to satisfy permitting requirements.

The drill rig shall be operated only by a driller who is licensed as a water-well driller by the Utah Division of Water Rights.

The work and services to be performed under this specification shall be subject to continual monitoring and inspection by the Project Engineer or a representative of the Boyer Mine (hereinafter referred to as the Owner). Periodic inspection may also be performed by representatives of the Utah Departments of Health (Bureau of Public Water Supplies) and Natural Resources (Division of Water Rights). Such inspection will be for the purpose of ensuring technical compliance with this specification.

10. GEOLOGIC CONDITIONS

No well log for the existing Morby well is available. It is assumed that the unconsolidated overburden is 20 to 70 feet thick and is underlain by sedimentay rock units. The unconsolidated materials are rounded to subrounded, hard, quartzite cobbles and boulders with sand and silts fines. The sedimentary rocks are shales, sandstones and limestones.

It is estimated that the new well will be a maximum of 200 feet deep. However, local conditions will dictate the exact depth to which the well will be drilled, as specified in the field by the Engineer. It is currently envisioned that the new well will be drilled a minimum of 40 feet into the aquifer (below the static water table).

11. WELL CONSTRUCTION

A. General.

The following specifications may be altered in the field by the engineer but can be considered sufficiently accurate for bidding purposes.

B. Method of Construction.

A production/monitoring well shall be constructed at the location indicated by the Engineer by the hydraulic air rotary or the cable tool method or a combination of the two methods. The hole shall be drilled to the depth specified in the field by the engineer and at a sufficient diameter (minimum of 10 inches) to accommodate the well casing, gravel pack, and grout seal, with a minimum thickness of 2 inches of grout around the permanent casing and couplings. No fluids shall be injected into the production well during drilling other than air and potable water unless specifically approved in writing by the engineer in the field.

The preferred method of hole advancement in the unconsolidated material is to drive temporary casing ahead of the hole to maintain hole integrity. The diameter of this temporary casing shall be equal to the final diameter of the hole as specified above. The temporary casing may be driven either by percussion from the cable tool string or by a pneumatic tool designed to drive casing. A standard drive shoe shall be welded or threaded on the lower end of the string of casing before driving. The shoe shall have a beveled and tempered cutting edge of metal that has been forged, cast, or fabricated for this purpose. It shall be the responsibility of the drilling contractor to utilize the equipment he deems suitable to insure that the well will maintain alignment, plumbness, and roundness during installation.

If a drilling fluid other than air or potable water is used while drilling in the unconsolidated material, this fluid shall be approved by the engineer prior to use. In no case shall a bentonite-based fluid be used in drilling of the well.

12. WELL CASING AND SCREEN SELECTION AND INSTALLATION

A. Well Casing Selection.

The permanent well casing shall be provided by the engineer. It is anticipated that the well casing will be 6 inch threaded PVC. In no instance will solvent welded PVC be utilized.

B. Screen Selection.

It is currently anticipated that the well screen will be of 6 inch slotted PVC with aperature openings of .010 inch. The screen will be threaded at either end to allow for connection with the bottom cap and the blank casing.

C. Method of Installation.

The casing and screen shall be lowered into the hole using the drilling rig, utilizing clamps, elevators, or other mechanical devices as needed. Screens shall be located in the casing string as specified in the field by the Engineer.

D. Method of Joining.

Casing and screen lengths shall be joined watertight by mechanical coupling so that the resulting joint shall have the same structural integrity as the casing itself. If threaded and coupled joints are used, couplings shall be API or equivalent, made up so that when tight all threads will be buried in the lip of the coupling. The completed string of well casing and screen shall be of sufficient length to extend from the bottom of the borehole to a point 2 feet 6 inches above the existing land surface.

E. Sanitary Protection of the Well.

At all times during the progress of the work, the drilling contractor shall use reasonable precautions to prevent either tampering with the well or entrance of foreign material into it. Upon completion of the well, the drilling contractor shall install a suitable threaded or flanged cap or compression seal so as to prevent any pollutants from entering the well through its head. There shall be no openings in the casing wall below its top except for a measurement access port and a casing vent that are installed in conformance with State standards.

13. GRAVEL PACK

A. Selection of Gravel Pack.

A gravel pack shall be placed adjacent to the well screen to filter water entering the well and stabilize the borehole wall. This filter shall consist of clean, well-rounded grains that are smooth and uniform. The gravel shall be silicaceous, with a limit of 5 percent by weight of calcareous material. Not more than 2 percent of the filter material shall consist of thin, flat, or elongated pieces, as determined by hand picking. The filter shall be free of shale, clay, dirt, and organic impurities. The filter shall be of a grain size that passes a No. 16 sieve and is retained on a No. 40 sieve.

B. Length of Gravel Pack.

The artificial filter material shall extend from a point equal in distance to 2.5 times the casing diameter below the lowest screen to the same distance above the highest screen that is installed in the consolidated material.

C. Storage of Filter Material.

The filter material shall be delivered in bags to the site and shall be protected from weather and contamination until used.

D. Method of Gravel Pack Installation.

The filter material shall be installed in a manner recommended by the driller and approved by the Engineer. The method chosen shall insure that the filter is firmly packed adjacent to the well screens and that no bridging of the filter occurs between the borehole wall and the well casing or screens. The filter shall be installed in such a manner to be protected from contamination due to mixing with debris from the borehole wall. The temporary surface casing shall not be pulled prior to installation of the artificial filter material in the consolidated formation. Tremie pipe is normally utilized to install the gravel pack.

