

WATER PERMIT NO. 6070-3

Name of Applicant: Spencer Quarries, Inc.

Address: 25341 430th Ave, Spencer SD 57374

Phone: 605 246-2344

Amount of Water Claimed: 3.1 add'l cfs (4.9 cfs total)

Total Acres: NA

Source of Water Supply: groundwater

Water to be used for: commercial use

County: Hanson

Type of Waste Disposal System: NA

Location: ½ mile west of Spencer

PRIORITY Date Received: 4-15-1998

Fee: \$650

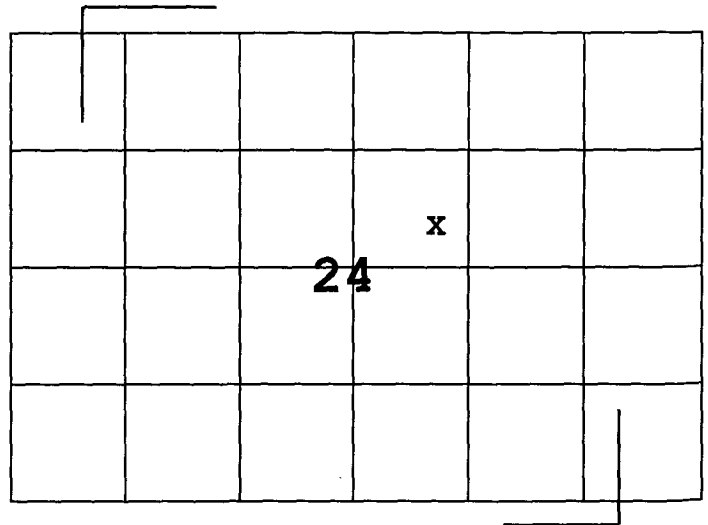
Corrected Application Received: 4-17-1998

Period of Annual Use: Jan 1- Dec 31

Remarks: Vested Right No. 4493-3 authorizes 1.8 cfs, this permit is for an additional 3.1 cfs

Diversion Point: SW ¼ NE ¼ Sec 24-T103N-
R57W

Land to be Irrigated: NA



Depth of Well: 18 foot deep dugout

Well Driller:

Remarks:

Type of Map: topo

Prepared by: Ellwyn A Nohr, PE

Reviewed and the Number Assigned on: 4-17-1998

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

FORM 2: Application for uses other than irrigation
(type or print)



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2070-3</u> (office use only) Hydrologic Unit <u>10160011</u>
	Basin <u>James River</u>
	Newspaper <u>The Alexandria Herald, Alexandria</u>

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) _____

- Name of Applicant Spencer Quarries, Inc. Phone 605-246-2344
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 25341 430th Ave. Spencer State SD 57374
(Street, RR. or Box) (Zip Code)
3.1 cfs add'l
- Amount of water claimed 4.9 *CFS or 3.1 cfs add'l **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Open mining pit
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 2246'S & 1340'W
OF NE CORNER SEC 24-103-57 (SW1/4 NE1/4)
County HANSON
- County or counties where water will be used Hanson
- Annual period during which water is to be used parts of entire year Jan. 1-Dec. 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Pump lifts water from mining pit going to
dugout going to WOLF CREEK, The water in dugout
is used in rock washing - goes through crushing and back into
dugout.

STATE OF SOUTH DAKOTA)
County of Hanson SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

1. Richard Walders, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Signed Richard Walders

Subscribed and sworn to before me this 14 day of April 19 98

Beth M. Kayser
Commission Notary Public
Expires 4-13-2003

**SOUTH DAKOTA
WATER PERMIT NO. 6070-3**

Date of first receipt of application April 15, 1998.

The Water Management Board approved Water Permit Application No. 6070-3 on September 27, 2000 for Spencer Quarries, Inc., 25341 430th Ave, Spencer SD 57374 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6070-3 appropriates 3.1 cubic feet of water per second (cfs) for dewatering of the quarry. Vested Right No. 4493-3 authorizes 1.8 cfs from this open mine pit located in the SW ¼ NE ¼ Section 24-T103N-R57W. This permit increases the water appropriation from 1.8 cfs to 4.9 cfs. The source of water is the Sioux Quartzite and incidental surface runoff into the quarry. A total of 100 gallons per minute may be diverted to a reservoir/dugout located near the center of the NE ¼ Section 24-T103N-R57W. This water is used and recycled in the rock quarry washing process. The remainder of water is diverted from the mine pit and discharged to Wolf Creek.
2. The water appropriated shall be used for the purpose of commercial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date from which applicant may claim right is March 30, 2000 (established when Spencer Quarries directed Water Rights Program to proceed with application).
5. One-fifth of the construction is to be completed on or before March 27, 2003.
6. All construction is to be completed on or before September 27, 2005.
7. Water is to be put to beneficial use on or before September 27, 2009.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The diversion of water for dewatering purposes approved under this permit will be located near domestic wells and other wells which may obtain water from the Sioux Quartzite or aquifers hydraulically connected to the quartzite. Spencer Quarries under this Permit shall control its withdrawals so there is not a reduction of needed water supplies in wells constructed into the Sioux Quartzite or in adequate wells completed into aquifers hydraulically connected into the quartzite.
2. Spencer Quarries shall report to the Chief Engineer annually the amount of water pumped.
3. Permit No. 6070-3 is subject to Spencer Quarries obtaining a surface water discharge permit from the Department of Environment and Natural Resources.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

FEB 15 2001

date



Supplemental Information

(type or print in ink)



1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

- a) Surface Dimensions 120' - 30' Depth 18'
- b) Depth to water (ground surface to water level) 40'

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope _____

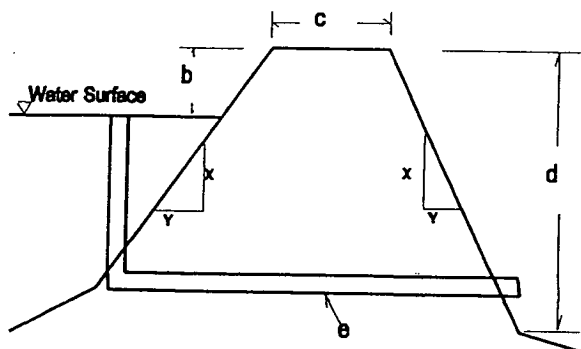
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

February 27, 1998

Richard Waldera
Spencer Quarries, Inc.
PO Box 198
Spencer SD 57374

Dear Mr. Waldera:

I am writing in response to our meeting on February 25, 1998, with the Corps of Engineers and our phone call on February 26, 1998.

During your presentation it was mentioned that the quarry is discharging approximately 2 million gallons of water per day into Wolf Creek. This equates to an average pump rate of 1,388 gallons per minute (gpm) or 3.10 cubic feet of water per second (cfs). I have reviewed our water rights records and the quarry does have a vested water right (copy enclosed) that allows diversion of 1.8 cfs for use in a rock quarry washing process.

According to our phone conversation on February 26, 1998, the quarry is diverting a portion of the water for rock washing. This may amount to about 100 gpm to the rock washing reservoir with the remainder diverted to dewater the quarry at a current pump rate of about 2,200 gpm (4.9 cfs). Since the current diversion rate of 4.9 cfs exceeds the 1.8 cfs diversion rate authorized by the vested right, a new water right permit will be needed for the 3.1 cfs increase. Application forms are enclosed. If possible, please include the total volume of water diverted per year. This yearly volume figure may well be the 2 million gpd figure you cited at the February 25, 1998, meeting.

In regard to the flood control permit application to reroute the creek, it will be necessary to show that the proposed creek changes will not increase the severity or likelihood of flood damages in other areas (South Dakota Codified Law 46-2A-11). You may wish to work with a consultant that is familiar with a HEC flood routing program or a similar hydrologic analysis tool to address this requirement. Also, you may submit the water permit application and flood control permit application at the same time or separately.

R.C.'s wish

Please let me know if you have any questions concerning this information. I can be reached at (605) 773-3352 and I will try to help in any way possible. If you have internet access, you can also get information about water right requirements through the department website located at www.state.sd.us/denr.

Sincerely,

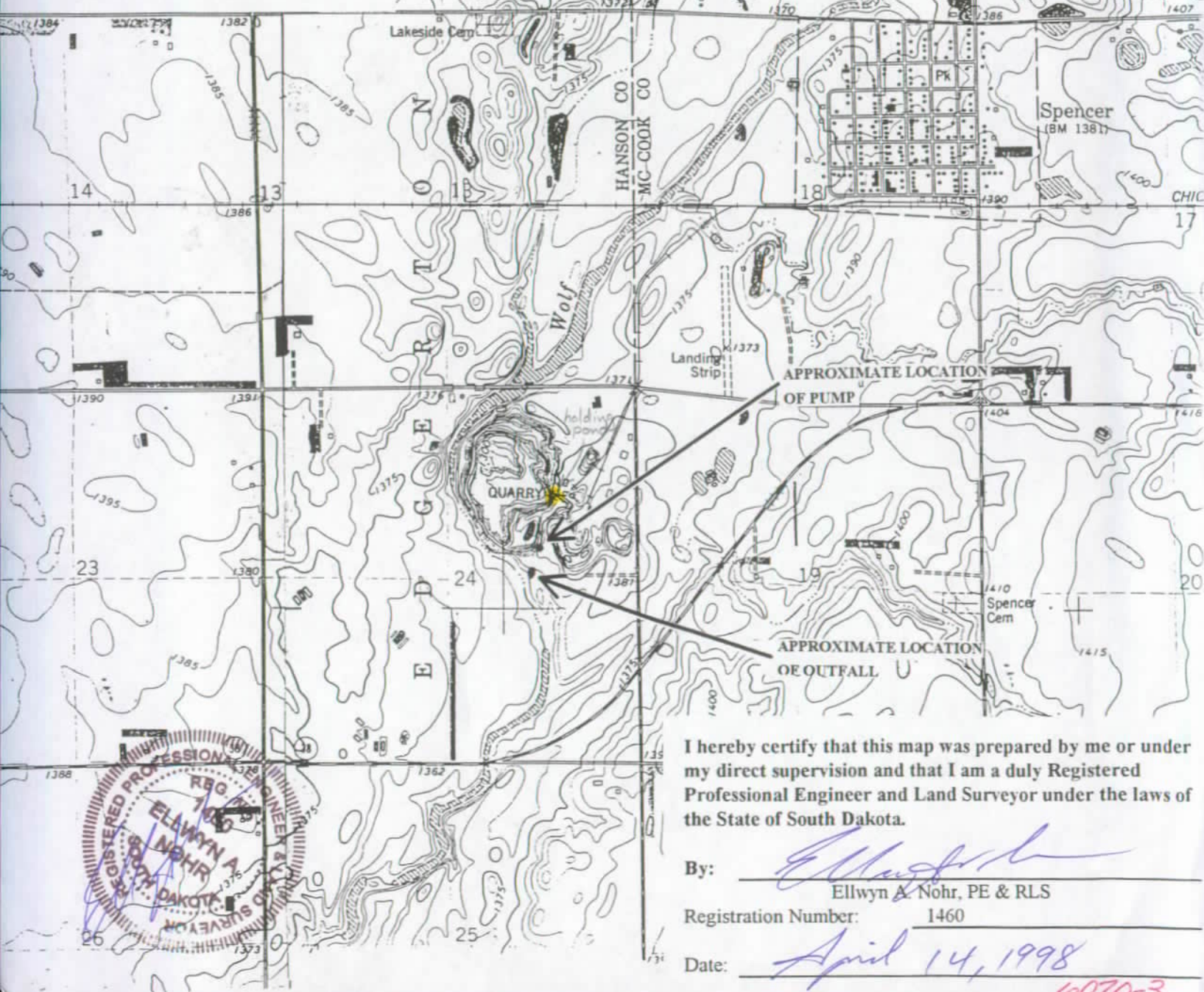
Ron Duvall
Natural Resources Engineer
Water Rights Program

enclosures

(NO SCALE)
USGS MAP
SEGMENT

Location & distance of pump from
NE 1/4 Corner of S 24, T103N, R57W:
2246.0 feet South & 1340' West

Location & distance of outfall from
NE 1/4 Corner of S 24, T103N, R57W:
2596.0 feet South & 1437' West



I hereby certify that this map was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer and Land Surveyor under the laws of the State of South Dakota.

By:

Ellwyn A. Nohr, PE & RLS

Registration Number:

1460

Date:

April 14, 1998

6070-3

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

19 415740

Pierre, April 17, 19 98

RECEIVED OF Spencer Quarries, Inc., P.O. Box 198, Spencer, SD 57374

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. _____

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

650 00

650 00

By _____
Chief Engineer

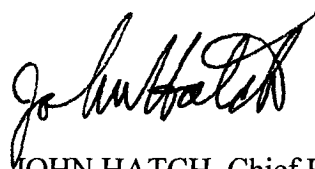
John Hatch

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6070-3, Spencer Quarries**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 6070-3, Spencer Quarries, c/o Richard Waldera, 25341 430th Ave., Spencer, SD 57374.

The Chief Engineer is recommending DEFERRAL of Application No. 6070-3 to allow additional time for Spencer Quarries to investigate methods to minimize groundwater flow into the quarry and to allow both Spencer Quarries and the Water Rights Program to investigate impacts of dewatering on area domestic wells.

See report on application for additional information.

A handwritten signature in black ink, appearing to read "John Hatch", with a stylized flourish at the end.

JOHN HATCH, Chief Engineer
June 11, 1998

SPENCER QUARRIES, INC.

Quartzite Materials

TELEPHONE 605. 246-2344

FAX = 605. 246-2362

P.O. BOX 198

SPENCER, SOUTH DAKOTA 57874

DATE: 7-30-98TO: Ken Buhler

THIS FAX CONTAINS 15 PAGES: one cover

CONCERNING:

FYI

FROM: Dick Walden

07/29/1998 14:15

3072657086

WSMC

PAGE 01



FAX TRANSMISSION

WESTERN STATES MINING CONSULTANTS, P.C.

770 W Collins Ave. #200

Casper, WY 82601

(307) 266-9117

Fax: (307) 238-7086

E-mail WSMC@coffey.com

To: Dick Walders
Spencer Quarries, Inc.

Date: July 29, 1998

Fax #: 605 246-2362

Pages: 17, including this cover sheet.

From: Scott P. Carlisle

Job #: 9811

Subject: Design and Cost Estimate for Grouting Project

Dick,

Attached is my trip report and the design for grouting of the east inflow. A copy with a full sized drawing is being mailed.

The estimated cost of the project is approximately \$126,000. The project upon approval, should take approximately four weeks to complete. Most of this time however, is lead time required by the contractors. The actual grouting at the site should be done in one week.

Thank you for letting me be of service. Feel free to call if you have any questions.

Sincerely,

Scott P. Carlisle, P.E.
Project Engineer

07/29/1998 14:16

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WSMC

PAGE 02



770 W. Collins Ave., Suite 200
Casper, Wyoming 82601
Phone (307) 266-9117
Fax (307) 236-7086

July 29, 1998

9811
grtphl.rpt

Dick Waldera
Spencer Quarries, Inc.
25341 430 Ave
Spencer, South Dakota 57874

Site Visit Report and Grouting Plan

Dear Dick,

This report summarizes my thoughts regarding the applicability of grouting of the inflow in the toe of the east highwall. As we discussed, both Gordon Lack (De Neef) and I feel that this inflow can be successfully grouted. To this end, I have developed a grouting plan and estimated the costs for this work.

1.0 Site Visit

The site visit was conducted on July 13, 1998. The visit included a tour of the pit, inspection of the inflow site, review of geology and hydrology, and discussions with Ken Buhler (SD Dept. of Environment and Natural Resources).

The geology of the pit consists primarily of Sioux Quartzite (ore) interspersed with some medium to fine grained sandstones. The quartzite is fine grained and well cemented. Fracturing is common, with vertical and near horizontal jointing observed (Christensen 1989). The sandstone appears as inclusions within the quartzite, sometimes massive, other times associated with structure in the quartzite. The inflow appears to be isolated to a sandstone inclusion associated with two intersecting joint structures. Photo 1 shows this inclusion and associated structures.

Regionally, the quarry is located outside the boundaries of two glacial aquifers (USGS). In the past the quarry has not produced significant quantities of water. Discussions with you, the owners, Ken Buhler, and the driller indicate the quartzite is not highly conductive of water, e.g., drill holes near the face can typically be wet with no water observed at the face. At pit scale some hydraulic conductivity does exist, but is likely associated with the pipestone (aquitard) contact below the pit,

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PAGE 03

PHOTO 1

Sandstone Inclusion and Spring In East Highwall



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PAGE 04

or with isolated sandstone inclusions. Further evidence for this conclusion is based on the fact that the inflow apparently started after the east bench was shot, sometime in 1995. Prior to that, no significant water was produced in that part of the pit.

Based on this premiss, I feel that grouting of the structure down to the pipestone should alleviate the inflow problem.

2.0 Grout Plan

The target structure for grouting comprises two steeply dipping joints, as shown in Photo 1. The primary inflow appears at the toe of the highwall between these joints. The structures appear to cross, forming an hour glass shaped inclusion. This inclusion comprising sandstone will be grouted down to the pipestone bed located approximately 30 feet below pit bottom. Measurements of the apparent dip of these structures indicate that a curtain approximately 60 ft wide will be required to seal the flow. Water is also produced from the pit floor, along the strike of these joints. This flow should also be stopped by the grout curtain.

Permeability, porosity, and areal extent of the inclusion were examined to determine the grouting parameters for the curtain. A cost optimization evaluation was then conducted to determine the appropriate drilling pattern. Figure 1, Cost Evaluation, indicates the primary drill pattern of grout holes be spaced on 1-ft centers. Figure 2 illustrates the design concept.

3.0 Design and Implementation

Task 1 Drill Pad Construction

A work pad will have to be constructed over the inflow. The purpose will be to elevate the drill rig above the main spring, allowing drilling and grouting to be conducted above the pit floor. Drain pipes and rock or gravel should be placed as shown to control the flow. Sand can then be placed on the drain bed. The size of the work pad should be sufficient to allow drilling and grouting to be conducted at a safe distance from the highwall.

The budget includes time for me to be present for construction of the pad should questions arise or any modifications be required.

Task 2 Mobilization/ Demobe

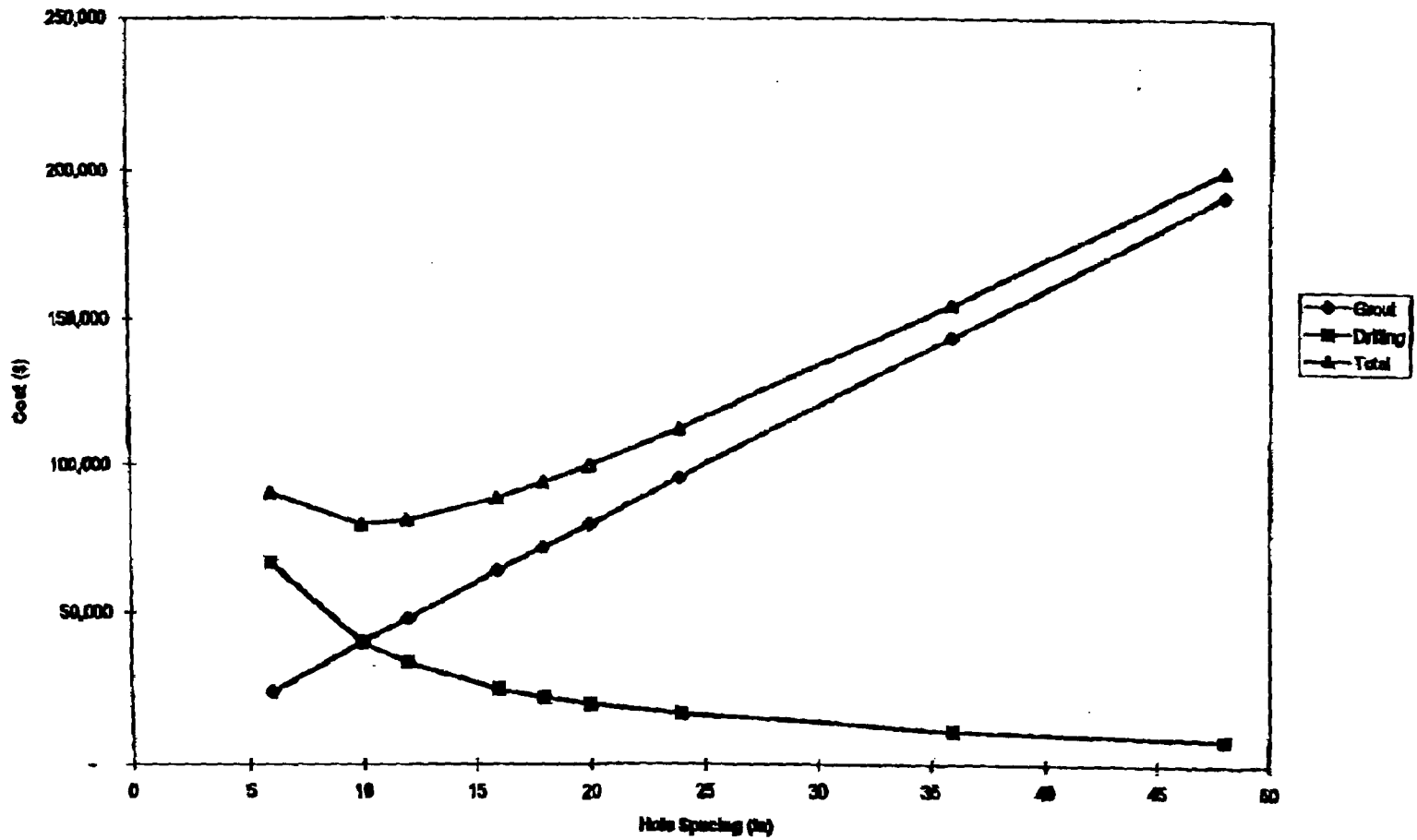
Contractors will be responsible for mobilizing/ demobing their own men and equipment. No unusual support from Spencer Quarries Inc. is expected.

Task 3 Drilling

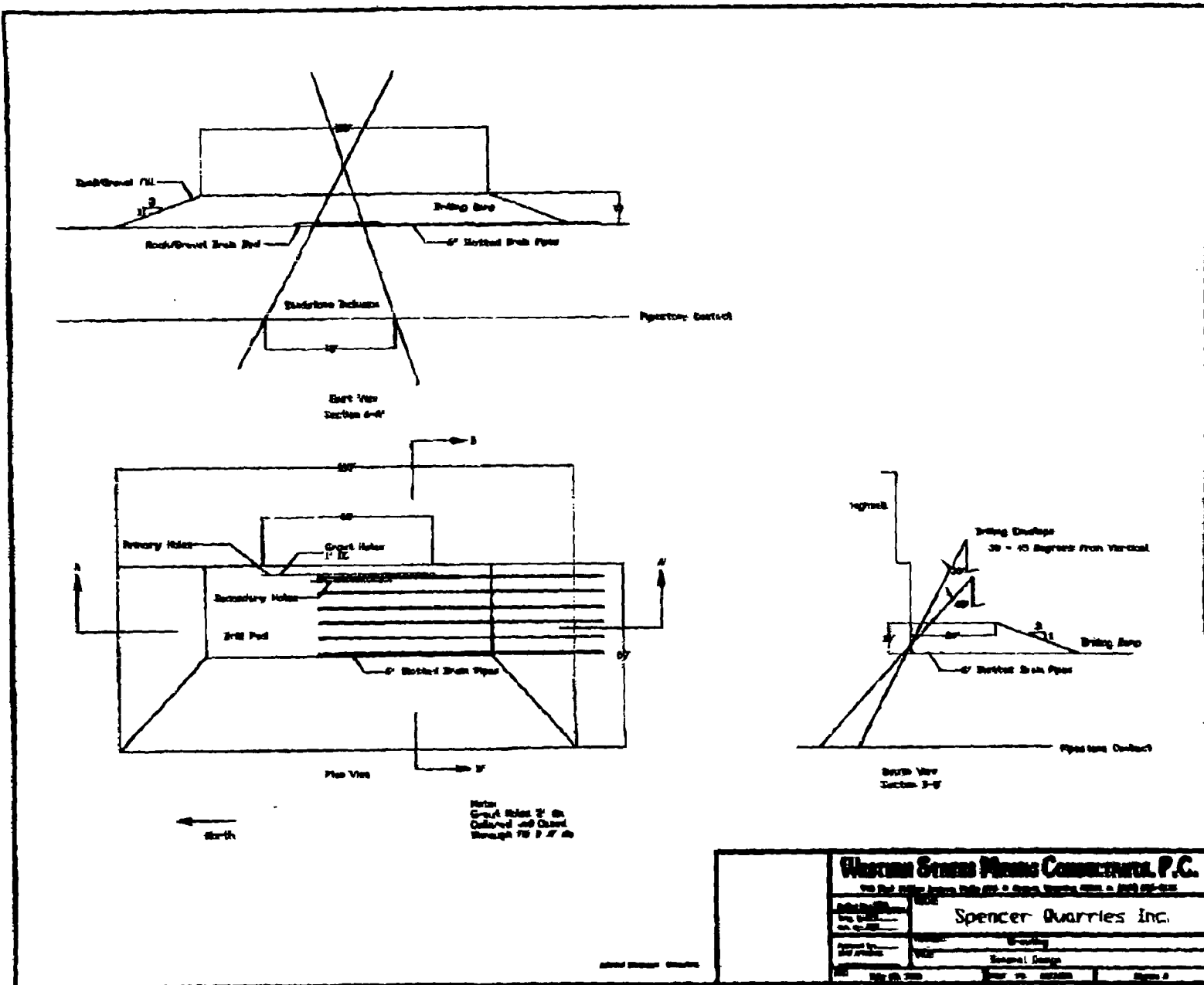
Yenter Companies Inc., out of Denver appears to be the most qualified and cost effective drilling company for this job. They can mobilize a drill from Mitchell, SD, thereby minimizing mobilization costs.

FIGURE 1

Cost Evaluation



ENCLOSURE - 000000



Western Stress Plains Construction, P.C.

700 East Main Street, Suite 100 • West, Virginia • 20151-1000

Project No.	1000
Client Name	Spencer Quarries Inc.
Project Name	Quarry
Project Location	West, Virginia
Project Date	July 29, 1998
Project Status	Design
Project Manager	John A. Spencer
Project Engineer	John A. Spencer
Project Designer	John A. Spencer
Project Checker	John A. Spencer
Project Approver	John A. Spencer

07/29/1998 14:16

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PAGE 07

Drilling should commence at the center of the pattern and work outward. Reliever holes may be required to intercept and reroute water prior to grouting high water producing holes. Due to possible difficulties in keeping drill holes open, casing may be required, or grout may be pumped through the drill steel. Holes should be grouted as soon as drilled.

Task 4 Grouting

Denver Grouting Services Inc., appears to be the best equipped to supply the grout pump and labor for the project. They will be mobilizing out of their Denver office.

Grouting should be monitored continuously to evaluate grout take, pumping pressure, set times, and water flow. Expected values for these parameters are shown in Table 1, Grouting Parameters. Adjustments to drill patterns, grout quantities, etc., are expected as work progresses. The effectiveness of grouting should be observed instantly by changes in water flow from the drain pipes. If the primary pattern of holes slows but does not stop the inflow, a secondary pattern of grout holes, as shown, may be required.

Task 6 Project Summary

WSMC will prepare a project summary report at the conclusion of the field work. This will include as-built drawings of the drilling and grouting patterns.

4.0 Costs

The estimated costs for the project are shown in Table 2, Project Budget. Construction of the drill pad was not included, as it was assumed that Spencer Quarries can construct this with on site equipment and labor. The total cost of the remaining tasks is estimated to be \$125,796.00. This estimate is based on the most likely scenario, with little contingencies. Note however, a significant amount of field engineering is typically required for grouting projects. Modifications to drill patterns, grout mixes, etc., should be expected. Costs may vary up or down from this estimate.

The grout material turned out to be the single most significant cost in this project. De Neef and Yenter's initial cost estimates are attached. They are based on a preliminary 2-ft hole spacing. As a result of the grout costs, the drilling pattern has been modified. Hole spacing was changed to approximately 1-ft. This increased drilling costs, but significantly reduced grout volumes. The net effect was a reduction in project costs by approximately \$30,000.

The project was estimated assuming that WSMC would oversee contracts with Yenter, Denver Grouting, and De Neef, consequently a 10% fee on expenses has been included. This can be eliminated if Spencer chooses to contract directly with the subs.

07/29/1998 14:16 3072657086

KSMC

PAGE 08

TABLE 1

Grouting Parameters

Hole Spacing in	Number of Holes			Total Length ft	Grout Volume per Hole gal	Pump Rate gpm	Pump Pressure psi	Pumping/ Set Time min
	Primary	Secondary	Total					
12	60	30	90	3120	8.9	3	70	3

TABLE 1

Project Budget
Spencer Quarries Groul Project

FILENAME: Groul.xls
 PAGE: 1
 DATE: 10/1/80
 PROJECT NO: 0011

LABOR									
TASK DESCRIPTION	1	2	3	4	5	6	7	8	9
	PO HRS	PO HRS	SR ENG	GRD	TECH	TECH	SUBTOTAL	TOTAL	
	67	76	74	55	35	20	LABOR	LABOR	
1. Oil Pail Construction	Units	30							
	Dollars	2,340					2,340	2,340	
2. Equipment Mobilization/Describe	Units								
Yankee Corporation Inc. (Drilling)	Dollars								
Demmer Grouting Services Inc.	Units								
Do Head (Grout Materials)	Units								
	Dollars								
3. Drilling	Units	37							
	Dollars	2,888					2,888	2,888	
4. Grouting	Units	37							
	Dollars	346	2,888				3,234	3,234	
5. Project Summary	Units	2	28			20			
	Dollars	174	1,958			200	2,434	2,434	
TOTAL HOURS	6	124			20		150	150	
TOTAL DOLLARS	522	6,672			700		10,894	10,894	

EXPENSES									
TASK DESCRIPTION	ADEN	10	11	12	13	14	15	16	17
	64	1	MISC	COMPUTER	SURVEY	VEHICLE	YEMTER	DEMNER	DE NEEP
			Tab, Regs, Pn	22	EQ	80	DRILLING	GROUTING	
1. Oil Pail Construction	Units	3	650						
	Dollars	252	325	50		30			
2. Equipment Mobilization/Describe	Units								
Yankee Corporation Inc. (Drilling)	Dollars								
Demmer Grouting Services Inc.	Units								
Do Head (Grout Materials)	Units							2000	
	Dollars							2,000	
3. Drilling	Units	3	325			3	3,420		
	Dollars	252	198	50		180	22,150		
4. Grouting	Units	4	325			3	28		
	Dollars	390	805	50		150	6,240	15,000	82,410
5. Project Summary	Units			60				2,000	
	Dollars			60				2,000	
TOTAL DOLLARS	840	1,300				7		205	2,280
TOTAL DOLLARS	840	650	200			300	31,280	10,000	52,410
								80,440	114,000
									114,000
									125,700

Notes

*Grout materials costs have been included for test standard bills.

**Estimated South Dakota costs and use taxes have been added. Bill will be billed at actual.

5.0 Schedule

The anticipated project schedule is shown in Figure 3. Task one, construction of the drill pad will be done by Spencer. Please let me know if this timetable is appropriate. Denver Grouting had the longest lead time, approximately 2 ½ weeks from notification. Yenter and De Neef can mobilize during this time frame. The remaining tasks will then follow sequentially. The scheduled project start date is in approximately two weeks. This date is flexible. Project duration is expected to be four weeks.

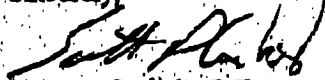
6.0 References

Christensen, C.M., 1989, Geology of Davidson and Hanson Counties South Dakota, Department of Water and Natural Resources Division of Geological Survey, Bulletin 33.

USGS, Water Resources of Hanson and Davison Counties, South Dakota, Water-Resources Investigations Report 83-4109.

Please feel free to call if you have any questions.