14. WELL GROUTING

A. Grouting Materials to be Used.

A mixture of Portland cement (ASTM C150) and not more than 6 gallons of clean water per bag (one cubic foot or 94 pounds) of cement shall be used. The use of special cements, bentonite to reduce shrinkage, or other admixtures (ASTM C494) to reduce permeability, increase fluidity, and/or control time of set, and the composition of the resultant slurry must be approved by the engineer prior to use.

B. Methods of Grout Installation.

Grout material shall be placed by a positive displacement method such as pumping or forced injection by air pressure. Grout shall be injected in the annular space between the well casing and the borehole wall. The grout pipe shall have a minimum inside diameter of one inch and extend from the surface to the bottom of the zone to be grouted. Grout shall be placed, from bottom to top, in one continuous operation. The temporary steel casing shall be pulled gradually as the grout is installed but shall in no case be pulled above the top of the existing grout level. The grout pipe may be slowly raised as the grout is placed but the discharge end of the grout pipe must be submerged in the emplaced grout at all times until grouting is completed. The grout pipe shall be maintained full, to the surface, at all times until the completion of the grouting of the entire specified zone. In the event of interruption in the grouting operations, the bottom of the pipe should be raised above the grout level and should not be resubmerged until all air and water have been displaced from the grout pipe and the pipe flushed clean with clear water. Following placement of the grout, it shall be allowed to cure a minimum of 24 hours before construction is resumed.

C. Location of Grout.

Grouting of the annular space between the well casing and the borehole wall shall be continuous from the top of the gravel pack to the land surface. This length of grout shall be for a distance of at least 100 feet. The grout thickness shall be at least 2 inches.

D. Screen and Casing.

The top of the 6 inch PVC casing shall be fitted with an end cap and a 5-foot section of 10-inch diameter steel casing shall be placed in the grout around the 6 inch PVC casing to provide long-term protection against damage. The top of this steel casing shall extend approximately 6 inches above the top of the PVC casing. The outer casing should be centered around the 6 inch PVC casing to allow room for removal of the end cap. A locking steel cap shall be placed on the steel protective casing to prevent unauthorized entry. The exterior of the protective steel casing shall be painted with a light colored paint to reduce the development of rust and to make the well clearly visible.

E. Protective Pad.

A 10 inch thick concrete pad (with a diameter of approximately 3 feet) shall be poured around the outside of the protective casing and sloped to shed water away from the casing.

The concrete pad shall be constructed so that 6 inches of the pad is buried below the ground surface and 4 inches to be exposed above the surface.

F. Well Development.

The well shall be developed following completion to remove drillhole damage that resulted from drilling. This development will be accomplished by surging with a surge block and air-lifting the surged water from the wells or by pumping. The development shall be considered complete when the well consistently yields clear water.

G. Surveying.

The wells shall be surveyed to provide horizontal and vertical control following completion.

Coalville, Utah
July 8, 1983

Summit Coal Company, Inc.
P.O. Drawer #7
Coalville, Utah
84017

Re: Water Shares Certificate #310

To Whom It May Concern:

This is to inform all concerned persons that I, William C. Blonquist, have in my ownership, sufficient Capital Shares in the CHALK CREEK-HOYTSVILLE WATER USERS CORPORATION to adequately supply the water necessary for the operation of the proposed "BOYER COAL MINE" located in UPTON, UTAH, by the Officers and Managenent of the SUMMIT COAL COMPANY, INC.

These water shares are available for the use in the operation of the proposed Coal Mine only, and not for other purposes.

Sincerely yours,

William C Blonquist

William C. Blonquist
President
Box 294
Coalville, Utah 84017

DATE: 12-27-86

Utah Division of Water Rights
1636 West North Temple
Salt Lake City, Utah 84114

Gentlemen:

The records of the Chalk Creek and Hoytsville Water User's Association show that William C. & Helen Blanquist owns 7 shares of stock under Stock Certificate Numbers 310 The shareholder has made an agreement to use 1 shares of his stock to Summit Coal Company to provide [redacted] water for [redacted] Coal Company be located at a Coal Mine Site

This letter will serve as official notice that the Chalk Creek and Hoytsville Water User's Association has no objections to the shareholder or the leasee using the stock as the basis to satisfy a "Application for Temporary Change of Point of Diversion Place or Purpose of Use" to be filed with your office.

Dennis Wright

Position:

INCORPORATED UNDER THE LAWS OF

NUMBER 338

SHARES SIX

CHALK CREEK-HOYTSVILLE WATER USERS CORPORATION

No Par Value — 1765 Shares

This Certifies that WILLIAM C. BLONQUIST and HELEN W. BLONQUIST, his wife, as joint tenants and not as tenants in common with full rights of survivorship is the owner of SIX Shares of the Capital Stock of

CHALK CREEK-HOYTSVILLE WATER USERS CORPORATION

transferable only on the Books of the Corporation on surrender of this Certificate properly endorsed.

In Witness Whereof, the said Corporation has caused this Certificate to be signed by its duly authorized officers and its Corporate Seal to be hereunto affixed at Coalville, Utah

this 31st day of JANUARY A.D. 1985

Sara Ellen Wright
SECRETARY

Lawrence Knight
PRESIDENT