Sincerely,

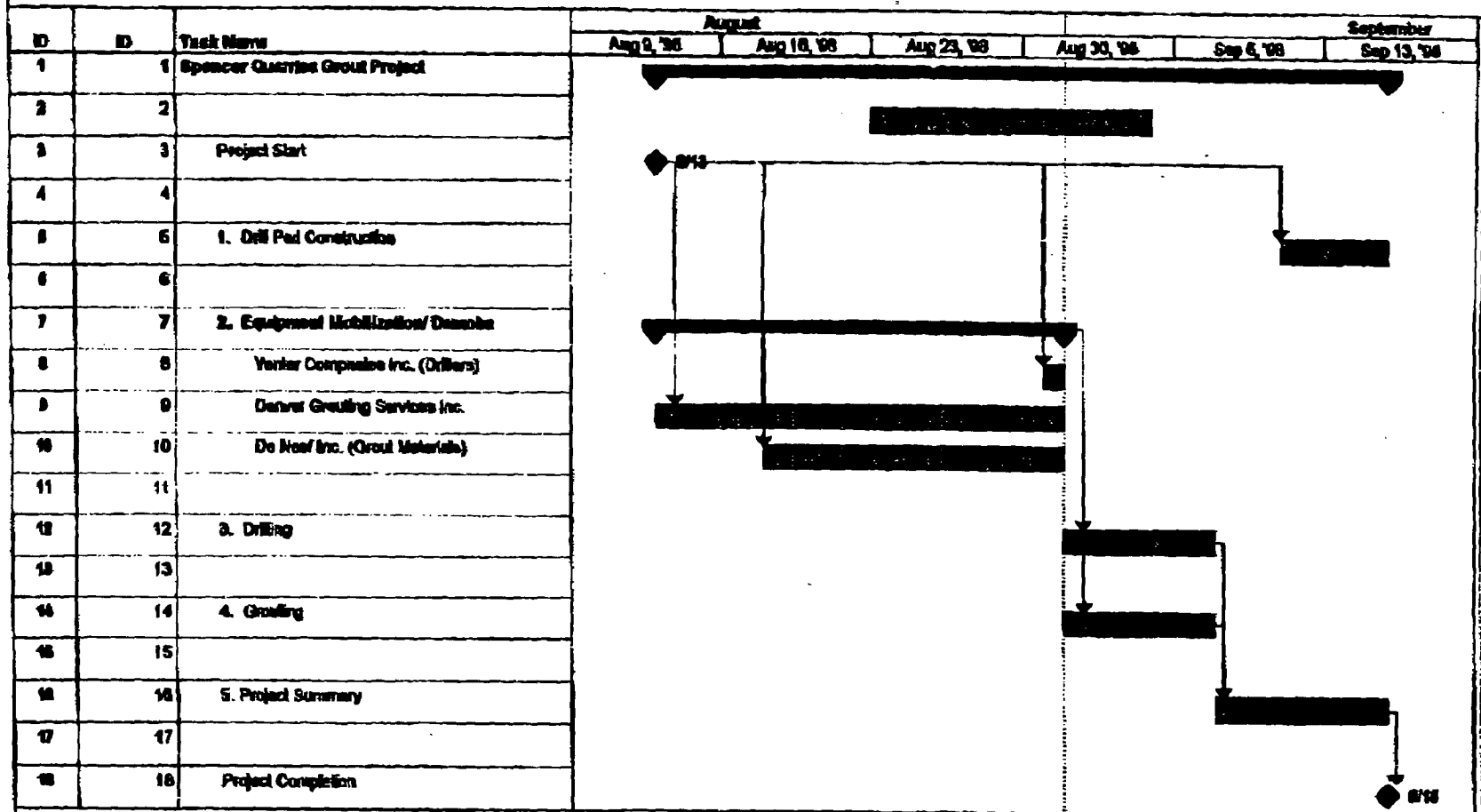


Scott P. Carlisle, P.E.
Project Engineer

Attachments

FIGURE 3

Project Schedule



Project: Spencer Quarry GROUT Project
Date: 7/29/98

Task

Milestones

Summary

SPENCER.MPF

Western States Mining Consultants, P.C.

07/29/1998 14:16

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PAGE 12

*Gordon Lack Co.*307-234-0631
Fax 307-472-6637**Industrial Equipment and Components**

JULY 27, 1998

WESTERN STATES MINING CONSULTANTS, P.C.
770 W COLLINS AVE, #200
CASPER, WY 82601ATTN MR. SCOTT CARLISLE, P.E.
REF: MATERIAL COSTS FOR SPENCER QUARRY GROUT PROJECT

DEAR SCOTT:

PER YOUR ESTIMATE OF NEEDED GROUT FROM YOUR FAX OF JULY
22, 1998 THESE ARE THE MATERIAL COSTS.

1. DE NEEF HYDRO ACTIVE CUT		
1600 GAL. @ \$ 49.00/gal		\$ 78,400.00
2. DE NEEF HYDRO ACTIVE CUT CAT		
320 32 oz. CANS @ \$ 22.00/ea		7,040.00
3. DE NEEF WASHING AGENT		
32 5gal PAILS @ \$ 90.00/ea		2,880.00
TOTAL COST OF GROUTING MATERIALS		\$ 88,320.00
ESTIMATED FREIGHT		\$ 1,280.00

TUBE-A-MANCHETTE
PART #

50.110E	173ea	1 1/2" SLEEVE PIPES 10' LG.	
		@ \$ 22.00ea	\$ 3806.00
50.210E	45ea	1 1/2" RAISER PIPES 10" LG.	
		@ \$ 7.84ea	352.80
50.130E	45ea	1 1/2" BOTTOM CAPS	@ \$ 1.50ea 67.50
50.140E	45ea	1 1/2" TOP CAPS	@ \$ 1.00ea 45.00
50.134E	160ea	1 1/2" PIPE BUTT COUPLINGS	
		@ \$ 5.30ea	848.00
50.124E	1ea	1 1/2" DOUBLE POT PACKER	
		@ \$ 310.00ea	310.00
50.170E	200'X	1 1/2" EXTRA STRENGTH PACKER ROD	
		@ \$ 2.15 LF	430.00
	12ea	1 1/2" LEATHER CUP SEALS	
		@ \$ 5.10ea	61.20
TOTAL TUBE-A-MANCHETTE			\$ 5,920.50
ESTIMATED FREIGHT			\$ 200.00

P.O. Box 1635 • Casper, Wyoming 82602
1855 S. Lennex • Casper, Wyoming 82601

07/29/1998 14:16 3072657086

WSMC

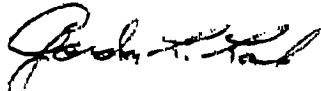
PAGE 13

*Gordon Lack Co.*307-234-0091
Fax 307-472-5837**Industrial Equipment and Components**

4ea 4" MARGO PLUG (2 PC.) 12' LG
e \$ 576.25ea \$ 2,305.00
ESTIMATED FREIGHT \$ 100.00

GORDON LACK SUPERVISION \$ 320.00/day + EXPENSES

NOTE: SOUTH DAKOTA SALES AND USE TAXES TO BE ADDED



GORDON L. LACK
GORDON LACK CO.
MINING REP.
DE NEEF CONSTRUCTION CHEMICALS, INC.

P.O. Box 1635 - Casper, Wyoming 82602
1888 S. Lennox - Casper, Wyoming 82601

07/29/1998 14:16 3272657086

WSMC

PAGE 14

Jul 21 18 04:53p

Yenter Companies, Inc.

303-279-0908

p.2



Mr. Dave Scriven
Western States Mining Consultants P.C.
770 West Collins Drive
Casper Wyoming 82601

Re: Spencer Quarry Grouting Project

July 20, 1998

Dear Dave;

Pursuant to your request for pricing for drilling holes for consolidation grouting at Spencer quarry please consider the following.

Yenter Companies, Inc. proposes to drill approximately 1000 lineal feet of 3" borehole (approximately 30 holes at a depth of approximately 30 to 35 feet) as directed by Western States Mining Consultants.

The price will be \$7.10 per lineal foot and includes mobilization/demobilization, lodging/per diem and local travel, drill support truck, Furukawa F-15 drill and drill string.

Clarifications:

Price assumes material is "drillable", with no anomalies causing unreasonable loss of drill string or inordinate drilling difficulties

One continuous operation is anticipated. Additional mobilization/demobilization at extra charge. Standby time if drilling is not reasonably continuous to be charged at \$ 170 per hour.

The Furukawa drill has substantial vertical reach, however, if additional height is required the "pad" must be safe for the drill access and operation. The pad will need to be approximately 25 feet in width.

The start date will need to be coordinated with the completion of another project in Newcastle, Wyoming. Every attempt will be made to meet your schedule (the week of August 3, 1998).

SPENCER QUARRIES, INC.

Quartzite Materials

TELEPHONE 605, 246-2344

FAX # 605, 246-2362

P.O. BOX 198

SPENCER, SOUTH DAKOTA 57574

October 8, 1998

Mr. Ken Buhler
Joe Foss Building
523 East Capitol Ave.
Pierre, SD 57501



Dear Ken:

I thought you would be interested in viewing this report.
To date no decision has been made, what our next step is, if
there is a next step.

Sincerely,

Richard Waldera
Spencer Quarries, Inc.

**WESTERN
STATES
MINING**

CONSULTANTS, P.C.



770 W. Collins Ave., Suite 200
Casper, Wyoming 82601
Phone (307) 266-9117
Fax (307) 235-7086

October 6, 1998

9811
grt_rpt.cvr

Mr. Dick Waldera
Spencer Quarries, Inc.
25341, 430 Avenue
Spencer, South Dakota 57874

GROUTING PROJECT COMPLETION REPORT

Dear Dick:

Attached please find a copy of the completion report for the Grouting Project. It includes a summary of the project and a conceptual idea for contouring the flow using the work done to date.

De Neef is working on an alternative cement/chemical grout for this application. I will keep you posted on their progress. I feel however that unless they can significantly increase the weight of the grout it will not work any better than straight chemical grout.

My recommendation at this time is to build a bulkhead barrier to stop the inflow. Grouting appears to have confined the inflow sufficiently that this would not be a difficult task.

Please review the report and call if you have any questions.

Sincerely,

Scott P. Carlisle, P.E.
Project Engineer



**COMPLETION REPORT
GROUTING PROJECT
SPENCER QUARRIES, INC.**

PREPARED FOR:

**SPENCER QUARRIES, INC
25341, 430 AVENUE
SPENCER, SOUTH DAKOTA 67874**

October, 1998

Project No.: 9811

**COMPLETION REPORT
GROUTING PROJECT
SPENCER QUARRIES, INC.**

PREPARED FOR:

**SPENCER QUARRIES, INC.
25341, 430 AVENUE
SPENCER, SOUTH DAKOTA 67874**

**PROJECT NO. 9811
OCTOBER, 1998**

TABLE OF CONTENTS

Section	Title	Page
1.0	Summary	1
2.0	Drilling	1
3.0	Inflow	1
4.0	Grouting	1
5.0	Results	2
6.0	Recommendations	2

Tables		Page
Table 1	Drill and Grout Hole Logs	2

Figures		
Figure 1	Borehole Locations	3
Figure 2	Project Plan View	5
Figure 3	Grout Location	6
Figure 4	Excavation Plan	7
Figure 5	Bulkhead Concept	8

1.0 Summary

The Spencer Quarries Inc., grouting project was conducted the week of Sept, 21, 1998. Equipment was mobilized to the site on the 21st and 22nd. Preliminary drilling was started on Tuesday the 22nd, to evaluate the lateral extent and depth of the inflow. Drilling and grouting was then conducted at the center of the inflow. Early results were promising, as flow to the south was stopped. Further grouting to the north did not appear to be effective. Consequently, the drill pad was removed down to the original pit bottom. Grouting recommenced at the center of the flow. The inflow area appeared to be confined by grouting. This however resulted in increased pressure of the main flow. The main flow finally altered its path and reappeared approximately 30 feet to the west of the highwall. No reduction in total flow was noted. Grouting was stopped.

2.0 Drilling

Drilling was conducted by Yenter Companies. Thirty-two holes totaling approximately 1140 feet were drilled during the project. Drilling included exploratory holes to evaluate the inflow (10 holes) and grout holes (22 holes). The holes were 3 inch diameter. Drilling was done with a rotary percussive hammer. Cuttings were flushed with air.

Minimal difficulties were noted with drilling. Some minor sanding/ silting of the holes was noted. This did not significantly affect installation of the sleeve tubes as they were installed immediately after drilling. More often gravelly holes caused sleeve tube installation problems. Holes often had to be cleaned with the drill several times before installing the tubes.

The drill hole locations are shown in Figure 1, Borehole Locations. Table 1, Hole Logs, is the drill log summary for this project. Note, a datum for locating drill holes was set at the center of the hourglass feature. All measurements on the drill log relate to this datum.

3.0 Inflow

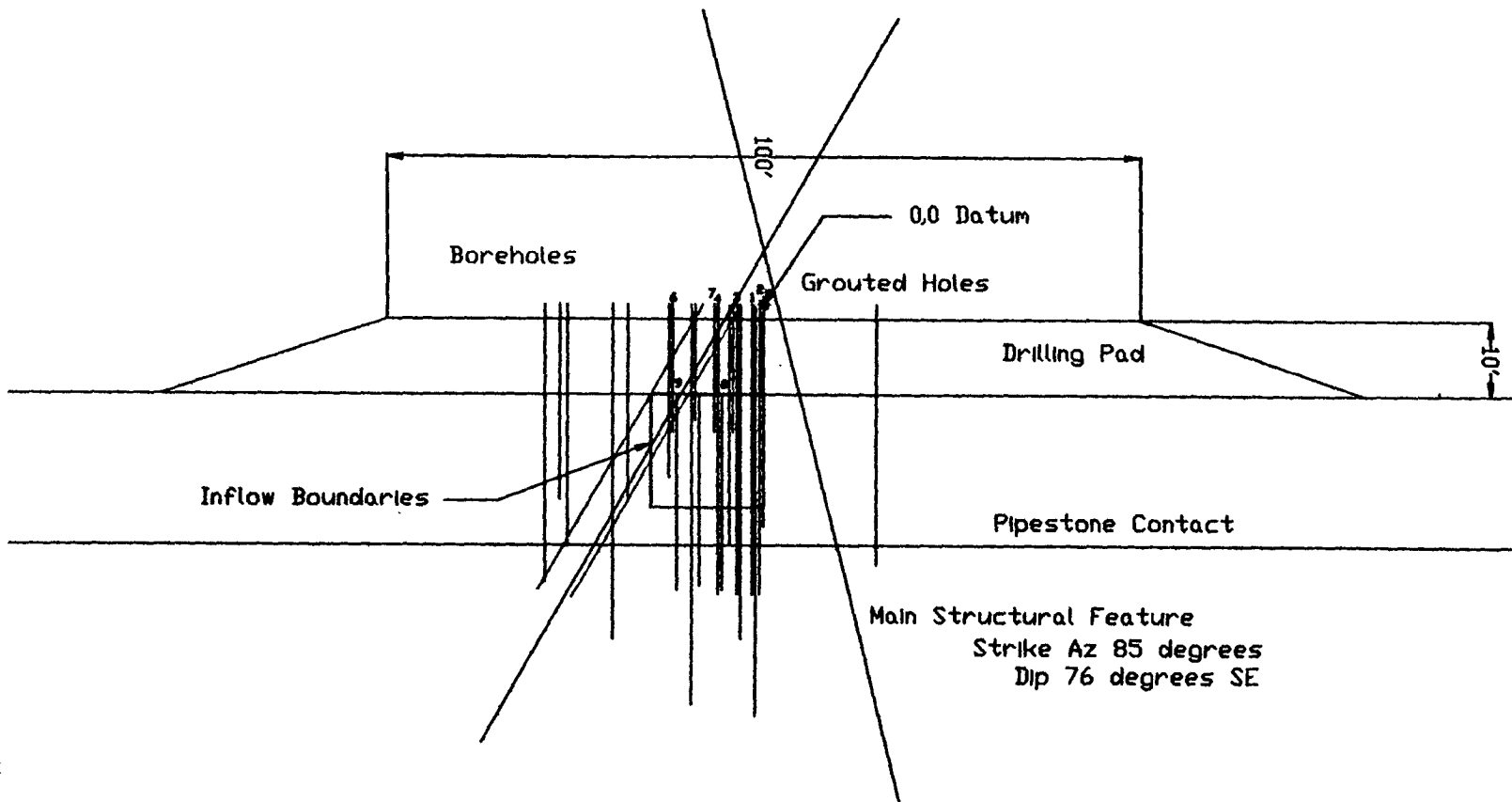
The inflow was drilled to determine it's lateral extent and depth. Figure 1 shows the estimated extent of the inflow based on these drill holes. The initial areal extent of the inflow as determined by drilling was 15 feet wide by 15 feet deep. It did not appear to extend to the pipestone. It appears to run parallel to the main structural feature in the high wall (dipping to the south).

4.0 Grouting

The basis of the grout program was to develop a grout curtain parallel to the highwall. Angled holes were drilled into the highwall above the inflow zone. The grouting contractor was Denver Grouting Services, Inc. Grout was injected with a two component rocker pump system. The pump mixed the grout resin, and catalyst just prior to injection. A 10% catalyst mixture was used for all grouting.

TABLE 1
Drill and Grout Hole Logs

[illegible]



Not To Scale

DATE: 10/1/98

SHEET NO.
9811.100

Borehole Locations

Western States Mining Consultants, P.C.
770 West Collins Avenue, Suite 200 • Englewood, Colorado 80151 • (303) 766-4117

Spencer Quarries Inc.

Figure 1

Proj. No. 9811

Drawn By: [Signature]

Check By: [Signature]

Approved By: [Signature]
DATE APPROVED: [Date]

The grout used for this project comprised water activated urethane foam, "HA CUT", provided by De Neef Construction Chemicals Inc. Injection was done through one inch diameter sleeve port pipe, installed in the boreholes. A bottom up grouting procedure was utilized on all holes.

A total of 22 barrels (1100 gallons) of grout was injected.

5.0 Results

Grouting did appear to confine the flow, as noted by concentration of the flow and an increase in pressure at the primary source. However, the grouting program failed to stop or effectively slow down the water inflow into the pit.

Grouting appeared to be effective in stopping flow in the sandy zone of the hourglass structures. The grout also appeared to have good flow characteristics in the fractured rock zones. The grout did not however effectively withstand the pressures built up by the confined flow.

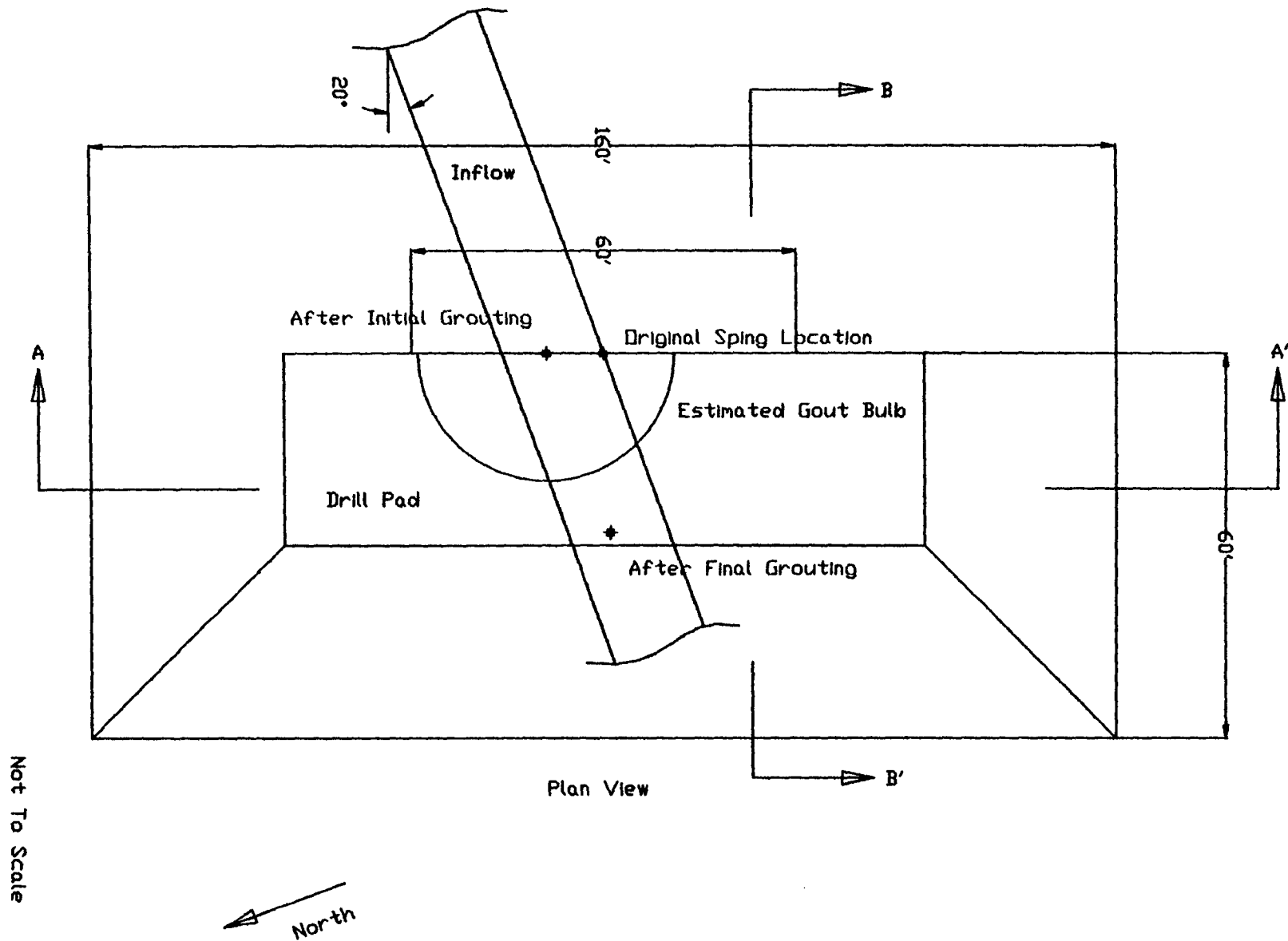
In the final stages of grouting, it is likely a substantial grout bulb was made in the center of the flow. This is supported by the observations that grout was surfacing in small seeps at a radius of approximately 30 from the primary spring. The primary spring was stopped, when a secondary spring was observed. This effectively relieved the pressure on the primary spring. The estimated location of the grout bulb and springs are shown in Figure 2, Project Plan View, and Figure 3, Grout Location. The secondary spring is located directly along the strike of the main fault structure. It does not appear the flow made its way around the grout bulb, as no lateral seeps were observed. The new spring did not produce a lot of silts when it erupted. Therefore, it probably did not cut a channel under the grout. It most likely punched through the grout in a fairly narrow region.

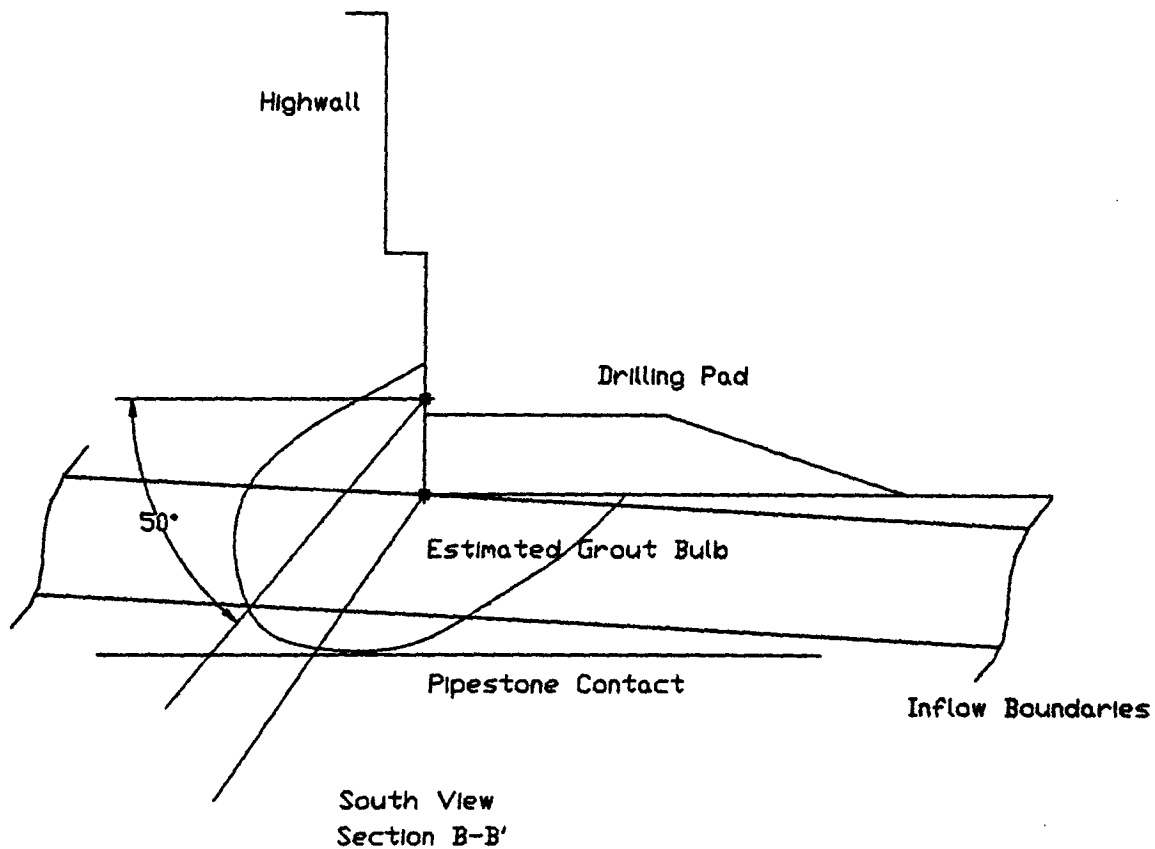
6.0 Recommendations

It appears the inflow does come from the East highwall, as previously assumed. The field evaluation revealed the inflow was more confined than was initially assumed. Pressures producing the inflow are also significantly higher than were initially assumed. The inflow appeared to be constrained to a narrow region (15 feet wide) coming from the highwall. The depth of the flow does not extend to the pipestone. It extends approximately 15 feet below current pit bottom. The pipestone is at a depth of 20 feet below pit bottom.

More grouting in this region will probably not be effective in controlling the inflow. Stopping this inflow requires relieving the pressure until a seal can be constructed. An excavation and bulkhead approach would be the best option at this point. It also allows a significant amount of the work to be completed by Spencer Quarries. Figure 4, Excavation Plan, and Figure 5, Bulkhead Concept, show a conceptual design of a bulkhead structure.

DATE: 10/1/98		Proj. No.: 9811	
SHEET 3		Drawn By: SFC	
9811.101		Chk. By: JDB	
Project Plan View		Approved By: _____	
		DATE APPROVED: _____	
Western States Mining Consultants, P.C. 770 Rock Castle Avenue, Suite 200 • Canyon, Wyoming 82401 • (307) 586-6117		Figure 2	
Spencer Quarries Inc.			



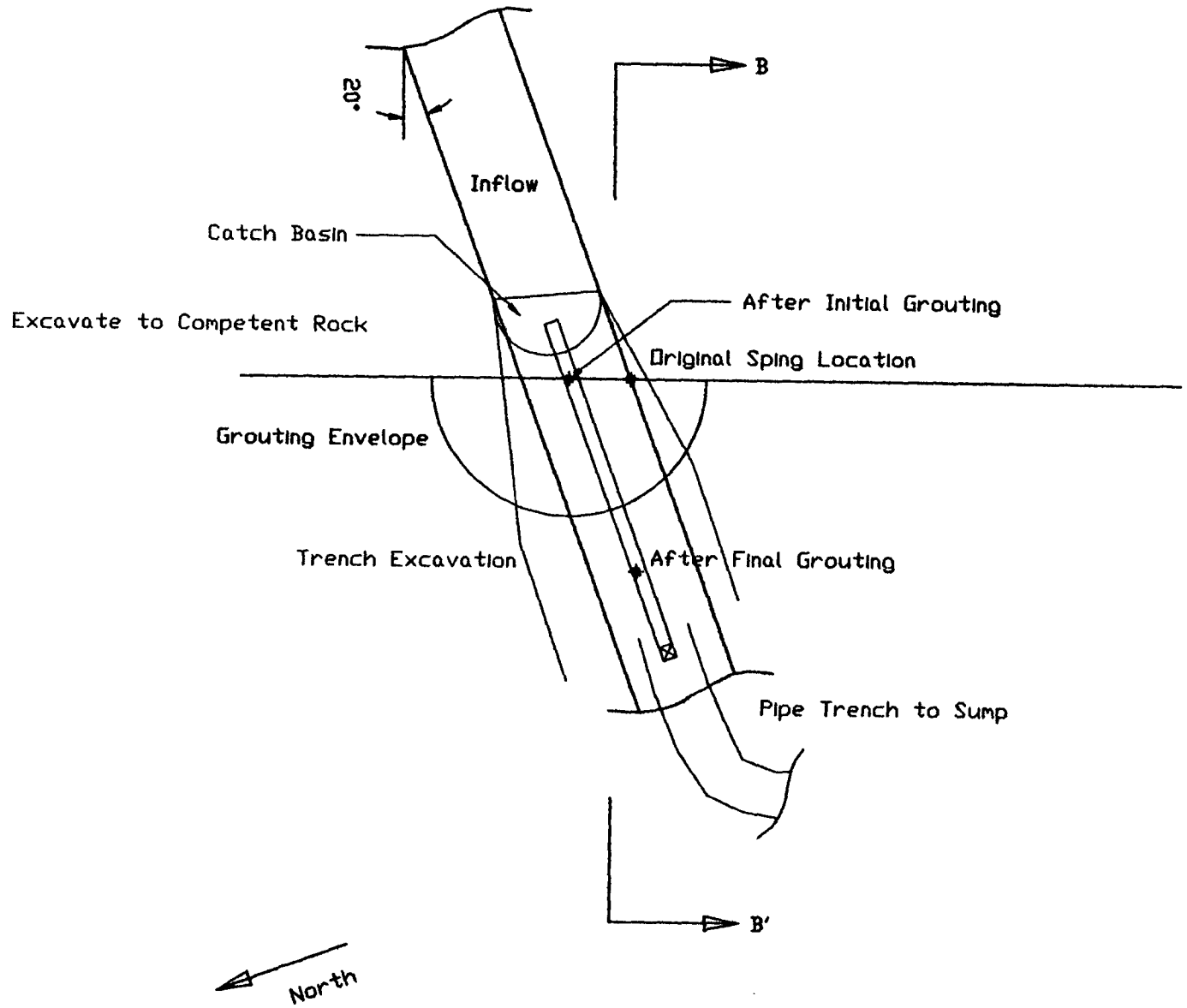


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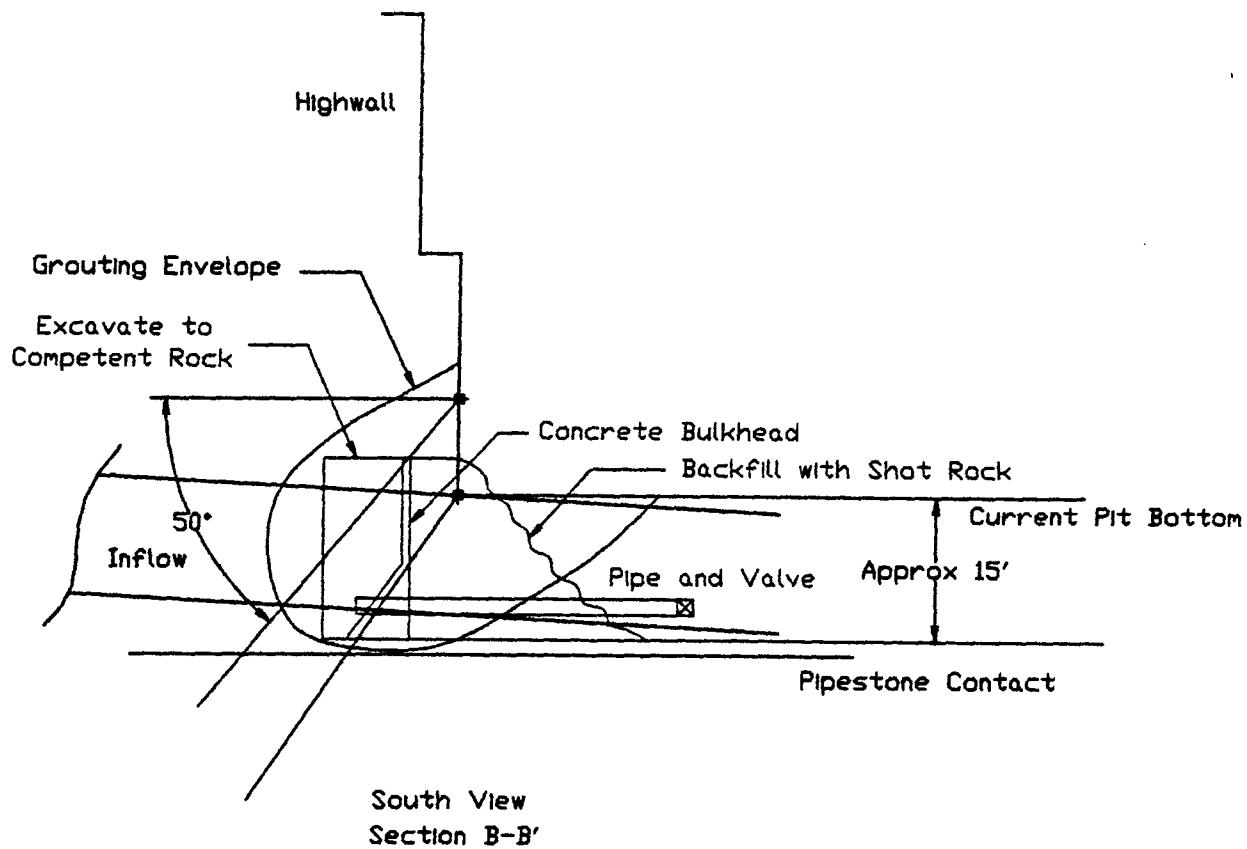
DATE: 10/1/98	SHEET NO. 9811.108	Grout Location	WESTERN STATES MINING CONSULTANTS P.C.		Proj. No.: 9811
			770 West Collins Avenue, Suite 200 • Copper, Wyoming 82601 • (307) 269-0117		Drawn By: SPC
			Spencer Quarries Inc.	Figure 3	Chk. By: DMS
					Approved By: DATE APPROVED

DATE: 10/1/98	
SHEET NO. 0011.108	
Excavation Plan	
Western States Mason Contractors, P.C. 770 West Oakdale Avenue, Suite 200 • Canyon, Wyoming 82401 • (307) 266-9117	
Spencer Quarries Inc.	Figure 4
Proj. No. 0011	Drawn By: SRC
Checked By: JMB	DATE APPROVED

Not To Scale



Plan View



Not To Scale

DATE 10/1/00	SHEET NO.	Bulkhead Concept	WESTERN STATES MINING CONSULTANTS P.C. 770 West Collins Avenue, Suite 200 • Copper, Wyoming 82601 • (307) 286-0117		Proj. No.: 9811
			Spencer Quarries Inc.	Figure 5	Drawn By: SPC
					Chk. By: DRS
					Approved By: _____ DATE APPROVED: _____

Grouting appears to have effectively confined the flow to a reasonably small area. This makes it possible to install a drain pipe to capture and control the flow and pressure. Installation of a pipe would allow a structural bulkhead to be built in the grout bulb. Once the bulkhead is complete, the flow can be throttled down and pressure allowed to build. The grout curtain can then be monitored for leaks. If leakage occurs, the valve can be opened to relieve the pressure and lower the water table. Leakage could then be treated by spot grouting as necessary. This method builds on the work done to date, and allows more control over the inflow. For example, if when valved off, the flow has sufficient head to overtop the grout curtain and bulkhead, the valve can be opened to lower the head to manage the flow. This should reduce to amount of the flow. Additional grouting could then be done at your convenience.

The sequence of construction would be as follows:

1. Excavate out the spring region to remove all blast damaged, broken materials, and permeable sands. The goal will be to find good competent rock surrounding the inflow. Competent rock will be required to seal and support the bulkhead structure. The grouted area will act as a secondary barrier surrounding the primary bulkhead.
2. Once good abutment rock is found, install a catch basin, pipe, and valve to catch and contain the flow. This will control the flow and pressure during construction of the bulkhead.
3. Then construct a concrete bulkhead in the opening. This will be anchored and sealed into the abutment rock. The portal area can then be backfilled to add support and stabilize the bulkhead and grout curtain
4. The outlet pipe valve can then be shut down. The system will then pressure up stopping the flow.
5. Monitor the highwall for leaks. If leaks appear, open the valve as required to manage leakage. Leakage can then be addressed on an as needed basis.

This design is purely conceptual. If you are interested in pursuing this route, we can do the design and supply field assistance as necessary.



October 8, 1998

Post-It[®] brand fax transmittal memo 7671 # of pages 3

To	Ken Buhler	From	Stan Pence
Co.	Water Rights-DENR	Co.	SOGS
Dept.		Phone #	677-6150
Fax #	605-273-4068	Fax #	677-5895

Release #98-93
Job # 1110

SOUTH DAKOTA GEOLOGICAL SURVEY
TRITIUM SAMPLES

Purchase Order 2392


Dr. H. Gote Ostlund
Professor Emeritus

Distribution:

Stan F. Pence
Hydrologist
South Dakota Geological Survey
Akeley Science Center, University of South Dakota
Vermillion, South Dakota 57069-2390

Rosenstiel School of Marine and Atmospheric Science
Tritium Laboratory
4600 Rickenbacker Causeway
Miami, Florida 33149-1098
Phone: (305) 361-4100
Fax: (305) 361-4112
email: tritium@rsmas.miami.edu

GENERAL COMMENTS ON TRITIUM RESULTSTritium Scale (New)

Tritium concentrations are expressed in TU, where 1 TU indicates a T/H ratio of 10^{-18} . The values refer to the new tritium scale of U.S. National Institute of Science and Technology (formerly NBS), and based on their tritium water standard #4926 as measured on 1961/09/03 and again 1978/09/03, and age-corrected with the new half-life of 12.43 years, i.e., $\lambda = 5.576\% \text{ year}^{-1}$. In this scale, 1 TU is 7.088 dpm/kg H_2O , or 3.193 pCi/kg H_2O , or 0.1181 Bq/kg H_2O (Bq = disint/sec). TU values are calculated for date of sample collection, REFDATE in the table, as provided by the submitter. If no such date is available, date of sample arrival at our laboratory is used. The stated errors, eTU, are one standard deviation (1 sigma) including all conceivable contributions. In the table, QUANT is quantity of sample received, and ELYS is the amount of water taken for electrolytic enrichment. DIR means direct run (no enrichment).

Through 31 December 1993, we reported tritium values in the "old" scale using the half-life 12.26 years, i.e., $\lambda = 5.65\% \text{ year}^{-1}$. In that old scale, 1 TU(old) is 7.186 dpm/kg H_2O , 3.237 pCi/kg H_2O . To convert from the new scale back to the old at any given point in time, multiply the listed TU(new)-values by F, where

$$F = 0.9645 - (\text{year}-1990) \times 0.0008$$

i.e. for 1994 the factor is 0.9613. The formula is correct within 0.02% between 1962 and 1999. To convert data from the old scale to the new, divide by F.

Very low tritium values

In some cases, negative TU values are listed. Such numbers can occur because the net tritium count rate is, in principle the difference between the count rate of the sample and that of a tritium-free sample (background count or blank sample). Given a set of "unknown" samples with no tritium, the distribution of net results should become symmetrical around 0 TU. The negative values are reported as such for the benefit of allowing the user unbiased statistical treatment of sets of the data. For other applications, 0 TU should be used.

Reliability of results

Refer to Services Rendered (Tritium), Section II.8, in the "Tritium Laboratory Price Schedule; Procedures and Standards; Advice on Sampling". Tritium efficiencies and background values are different in the nine counters and values are corrected for cosmic intensity, gas pressure and other parameters. For tritium, the efficiency is typically 1.00 cpm per 100 TU (direct counting). At 50x enrichment, the efficiency is equivalent to 1.00 cpm per 2 TU. The background is about 0.3 cpm, known to about ± 0.02 cpm. Our reported results include not only the Poisson statistics, but also other experimental uncertainties such as enrichment error, etc.

References

Mann, W.B., M.P. Unterweger, and B.M. Coursey, Comments on the NBS tritiated-water standards and their use, *Int. J. Appl. Radiat. Isot.*, 33, 383-386, 1982.

Taylor, C.B., and W. Roether, A uniform scale for reporting low-level tritium measurements in water, *Int. J. Appl. Radiat. Isot.*, 33, 377-382, 1982.

Client: SOUTH DAKOTA GEOLOGICAL SURVEY

Purchase Order:

Recvd : 98/08/24

Contact: S. Pence 605/677-5227,-5895(F)

Job# : 1110

Akeley Sci. Ctr., USD, 414 E. Clark St

Final : 98/10/08

Vermillion, SD 57069-2390

Cust LABEL INFO	JOB.SX	REFDATE	QUANT	ELYS	TU	eTU
SO.DAKOTA GEOL.- SPRING	1110.01	980811	1000	270	2.70	0.10



MORGAN, THEELER, COGLEY & PETERSEN
LAWYERS
221 EAST THIRD AVENUE
P.O. BOX 1025
MITCHELL, SOUTH DAKOTA 57301-1025
(605) 996-5588
FAX # (605) 996-6129

JOHN L. MORGAN
JACK THEELER
JOHN F. COGLEY
DON E. PETERSEN
MELISSA R. O'ROURKE*
TRUDY A. MORGAN

CHESTER L. MORGAN (1891-1963)
HARRY T. FULLER (1914-1970)

December 29, 1998

*Also licensed in Nebraska

MEMBER OF COMMERCIAL LAW
AFFILIATES, A WORLDWIDE
ORGANIZATION OF INDEPENDENT
LAW FIRMS.

Department of Environment & Natural Resources
523 E. Capitol Ave.
Pierre SD 57501

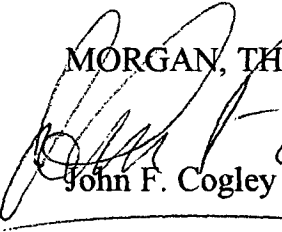
Gentlemen:

We have been contacted by Paul Robertson concerning two wells located on property owned by him described as the East Half of Section 20, Township 103 North, Range 57, West of the 5th P.M., Hanson County, South Dakota. The property is located on Highway 38 a few miles west of Spencer. The two wells are located roughly 100 feet apart with one of them having been dug in 1964 and the other being approximately fifty years old. The wells have apparently always been good producers up until about a year and a half ago. Mr. Robertson indicates that the problem with his wells is attributable to actions taken by Spencer Quarries. He has further advised us that in approximately May of this year someone from your Department was at his place and took a look at the entire situation. Unfortunately, Mr. Robertson misplaced the note he had made concerning the individual's name. We are writing in the hope that you can provide us with the individual's name and a telephone number at which he can be contacted. In the alternative, you could have the individual call me at 800-371-5587.

We thank you in advance for your assistance and cooperation.

Yours very truly,

MORGAN, THEELER, COGLEY & PETERSEN


John F. Cogley

JFC:bs

**Water Rights Program
File Documentation**

NAME OF PERSON OR FILE: Richard Waldera

ADDRESS: 25341 430th Ave, Spencer COUNTY: Hanson

DATE: March 30, 2000 TELEPHONE: (605)246-2344

RE: Deferred Water Permit Application No. 6070-3

COMMENTS:

Mr. Waldera called in response to my March 7, 2000 inquiry about the quarry. Mr. Waldera informed me that Spencer Quarries, Inc. recently had an owner's meeting, and it was determined that although they are willing to "pursue any avenue reasonably available", at this time, a method to minimize groundwater flow into the mine is not available. Mr. Waldera informed me that Water Permit Application No.6070-3 can be removed from Deferred status and the application should be processed.

A handwritten signature in black ink, appearing to read "Ken Buhler", with a stylized, cursive script.

Ken Buhler
Natural Resources Engineer

REPORT FOR
WATER PERMIT APPLICATION NO. 6070-3
SPENCER QUARRIES, INC.
MAY 4, 2000

Application No. 6027-3 proposes to increase the diversion rate authorized from the Spencer Quarry by 3.1 cubic feet of water per second (cfs). Vested Right No. 4493-3 currently authorizes 1.8 cfs from this open mine pit located in the SW¼ NE¼ Section 24, T103N-R57W. This application is to increase the water appropriation from 1.8 cfs to 4.9 cfs. A total of 100 gallons per minute may be diverted to a reservoir/dugout located near the center of the NE¼ of Section 24, T103N-R57W, to be used and recycled in the rock quarry washing process. The remainder of water is diverted from the mine pit and discharged to Wolf Creek.

AQUIFER: Sioux Quartzite (SOUX)

HISTORY:

Spencer Quarries, Inc. has operated an open pit at this site for a number of years, where the Sioux Quartzite is mined. In 1980, Spencer Quarries filed Vested Water Right Claim No. 4493-3, with a 1935 priority date, to appropriate 1.8 cubic feet of water per second (cfs) to be used to supply water for a rock quarry washing operation. Correspondence with the vested right application indicates that pumping from the mine was not continuous and only a relatively small amount (less than 240 ac-ft/yr) was pumped to Wolf Creek for dewatering. This information suggests that groundwater did not constitute a significant volume of the water that was pumped from the quarry.

In March 1994, Spencer Quarries drilled into unconsolidated material 70 feet above the current quarry floor which contained water under artesian conditions (Waldera, 1998). As quarrying continued, this zone of uncemented or poorly cemented sand was exposed on the quarry highwall. A large inflow of water was encountered where this zone intersects the quarry floor which is presently 135-140 feet below grade. The quarry pumps approximately 2 million gallons per day (MGD) at a rate of 2,200 gpm to dewater the mine. A small amount of water is used for processing purposes but the majority is pumped to Wolf Creek for dewatering purposes.

In April, 1998, Spencer Quarries, Inc. filed Water Permit Application No. 6070-3, requesting an additional diversion rate to handle the increase inflow. The Chief Engineer deferred the application to allow additional time for Spencer Quarries to investigate methods to minimize groundwater flow into the quarry and to allow both Spencer Quarries and the Water Rights Program to investigate impacts of dewatering on area domestic wells.

Spencer Quarries, Inc. contracted with Western States Mining Consultants, P.C. to perform a September 1998, grouting project to try to stop the groundwater inflow to the quarry. The grouting project was unsuccessful but Spencer Quarries has continued pursuing means of stopping the inflow. On March 30, 2000, Richard Waldera (General manager) informed the Water Rights Program that a method to minimize groundwater inflow to the mine was not available and requested Application No. 6070-3 be removed from deferred status.

AQUIFER CHARACTERISTICS:

The Sioux Quartzite is not generally considered a prolific aquifer. However, at 2 MGD (million gallons per day), the Spencer Quarry is essentially one of the largest single "wells" in the state.

The Sioux Quartzite is a sedimentary formation that consists mainly of silica cemented quartz grains. A characteristic typical to most quartzite is excellent cementation, which causes the rock to break through the quartz grains instead of around them. These fractures and joints are typically the source of groundwater to wells. In some locales within the quartzite, the rock is not well cemented. In fact, Baldwin, 1949 states that "...rarely one can find patches where all the cement is gone and the sand is loose." This absence of cement is probably

due to weathering processes, which have leached or removed the silica cement, probably preferentially along the walls of joints and cracks in the rock where water has seeped through and channelized. At Spencer Quarry, the zone where the ground water was encountered appears to be associated with two intersecting joints or fractures (figure 1)



Figure 1. Zone of Uncemented quartzite where inflow was encountered

There is no estimate of the amount of water is storage in the quartzite. The Water Rights Program does not have any observation wells completed into the Sioux Quartzite in this area and the affect of quarry dewatering on the quartzite cannot be measured.

The Water Rights Program monitors an observation well, (HS-78A) approximately 3.5 miles north of the quarry that is completed into the Sioux Quartzite wash aquifer. The quartzite wash is weathered quartzite directly overlying the Sioux Quartzite. The hydrograph for observation well HS-78A (figure 2) indicates water levels in the well began declining in the spring of 1994, and declined 6.1 feet between April 1994 and October 1999.

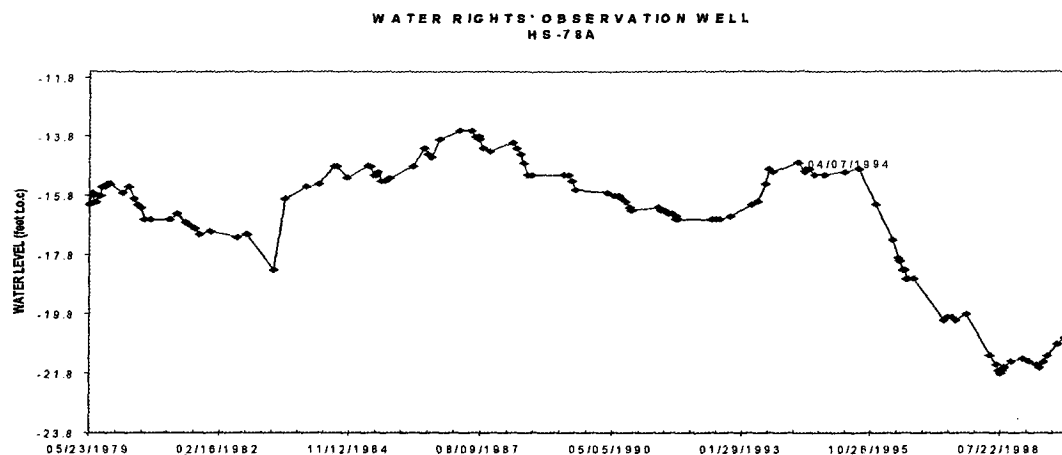


Figure 2. Hydrograph of a Sioux Quartzite Wash observation well located 3.5 miles north of the quarry

An observation well (HS-78B), located near HS-78A, also identified declining water levels in the Floyd: East James aquifer. The Floyd: East James is an extensive aquifer that extends from one-half mile north of the quarry up into Beadle County. The Floyd: East James aquifer is a buried outwash separated from the quartzite wash and the quartzite by approximately 275 feet of clay and shale at this site. The hydrograph for this observation well, (figure 3.) shows 5.9 feet of decline between April 1994 and October 1999.

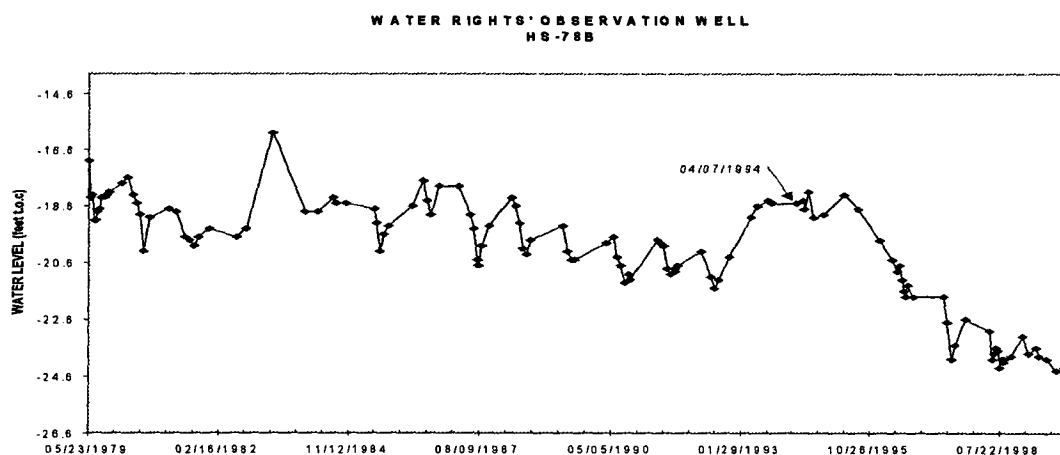


Figure 3. Hydrograph of a Floyd: East James Aquifer observation well 3.5 miles north of the quarry

Examination of hydrographs from other Floyd: East James aquifer observation wells in the area identified several areas where the water levels began declining in the spring of 1994. The largest decline occurred in an observation well (HS-79F), completed into the Floyd: East James aquifer approximately 1.5 miles north of the quarry. At this site, a hydrologic connection between the Floyd: East James aquifer and the Sioux Quartzite is possible, 27 feet of outwash directly overlies five feet of quartzite wash and the Sioux Quartzite. The hydrograph for HS-79F, (figure 4.) identifies 9.9 feet of decline in the potentiometric surface between April 1994 and October 1999. Note that in June 1998, a maximum decline in water level from April 1994 (11.4 feet) was recorded and water levels have recovered.

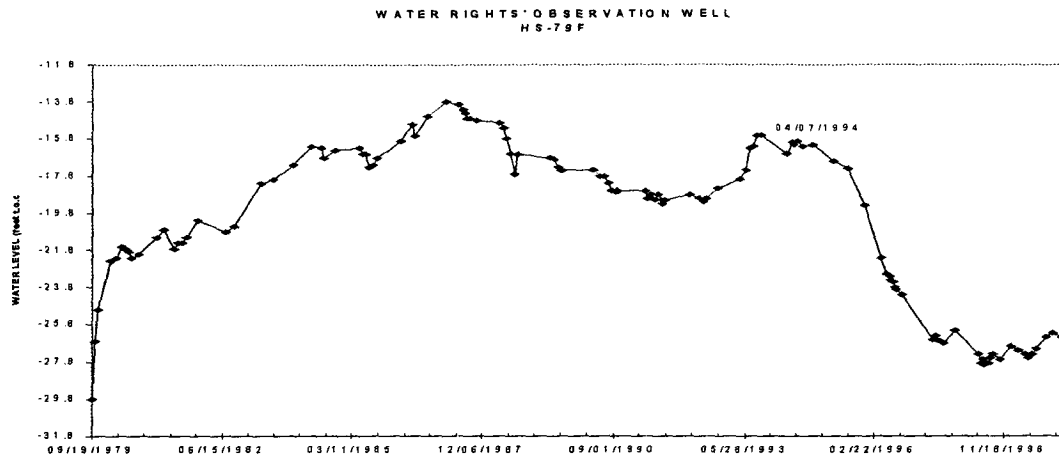


Figure 4. Hydrograph of a Floyd: East James Aquifer observation well 1.5 miles north of the quarry

The water levels of seven other observation wells completed into the Floyd: East James Aquifer in the area declined between April 1994 and October 1999. One observation well, HS-79E, located approximately 9.5 miles west of the Spencer Quarry, observed a decline of 8.1 feet over the time period, see figure 5.

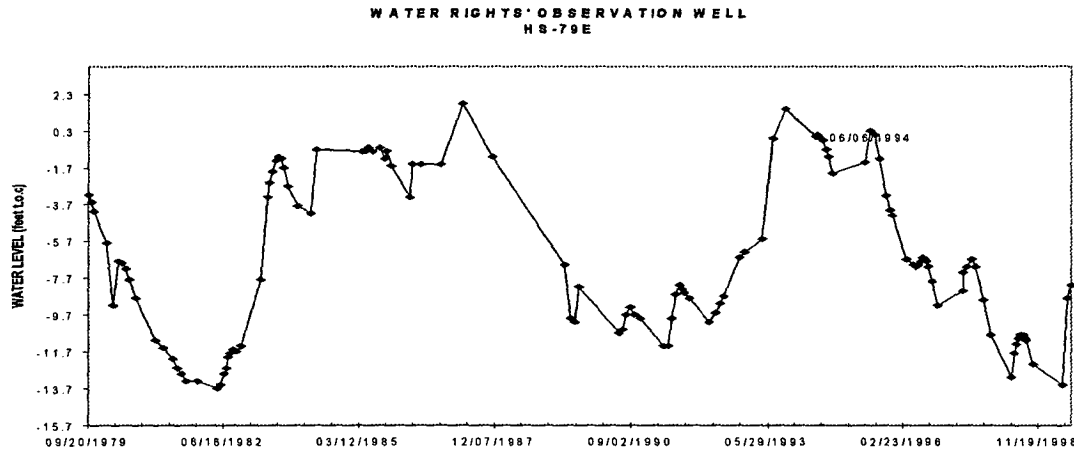


Figure 5. Hydrograph of a Floyd: East James Aquifer observation well 9.5 miles west of the quarry

It is possible that the Sioux Quartzite is hydraulically connected to the Floyd: East James aquifer in this area. It can not be concluded with certainty that the declining water levels measured in Water Rights' observation wells can be attributed to dewatering activities at the quarry. However, water levels of the Floyd: East James aquifer have been fairly stable or even came up between 1994 and 1999 in other parts of the aquifer. Observation well, MR-79B, is completed into the Floyd: East James aquifer approximately 18 miles north of the quarry. The hydrograph for the well (figure 6) is typical for the aquifer with water levels rising 0.3 feet between April 1994 and October 1999.

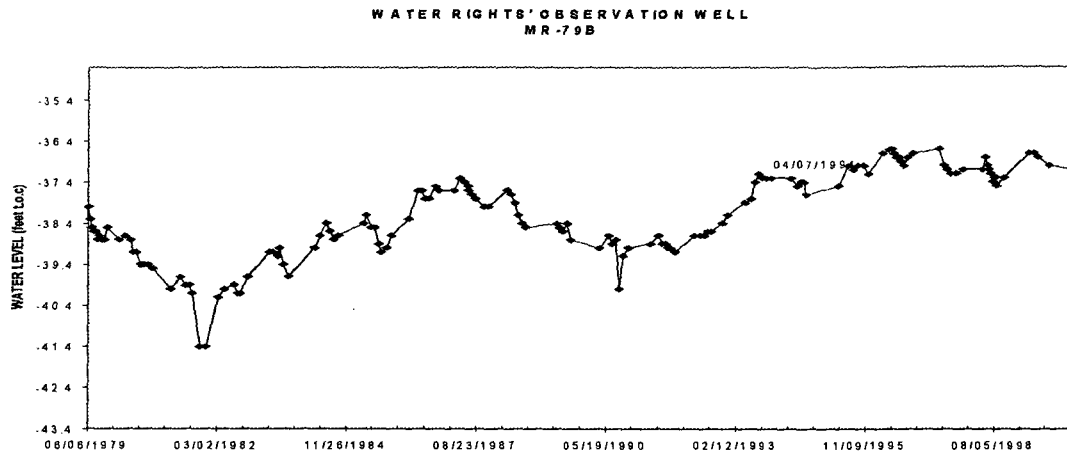


Figure 6. Hydrograph of a Floyd: East James Aquifer observation well 18 miles north of the quarry

Review of Existing Water Permits/Rights:

The nearest Water Rights/Permits appropriating groundwater in this area belong to communities (Spencer, Emery, Alexandria, and Rockport Hutterian Brethren) that are served by rural water systems. Water Right No. 996-3, the City of Salem, is the nearest active groundwater right and is over 11 miles from the Spencer Quarry. The source of Salem's water is identified as an unnamed outwash deposit or quartzite wash lying directly upon the Sioux Quartzite. This aquifer is suspected to be in hydraulic connection with the Sioux Quartzite because of high concentrations of radionuclides and radon (Baker, 2000). The nearest groundwater right appropriating water from the Floyd: East James aquifer, Water Right No. 4317A-3, Muilenburg, Inc, is located approximately 12 miles from the Spencer Quarry. Even if it is assumed that a hydraulic connection exists between the source aquifers for Water Right Nos. 996-3 and 4317A-3, and the Sioux Quartzite, drawdown from Spencer Quarry's dewatering activities should not adversely impact these or other area appropriative rights due to the distance from the quarry.

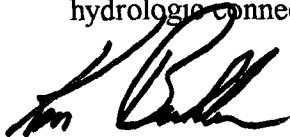
The Sioux Quartzite is a source of water to a number of domestic wells in this area. The Water Rights Program has received two complaints alleging impacted domestic wells in this area. On May 8, 1998, Paul Robertson, contacted Water Rights about two domestic wells, which are located approximately four miles west of the quarry. Mr. Robertson claimed that the quartzite wells had gone dry since the quarry began dewatering at an increased rate. Water Rights' staff met with Mr. Robertson and determined that the wells, at best, were marginal and it was not possible to conclude if the quarry dewatering was affecting the Robertson wells.

On July 9, 1998, Calvin Heitzman who has two domestic wells just to the south of the quarry (Section 25, T103N-R57W), contacted the Water Rights program and claimed his water supply had been diminishing over the past several years and attributed this to the quarry. Mr. Heitzman was concerned about the groundwater levels of his stock wells, but indicated that he still had water from the wells, and since the quarry's increased pumping for dewatering, Wolf Creek was now a dependable stockwater source.

SDCL 46-6-24 provides that domestic and municipal wells completed into the quartzite would not need to meet the well construction standards, including adequate well requirements, to be protected from damage, loss of water production or quality, replacement cost or increased operating caused expenses by dewatering activities at the quarry.

CONCLUSIONS:

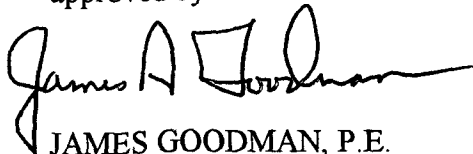
1. The Sioux Quartzite is an aquifer in this area.
2. The Sioux Quartzite may be hydraulically connected to the Sioux Quartzite Wash aquifer and the Floyd East James aquifer in this area.
3. Observation well data suggests that water migrates from the quartzite wash aquifer and the Floyd: East James aquifer in this area and contributes to the inflow to the mine.
4. Increased withdrawals from the quarry coincide with and may in fact be the cause of declining water level of several area observation wells.
5. This appropriation should not have an adverse impact to existing rights.
6. Spencer Quarries, Inc. has made an effort to try to stop the inflow into the quarry, which would have eliminated the need for this application.
7. If dewatering did not occur, mining at Spencer Quarry probably would not be possible.
8. The current water right for the quarry, Vested Right No. 4493-3, is for a "non-consumptive" use. Since most of the water currently pumped is groundwater, Vested Right No. 4493-3 may need to be recognized as a consumptive use.
9. Water level declines measured in area observation wells completed into aquifers that may be hydraulically connected to the Sioux Quartzite are not significant.
10. Domestic and municipal wells completed into the Sioux Quartzite are protected from affects of quarry dewatering regardless of their well construction. Wells completed into aquifers (Floyd: East James or Quartzite Wash), which may be hydraulically connected to the quartzite would have to be adequate wells to be protected from quarry dewatering. Wells would only be protected if it could be shown that there is a hydrologic connection between the quartzite and the well's production aquifer.



KEN BUHLER

Natural Resources Engineer

approved by



JAMES GOODMAN, P.E.

Natural Resources Engineer

REFERENCES:

Baker, Mike, 2000, DENR- Office of Drinking Water, Personal communication

Baldwin, B., 1949, A Preliminary report on the Sioux Quartzite, South Dakota Geological Survey Report of Investigations No. 63, University of South Dakota, Vermillion, SD

Waldera, Richard, 1998, Personal communication

Water Rights Program, 2000, "Observation Well Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights Program, 2000, "Water Permit/Right Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD

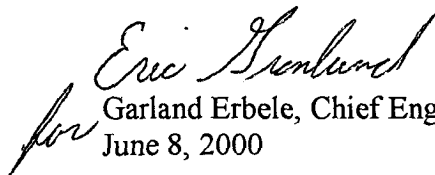
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6070-3, Spencer Quarries, Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 6070-3, Spencer Quarries, Inc., c/o Richard Waldera, 25341 430th Avenue, Spencer, SD 57374.

The Chief Engineer is recommending APPROVAL of Application No. 6070-3 because 1) there is a reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The diversion of water for dewatering purposes approved under this Permit will be located near domestic wells and other wells which may obtain water from the Sioux Quartzite or aquifers hydraulically connected to the quartzite. Spencer Quarries under this Permit shall control its withdrawals so there is not a reduction of needed water supplies in wells constructed into the Sioux Quartzite or in adequate wells completed into aquifers hydraulically connected to the quartzite.
2. Spencer Quarries shall report to the Chief Engineer annually the amount of water pumped.
3. Permit No. 6070-3 is subject to Spencer Quarries obtaining a surface water discharge permit from the Department of Environment and Natural Resources.

See report on application for additional information.


Garland Erbele, Chief Engineer
June 8, 2000

NOTE: SDCL 46-6-24 provides that domestic and municipal wells completed into the quartzite will not need to meet the well construction standards, including adequate well requirements, to be protected from damage, loss of water production or quality, replacement cost or increased operating caused expenses by dewatering activities at the quarry.

For information on obtaining a surface water discharge permit, please contact Kelli Buscher with the Surface Water Quality Program at (605) 773-3351.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

June 9, 2000

Richard Waldera
Spencer Quarries, Inc.
25341 430th Ave
Spencer SD 57374

Dear Mr. Waldera:

Water Permit Application No. 6070-3 for industrial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Alexander Herald printed at Alexandria, SD (Ph # 605 239-4521). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 9, 2000

Alexandria Herald
Box 450
Alexandria SD 57311-0450

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 6070-3 to Appropriate Water to be published twice. Please publish the first notice on June 15, 2000 with the second publication 7 days later.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Spencer Quarries, c/o Richard Waldera, 25341 430th Ave, Spencer SD 57374 (Ph # 605 239-4521).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, please send us an affidavit or use the enclosed Proof of Publication form. The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

No. 6070-3

Date _____

We are in receipt of your letter of June 9, 2000 enclosing Notice of Hearing to Appropriate Water by Application No. 6070-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on June 15, 2000 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 6070-3 to Appropriate Water

Notice is given that Spencer Quarries, Inc., c/o Richard Waldera, 25341 430th Ave, Spencer SD 57374 has filed an application for a water permit to appropriate 3.1 cubic feet of water per second (cfs) for dewatering of the quarry. Vested Right No. 4493-3 authorizes 1.8 cfs from this open mine pit located in the SW ¼ NE ¼ Section 24-T103N-R57W. This application is to increase the water appropriation from 1.8 cfs to 4.9 cfs. The source of water is the Sioux Quartzite and incidental surface runoff into the quarry. A total of 100 gallons per minute may be diverted to a reservoir/dugout located near the center of the NE ¼ Section 24-T103N-R57W. This water is used and recycled in the rock quarry washing process. The remainder of water is diverted from the mine pit and discharged to Wolf Creek.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends approval of Application No. 6070-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by July 3, 2000. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider this application at 10:00 am, July 12, 2000 at the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The July 12, 2000 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by July 3, 2000.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by July 3, 2000, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.



Printer's Affidavit of Publication

Affidavit of Publication

STATE OF SOUTH DAKOTA,
SS.
COUNTY OF HANSON

TERRY JANSSEN, Publisher, of said County and State, being first duly sworn on his oath, says the ALEXANDRIA HERALD is a weekly newspaper of general circulation, printed and published in Alexandria, in Hanson County, State of South Dakota, by himself and has been such newspaper during the times hereinafter mentioned; that the said newspaper is a legal newspaper, that it has a bona-fide circulation of more than 2000 copies weekly, that it has been published within said County of Hanson for more than fifty-two successive weeks prior to the publication of the notice hereinafter mentioned and has been printed during said period and at the present time, in whole in an office maintained at said place of publication; and that I, the undersigned, am publisher of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all facts in this affidavit; that the advertisement headed

Notice of hearing

a printed copy of which is hereto attached, was printed and published in the said newspaper for 2 weeks; that said notice was published in the issues of said paper on the dates as follows, to-wit: The first publication being made

15 June 2000

the second publication on 22 June 2000

the third publication on _____, 19 ____;

the fourth publication on _____, 19 ____;

and the last publication on _____, 19 ____;

that \$ 64.76 being the full amount of the fee for publication of the annexed notice, insures solely to the benefit of the publisher of the said newspaper; that no agreement or understanding for a division thereof has been made with any person; and that no part thereof has been agreed to be paid by any person whatsoever.

Terry Janssen
Subscribed and sworn to before me this 30th

day of June, 192000

Rodney L. Hammen
Notary Public, Hanson County

My Commission Expires _____

(S.A.T.)

12-5-04

NOTICE OF HEARING

ON APPLICATION NO.
6070-3 TO
APPROPRIATE WATER

Notice is given that Spencer Quarries, Inc., c/o Richard Waldera, 25341-430th Ave, Spencer SD 57374 has filed an application for a water permit to appropriate 3.1 cubic feet of water per second (cfs) for dewatering of the quarry. Vested Right No. 4493-3 authorizes 1.8 cfs from this open mine pit located in the SW 1/4 NE 1/4 Section 24-T103N-R57W. This application is to increase the water appropriation from 1.8 cfs to 4.9 cfs. The source of water is the Sioux Quartzite and incidental surface runoff into the quarry. A total of 100 gallons per minute may be diverted to a reservoir/dugout located near the center of the NE 1/4 Section 24-T103N-R57W. This water is used and recycled in the rock quarry washing process. The remainder of water is diverted from the mine pit and discharged to Wolf Creek.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends approval of Application No. 6070-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the

Chief engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E. Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or applicant must be filed by July 3, 2000. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider this application at 10:00 am, July 12, 2000 at the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol, Pierre SD. The Chief Engineer's recommendation is not final of binding upon the board. The board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The July 12, 2000 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by July 3, 2000.

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These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by July 3, 2000, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-12, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:0 thru 74:02:01:15.

Steven M. Pirner, Secretary,
Department of Environment
and Natural Resources.

25-26



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 12, 2000

Paul Robertson
42566 SD Hwy 38
Alexandria, SD 57311

Dear Mr. Robertson:

Please find a copy of the report, recommendation and publication notice in the matter of Spencer Quarries Water Right Permit Application No. 6070-3. This information is being sent to you based on your past interest in the impact of their dewatering.

The enclosed notice of hearing schedules a hearing before the Water Management Board on July 12, 2000. This notice will be published in the Alexandria Herald on June 15 and 22, 2000. If you want to participate in the hearing, you will need to submit a petition as set forth in the notice by July 3, 2000.

If you have any question about the application or hearing process, please contact Ken Buhler or myself at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 12, 2000

Calvin Heitzman
RR 1, Box 130
Spencer, SD 57374

Dear Mr. Heitzman:

Please find a copy of the report, recommendation and publication notice in the matter of Spencer Quarries Water Right Permit Application No. 6070-3. This information is being sent to you based on your past interest in the impact of their dewatering.

The enclosed notice of hearing schedules a hearing before the Water Management Board on July 12, 2000. This notice will be published in the Alexandria Herald on June 15 and 22, 2000. If you want to participate in the hearing, you will need to submit a petition as set forth in the notice by July 3, 2000.

If you have any question about the application or hearing process, please contact Ken Buhler or myself at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosure



Ken Buhler

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 15, 2000

Dick Waldera
Spencer Quarry
25341 430th Ave
Spencer, SD 57374

RE: SWD Permit Application

Dear Mr. Waldera:

Please find enclosed the application forms for a South Dakota Surface Water Discharge System Permit which you requested for the Spencer Quarry

Please fill out the General Information form, and Appendixes B and F which provides more detailed information about your operation.

It may be necessary to conduct an antidegradation review of this application and subsequent permit. This will be discussed with the water quality standards staff on receipt of your application. If an antidegradation review is necessary, you will be notified of any requirements.

During the 1992 legislative session, South Dakota Codified Law (SDCL) 1-40-27 was passed and became effective July 1, 1991. SDCL 1-40-27 states "... All applications filed pursuant to Titles 34A and 45 shall include certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit...". In accordance with SDCL 1-40-27, you will need to sign the enclosed **Certification of Applicant** form in the presence of a Notary and return the form along with your application. Failure to return the signed Certification of Applicant Form shall result in the application or renewal being considered incomplete.

When the forms are completed, send the original to us and a copy to the EPA at the following addresses:

Ms. Kelli Buscher
Surface Water Quality Program
South Dakota Department of
Environment and Natural Resources
Joe Foss Building
Pierre, SD 57501-3181

Ms. Pauline Davlos (8P2-SA)
USEPA - Region VIII
Denver Place, Suite 500
999 18th Street
Denver, CO 80202-2466

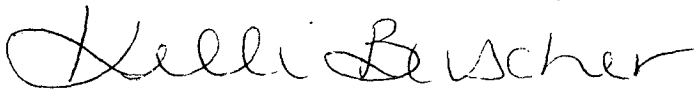
Dick Waldera
June 15, 2000
Page 2

Federal regulations allow 180 days from receipt of a completed permit application to permit issuance.

During the 1992 legislative session, the Second Century Environmental Protection Act was enacted. One part of this Act requires certain dischargers to pay an annual permit fee starting in July of 1993. After your permit is issued, we will assess the fee based on this law and the information contained in your application. It is expected that a fee for this type of facility would be \$600.

Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Kelli D. Buscher". The signature is fluid and written in dark ink.

Kelli D. Buscher, P.E.
Natural Resources Engineer
Surface Water Quality Program
(605) 773-3351

Enclosure: South Dakota Surface Water Discharge Permit Application
Appendixes B and F

cc: Pauline Davalos, EPA-Region VIII (8P2-SA)



Calvin Heitzman
43013 254th Street
Spencer, So. D. 57374

Chief Engineer
Water Rights Program
Foss Building
523 E. Capitol, Pierre SD. 57501

This letter is to petition my application to be at the hearing before the Water Management Board on July 12, 2000. My interest is in opposing the application as I have 4 water wells that have a very low and shortage of pumpable water.

Well locations NW $\frac{1}{4}$ 30-103-56
NE $\frac{1}{4}$ 25-103-57
NE $\frac{1}{4}$ 26-101-57
SW $\frac{1}{4}$ 36-103-57

We have to supplement our livestock water needs with the purchase of rural water.

I moved to this farm in 1955 NW $\frac{1}{4}$ 30-103-56. We raised about 1500 hogs a year and had several hundred cattle, always with adequate water supply as there was no rural water.

Purchased NE $\frac{1}{4}$ 25-103-57 in 1965 and made a small cattle & hog feeding operation. Has a 6" well with a very heavy flow until several years ago.

Purchased NE $\frac{1}{4}$ 26-101-57 on Sept 6, 1991 had a very good heavy flowing 6" casing well.

Purchased SW $\frac{1}{4}$ 36-1985 at that time a very adequate cow pasture water supply.

All wells have submersible pumps and have to be regulated very low gallon per min or they will suck air.

Sincerely yours Calvin D. Heitzman



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

June 29, 2000

Richard Waldera
Spencer Quarries
25341 430th Avenue
Spencer, SD 57374

Dear Mr. Waldera:

Please find enclosed a copy of a petition filed in the matter of Spencer Quarries' Water Permit Application No. 6070-3.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

July 3, 2000

Richard Waldera
Spencer Quarries
25341 430th Avenue
Spencer, SD 57374

Dear Mr. Waldera:

Please find enclosed two more petitions that have been filed in the matter of Spencer Quarries' Water Permit Application No. 6070-3. I am sending these to you since I am unsure whether the petitioner is filing a copy with you.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosure

June 29, 2000

Chief Engineer
Water Rights Program
Foss Building
523 E Capitol
Pierre, SD 57501



Dear Sirs:

This letter is in response to the notice of hearing on application no. 6070-3, Spencer Quarries, Inc.

I oppose the application of dewatering as I have a well located on NE 23-103-57 approximately one mile west of the Spencer Quarry location.

Over the past few years, my well has been running out of water towards the Fall of the year and perhaps has a direct link to the Spencer Quarry groundflow problems.

It would be to everyone's advantage if this groundflow problem could be minimized for the quarry and thus help area farmers with their well problems. Cattle are run on my pasture were my well exits and causes problems of trying to relocate cattle to another area. I have no rural water at this site.

My husband purchased this property approximately 18 years ago at which time there was no well problem. Since his death, my father-in-law, Calvin Heitzman, rents this ground from me for use of his cattle. Calvin has issued an application to appear at the hearing on July 12, 2000, and as my renter will also address my site issues at the meeting.

Sincerely,

Debra M. Heitzman
42908 253rd St
Spencer, SD 57374

To: Pursuant to 46-2A-2
Chief Engineer:

Chief Engineer:

This notice is in response to your application of #6070-3 to appropriate mater.

I feel the approval of this application will affect the amount of water that is available for my well on my farm SW 1/4 ~~4~~ - 21-103-57

The amount of water pumped from my well and the surrounding iron well has greatly decreased since the increase pumping that has taken place at the Greiner Quorins.

I feel more information should be made available before this application is approved.



Yours Truly
David Dutter

July 8, 2000

Chief Engineer
Water Rights Program
Foss Building
523 E Capital
Pierre, SD 57501



Dear Sirs:

Please remove my letter of opposition from the hearing date of July 12, 2000, regarding the application of the Spencer Quarries dewatering permit.

If there is some way to correct the water situation for the quarry and the area farmers, I would support your helping them in any way possible.

Sincerely,

Debra Heitzman

Debra Heitzman
42908 253rd St.
Spencer, SD 57374

WATER MANAGEMENT BOARD MEMBERS

Francis E. Brink, Chairman
1214 South Wells Street
Aberdeen, SD 57401-7351

Leo Holzbauer
RR 1, Box 170
Wagner, SD 57380-9681

Rodney Freeman, Jr.
P.O. Box 176
Huron, SD 57350-0176

Bernita Loucks
219 42nd Street
Rapid City, SD 57702-0240

Marian Gunderson
811 West 3rd
Yankton, SD 57078-3702

BOARD ATTORNEY

John Guhin, Deputy Attorney General
Office of Attorney General
Natural Resources Section
State Capitol Building
Pierre, SD 57501

WATER RIGHTS PROGRAM
Department of Environment and
Natural Resources

Garland Erbele, Chief Engineer
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

STAFF ATTORNEY

Diane Best
Assistant Attorney General
Office of Attorney General
Natural Resources Section
State Capitol Building
Pierre, SD 57501

CERTIFICATION

I hereby certify that on August 2, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated August 2, 2000, along with the names and addresses of the Water Management Board Members, regarding Preparation of Findings of Fact, Conclusions of Law and Final Decision for Water Permit Application No. 6070-3, addressed as stated below:

Dick Waldera
Spencer Quarries
25341 430th Ave.
Spencer, SD 57374

Calvin Heitzman
RR 1, Box 130
Spencer, SD 57374

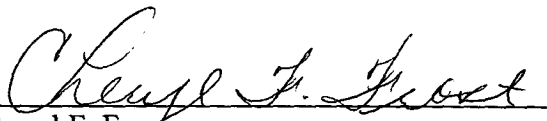
Richard Sweetman
P.O. Box 84140
Sioux Falls, SD 57118-4140

Lee McCahren
117 E. Capitol Ave.
Pierre, SD 57501

A copy of the above described Notice and attachment was sent Inter-office to:

John Guhin, Deputy Attorney General, Capitol Building.

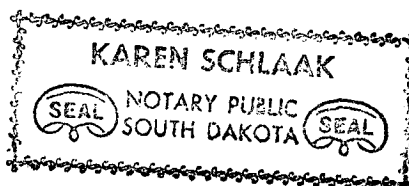
Diane Best, Assistant Attorney General, Capitol Building.


Cheryl F. Frost
Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 3rd day of August, 2000


Notary Public



KAREN SCHLAACK, Notary Public
My Commission Expires
April 1, 2002

STATE OF SOUTH DAKOTA
BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE	)	
APPLICATION FOR WATER PERMIT	)	FINDINGS OF FACT,
NO. 6070-3, SPENCER QUARRIES, INC.	)	CONCLUSIONS OF LAW, AND
	)	FINAL DECISION
	)	

FINDINGS OF FACT

1. This is an application to increase the diversion rate authorized from the Spencer Quarries by 3.1 cfs. Vested Right No. 4493-3 currently authorizes a 1.8 cfs diversion.

2. The source of the water at issue is the Sioux Quartzite Formation. The Sioux Quartzite is a sedimentary formation that consists mainly of silica cemented quartz grains. Fractures and joints within the formation are typically the source of ground water to wells.

3. The position of Spencer Quarries (hereinafter Spencer) is radically different from most applicants coming before this Board. Spencer has not sought the water for which it seeks a permit.

4. The need for Spencer to seek the permit at issue arose in the spring of 1995 when it drilled into unconsolidated materials seventy feet above the current quarry floor. That material contained water under artesian conditions. Water started flowing into Spencer at that time. It was believed by the managers that the source of the water was from a small slough area or locally trapped water. Spencer installed pumps to try to control the amount of water in Spencer. Ultimately, Spencer contacted the Water Rights Program. The Water Rights Program

informed Spencer that the water in question could be classified as ground water based upon a temperature of about fifty-one degrees. Upon testing, it was concluded that the water in fact was about fifty-one degrees and was ground water.

5. The quarrying resulted in a large inflow of water at a location 135 to 140 feet below grade. The zone where ground water was encountered appears to be associated with two intersecting joints or fractures in the Quartzite. The amount of water flowing through the joints is approximately two million gallons per day.

6. In 1998, Spencer filed the present water permit application to request an additional diversion rate to handle the increase flow. The application was deferred to allow Spencer to investigate methods to minimize ground water into Spencer.

7. Spencer has been conscientious in attempting to halt the flow of water. For example, Spencer contracted with Western States Mining Consultants. The consultants devised a plan by which holes would be drilled and expandable foam injected to cut off the flow of water. This project, for which Spencer was charged \$131,975.00, was unsuccessful. The foam was injected and successfully halted the flow of water where smaller amounts were flowing. Where greater amounts were flowing, however, the foam did not have an adequate chance to set up. As a result, the flow of the water was, in fact, concentrated from the areas of lower flow (which was halted) to the areas of greater flow, which could not be halted.

8. Spencer also investigated the idea of installing anchor bolts and constructing a large concrete room to trap the water. Spencer was unable to find a sound rock formation in which the room could be anchored. . Spencer spent \$17,000.00 on the project before abandoning it.

9. Spencer has also spent a large amount of additional money on pumps and on electricity to run the pumps. The electricity for the pumps, according to Spencer, has cost \$3,000 per month; the pumping had occurred for sixty-one months at the time of hearing.

10. The aggregate costs of the unwanted water to Spencer are in excess of \$360,000.00.

11. A small amount of the water flowing into Spencer is used for processing purposes. The majority of the water is pumped to Wolf Creek for dewatering purposes.

12. There is no estimate of the amount of water in storage in the Sioux Quartzite at issue.

13. The Water Rights Program does not have any observation wells in the immediate area of the application. The precise effect of quarry dewatering cannot be measured.

14. Nonetheless, the Water Rights Program has several observation wells beyond the immediate area of the quarry which indicate that the dewatering which has already occurred may have had an effect on the water levels in the quarry area. A hydrograph for an observation well 3.5 miles north of the application indicates that water levels in this well began declining in the spring of 1995, at about the time the water at

issue was encountered, and declined about six feet between April 1995 and October 1999, when the water level stabilized.

15. An observation well in the Floyd: East James Aquifer may also be relevant. This aquifer may be hydraulically connected to the Sioux Quartzite. The aquifer extends one-half mile north of Spencer into Beadle County. The observation well in question shows a decline of 5.9 feet between April 1995 and October 1999, when the well stabilized.

16. Another seven observation wells in the area showed declines beginning in the spring of 1995 and stabilizing in 1999.

17. The DENR provided testimony regarding the level of decline in its observation wells, in formations that may be hydraulically connected to the Sioux Quartzite. Water levels in the Sioux Quartzite itself have not been measured. The exact decline in the quartzite at the quarry site has not been quantified.

18. There is no reasonable possibility of interference with any existing water permit appropriating ground water in the area. The nearest active ground water permit is located eleven miles to Spencer and, given this distance and the hydrology of the Sioux Quartzite, Spencer dewatering will have no effect on this water right which is held by the City of Salem.

19. The Sioux Quartzite is a source of water to a number of domestic wells in the area. Two complaints were received alleging impacts. One of the complainants opposes the grant of the present permit.

20. Calvin Heitzman (hereinafter Opponent) testified that he has always had adequate water in the summer months, but that, in the last few years, he has not had adequate water and has had to rely more on rural water.

21. The Opponent testified that he believes the dewatering of Spencer has caused water in four of his wells to decline. He testifies that his problem with the wells began after 1995, the time at which the dewatering began. He also testified that he could tell the static water level from the rust on the piping.

22. The Opponent testified that the lack of water hindered his ability to provide water for his extensive cattle operations.

23. The Board finds that Opponent has failed to show that the dewatering of the Sioux Quartzite has had an effect on Opponent. The Board finds that there has been insufficient evidence produced as to the levels of water in Opponent's pump before and after the dewatering began. The Board also finds that Opponent has not shown that his problems have arisen because of the dewatering. For example, the Board finds that a well may not produce because of calcium carbonate and scaling, which diminishes the ability of the well to produce water. Such problems are to be expected in this area.

24A. As addressed above, the DENR observation wells previously showed declines in the area of the Spencer Quarry. While such declines may be attributed to dewatering of the Spencer Quarry, the exact extent of any such decline is not calculated. Because the observation wells do, however, show some correlation between the extent of dewatering and water levels in

the quarry area, very recent trends should also be recognized. In other words, if the decline in water levels and observation wells during the period 1995 through 1998 is considered to demonstrate that the dewatering has lowered water levels in the immediate area of the Quarry, then observation well data from 1998 through 2000 would tend to show that the decline has peaked and the water level in the Spencer Quarry area has stabilized (i.e., reached equilibrium). The effects on Mr. Heinzman will not worsen.

24B. As a practical matter, it would be difficult if not impossible to halt the flow of water into the Spencer Quarry. Consequently, if the permit were denied, water would continue to enter the quarry, but Spencer Quarry could no longer pump at a rate sufficient to dewater the quarry. Spencer Quarry could not operate under this scenario.

CONCLUSIONS OF LAW

1. The Board has jurisdiction in this matter.
2. There is a reasonable probability that there is unappropriated water available for the Applicant's proposed use.
3. The proposed diversion can be developed without unlawful impairment of existing rights. As set forth in the Findings, the water levels in the area have stabilized, and as a result, the previous decline in the water level in the quarry area has been halted. Therefore, future diversions will not impair existing rights, including the domestic right of Opponent.
4. The Board finds that the proposed use is beneficial. The beneficial use will be, in part, to use a small part of the

water in the washing process. The major part of the water will simply be routed through the operation to Wolf Creek. The routing of the water through the operation is of beneficial use to Applicant because if the water were not routed through the area, Spencer would be unusable.

5. The grant of the permit is in the public interest. The Applicant has inadvertently caused the water to enter his operation and now seeks a rational way to deal with the problem. The grant of the permit regularizes his use and subjects it to the scrutiny of the State and to its administrative procedure.

6. Because the formation in question is older than greenhorn formation, Opponent was not required, in the present proceeding, to comply with SDCL 46-6-24; in other words, Opponent was not required to demonstrate that his well was "adequate," as defined by SDCL 46-6-6.1 to be afforded protection. Nor will Opponent, or any other domestic user in a similar position, be required to meet that qualification.

FINAL DECISION

Application No. 6070-3 is approved with the following qualifications:

1. The diversion of water for dewatering purposes approved under this permit will be located near domestic wells and other wells which may obtain water from the Sioux Quartzite or aquifers hydraulically connected to the quartzite. Spencer Quarries under this Permit shall control its withdrawals so there is not a reduction of needed water supplies in wells constructed into the

Sioux Quartzite or in adequate wells completed into aquifers hydraulically connected to the quartzite.

2. Spencer Quarries shall report to the Chief Engineer annually the amount of water pumped.

3. Permit No. 6070-3 is subject to Spencer Quarries obtaining a surface water discharge permit from the Department of Environment and Natural Resources.

Dated this 16 day of October, 2000.

BY THE BOARD:



Francis Brink, Chairman

wmb.jpg Spencer Quarries
(mjj)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

October 18, 2000

NOTICE

TO: Dick Waldera Calvin Heitzman
Spencer Quarries RR 1, Box 130
25341 430th Ave. Spencer, SD 57374
Spencer, SD 57374

Richard Sweetman Lee McCahren
P.O. Box 84140 117 E. Capitol Ave
Sioux Falls, SD 57118-4140 Pierre, SD 57501

FROM: Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

SUBJECT: Adoption of Findings of Fact, Conclusions of Law and Final Decision

This is to notify you that the Final Decision, including Findings of Fact and Conclusions of Law, were adopted September 27, 2000, by the Water Management Board approving Water Right Permit Application No. 6070-3, Spencer Quarries. A copy of the signed Findings of Fact, Conclusions of Law and Final Decision is enclosed.

South Dakota statutes provide that decisions of the Board may be appealed to the Courts. Notice of appeal of the Board's decision must be filed within thirty days of this notice and be in accordance with procedures established in SDCL 1-26-31.

Enclosure

c: John Guhin, Deputy Attorney General
Diane Best, Assistant Attorney General

CERTIFICATION

I hereby certify that on October 18, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated October 18, 2000, regarding the adoption of Findings of Fact, Conclusions of Law and Final Decision in the matter of Water Right Permit Application No. 6070-3 for Spencer Quarries, Inc., addressed as stated below:

Dick Waldera
Spencer Quarries
25341 430th Ave.
Spencer, SD 57374

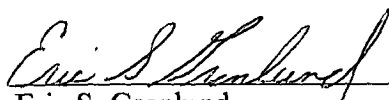
Calvin Heitzman
RR 1, Box 130
Spencer, SD 57374

Richard Sweetman
P.O. Box 84140
Sioux Falls, SD 57118-4140

Lee McCahren
117 E. Capitol Ave
Pierre, SD 57501

A copy of the above described Notice was sent Inter-office to:

John Guhin, Deputy Attorney General, Capitol Building
Diane Best, Assistant Attorney General, Capitol Building



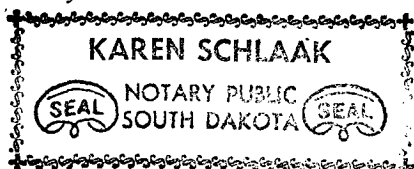
Eric S. Gronlund
Natural Resources Engineer
Water Right Program

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 19th day of October, 2000.



Karen Schlaak
Notary Public



KAREN SCHLAACK, Notary Public
My Commission Expires
April 1, 2001



FEB 15 2001

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

6070-3

Dick Waldera
Spencer Quarries
25341 40th Ave.
Spencer, SD 57374

Dear Mr. Waldera:

Enclosed is Water Permit No. 6070-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *?Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

c: Richard Sweetman, Terin Corporation

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date 2-28-01

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181



FROM:

Spencer Quarries, Inc.
(name)

25341 430th Ave
(address)

Spencer, S.D. 57374
(city, state, zip)

605-246-2344
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 6070-3 states that the water use system is to be constructed by

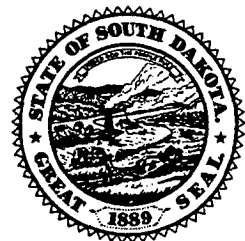
Sept 27, 2005 (date), and water is to be put to beneficial use by Sept. 27, 2009 (date).

The water use system was completed on March 27, 2003 ? (date).

Applying the water to beneficial use was completed on Sept 27, 2009 (date).

You may schedule an investigation so that the water license may be issued.

Richard Waldern Gen. Mgr.
(signature)



Water Permit No. 6070-3
James River - Water District

Report of Examination of Works and/or Application of Water to Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, June 23, 2015, made a thorough examination of the water use system constructed by Spencer Quarries, Inc. of 25341 430th Ave., Spencer, SD 57374 holder of Permit No. 6070-3, bearing the priority of March 30, 2000 authorizing the diversion of 3.1 cubic feet per second (cfs) of water for Commercial purposes, in Hanson County.

Inspection contact & relationship **Todd Waldera**
to permit holder, if applicable:

A. Works used to divert the water:

Pump #1:

- 1) Make Grand Island
- 2) Model Unknown
- 3) Capacity 1,300 GPM

Motor:

- 1) Make High Thrust
- 2) Model No. 405TP
- 3) Horsepower rating 100 hp

Pump #2:

- 1) Make Grand Island
- 2) Model Unknown
- 3) Capacity 2,200 GPM

Motor:

- 1) Make GE
- 2) Serial No. 5K4060860033
- 3) Horsepower rating 125 hp

B. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period NA
- 3) Exceptions to compliance are: None

The system is in Good condition with the point(s) of diversion located as follows:

Pumps from Mining Pit:

Approximately 2,285 feet south and 1,350 feet west of the NE corner of Section 24-T103N-R57W
(N 43.71053, W -97.61195) (SW ¼ NE ¼)

The works are capable of diverting and conveying to the place of use 3.1 cfs of water which is to be used for Commercial use.

The license should be issued for 3.1 cfs.

All structures, wells and lands on map Y

Comments or other permit(s) associated with the project:

Water Permit No. 6070-3 appropriates 3.1 cfs for dewatering of the quarry. Vested Right No.4493-3 authorizes 1.8 cfs from this open mine pit located in the SW ¼ NE ¼ Section 24-T103N-R57W. This permit increases the water appropriation from 1.8 cfs to 4.9 cfs. The source of water is the Sioux Quartzite and incidental surface runoff into the quarry. Water is used and recycled in the rock quarry washing process, and the remainder is diverted from the mine pit and discharged into Wolf Creek.

The quarry pit has two pumps capable of diverting water from the pit. Each pump system is valved to direct water into two connected ponds which enter Wolf Creek directly or can be diverted to a rock washing pond used in the gravel washing process. The pumps are not operated continuously or simultaneously. Water used in the gravel washing operation is returned back to the quarry into a separate quarry pit located in the NE ¼ NE ¼ Section 24-T103N-R57W. This water does not return water to the original quarry pit used to divert water into Wolf Creek.

Water Permit No. 6070-3 also has qualifications to report to the Chief Engineer the annual amount of water pumped and subject to obtaining a surface water discharge permit. Spencer Quarries has been reporting their annual water use and did obtain Industrial Storm Water Discharge Permit No. SDR00A651.



Mike DeFea

Natural Resources Engineer II
DENR, Water Rights Program

Date report completed: August 14, 2015

Spencer Quarries

Water Permit No. 6070-3



Mike DeFea

Mike DeFea
Natural Resources Engineer
DENR, Water Rights Program
June 17, 2015



South Dakota
Department of Environment
& Natural Resources
Protecting SD's Tomorrow... Today



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

August 25, 2015

6070-3

Todd Waldera
Spencer Quarries, Inc.
25341 430th Ave
Spencer SD 57374

Dear Mr. Waldera:

On June 23, 2015 an investigation of the water use system, including the extent of application of water to beneficial use, as developed under Water Permit No. 6070-3, was completed by Mike DeFea, a staff engineer with our program. The final water right document, the water license, can now be issued.

State law requires that we charge a \$50.00 fee for the investigation and issuance of the water license. Upon receipt of the \$50.00 fee from you, we will complete processing the water license. The check or money order for the fee should be made payable to the "Water Rights Program".

The licensed water right will be similar to a property right that cannot be lost as long as the water use continues and you abide by the permit requirements.

If you have any questions regarding the water permit, investigation of the water use system or payment of the fee, please contact me.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/3, 20 15

RECEIVED OF Spencer Quarries Inc PO Box 198 Spencer SD 57374

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	50	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>6070-3</u>		
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	50 00

No. 07482

By Jane Goodman
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

SEP 08 2015

6070-3

Todd Waldera
Spencer Quarries Inc
PO Box 198
Spencer SD 57374

Dear Mr. Waldera:

Enclosed is Water License No. 6070-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

A handwritten signature in cursive script that reads 'Jeanne Goodman'.

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 6070-3**

(1) Spencer Quarries, 25341 430th Ave, Spencer SD 57374 made Application No. 6070-3, April 15, 1998 for a water permit to divert 3.1 cubic feet of water per second from ground water and runoff (open mine pit), Hanson County, South Dakota for commercial purposes. Permit No. 6070-3, with a priority date of March 30, 2000 was approved September 27, 2000 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 27, 2005 and for the application to beneficial use of said water on or before September 27, 2009.

The total system is capable of 4.90 cubic feet of water per second (cfs). Vested Water Right No. 4493-3 authorizes 1.8 cfs and Water Permit No. 6070-3 authorizes the remaining 3.10 cfs.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 3.10 cubic feet of water per second for beneficial use.

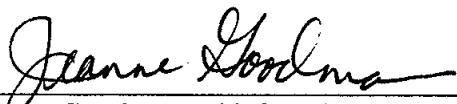
The location of the pit is approximately 2,285 feet south and 1,350 feet west of the NE corner of Section 24, T103N, R57W (SW ¼ NE ¼). The quarry pit has two pumps capable of diverting water from the pit. Each pump system is valved to direct water into two connected ponds which enter Wolf Creek directly or can be diverted to a rock washing pond used in the gravel washing process. Water used in the gravel washing operation is returned back to the quarry into a separate pit located in the NE ¼ NE ¼ Section 24, T103N, R57W.

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use. Water is used and recycled in the rock quarry washing process with the remainder diverted from the mine pit and discharged to Wolf Creek.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Spencer Quarries, 25341 430th Ave, Spencer SD 57374 the holder and/or owner of Water Right No. 6070-3 is issued a license to appropriate water, the right to use 3.10 cubic feet of water per second from ground water (open mine pit) and runoff with a priority date of March 30, 2000 from the location specified in (2) of this license for commercial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 6070-3 and subject to the following qualifications:

- The diversion of water for dewatering purposes approved under this permit will be located near domestic wells and other wells which may obtain water from the Sioux Quartzite or aquifers hydraulically connected to the quartzite. Spencer Quarries under this Permit shall control its withdrawals so there is not a reduction of needed water supplies in wells constructed into the Sioux Quartzite or in adequate wells constructed into aquifers hydraulically connected into the quartzite.
- Spencer Quarries shall report to the Chief Engineer annually the amount of water pumped.
- Permit No. 6070-3 is subject to Spencer Quarries obtaining a surface water discharge permit from the Department of Environment and Natural Resources. *Spencer Quarries holds Industrial Storm Water Discharge Permit No. SDR00A651.*



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

SEP 08 2015

date

