

WATER PERMIT NO. 1646-1

Name of Applicant: Fisher Sand & Gravel Company

Address: HCR 30, Box 1A, Spearfish SD 57783

Phone: 605 642-5760

Amount of Water Claimed: 52 acre-feet annually

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: industrial

County: Lawrence

Type of Waste Disposal System:

Location: approximately 2 miles northeast of Spearfish

PRIORITY

Date Received: 12-4-96

Fee: \$\$150

Corrected Application Received: 12-20-96

Period of Annual Use: January - December 31

Remarks:

Diversion Point: NW 1/4 SW 1/4 Sec 29-T7N-R2E

Land to be Irrigated: NA

		29			
	X				

Depth of Well: 1080 feet deep

Well Driller: Graf Drilling

Remarks:

Type of Map: topographic map

Prepared by: Ray Leahy

Reviewed and the Number Assigned on: 12-20-96

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA WATER PERMIT NO. 1646-1

Date of first receipt of application December 4, 1996.

Date of return to applicant for corrections, amendments or changes December 5, 1996.

Date of receipt of corrected application December 20, 1996.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1646-1 to Fisher Sand & Gravel Company, HCR 30 Box 1A, Spearfish SD 57783 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. 1646-1 appropriates 0.78 cubic feet of water per second (52 acre-feet annually) from one well (Minnelusa Formation) 1,080 feet deep located in the NW 1/4 SW 1/4 Section 29-T7N-R2E.
2. The water appropriated shall be used for the purpose of a sand and gravel processing operation and may not exceed the amount of water needed for beneficial use for industrial use.
3. The water is to be used during the following described annual period: January 1- December 31.
4. The date of approval of Permit No. 1646-1 is March 24, 1997.
5. The date from which applicant may claim right is December 4, 1996.
6. One-fifth of the construction is to be completed on or before September 24, 1999.
7. All construction is to be completed on or before March 24, 2002.
8. Water is to be put to beneficial use on or before March 24, 2006.
9. 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 well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used (directly or for storage purposes). The well shall also be equipped with a pressure gauge and a record kept of any pressure fluctuations. Such records shall be available to the Chief Engineer upon request. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

WATER MANAGEMENT BOARD

By: John Hatch
John Hatch, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUN 11 1997
date



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	(office use only)	
	No. <u>1446-1</u>	Hydrologic Unit <u>10/20203</u>
	Basin <u>Belle Fourche River</u>	
	Newspaper <u>Black Hills Pioneer, Spearfish, SD</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.) _____

1. Name of Applicant FISHER SAND & GRAVEL COMPANY Phone 605-642-5760
(check one) ☐ Owner ☒ Tenant/lessee

Mailing Address HCR 30, BOX 1A, SPEARFISH State SO. DAK. 57783
(Street, RR. or Box) (Zip Code)

2. Amount of water claimed 0.78 *CFS or 275 **GPM 52 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply WELL

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) WELL-SW1/4NW1/4SW1/4 SECTION 29
TWP. 7 N; RG. 2 E.

County LAWRENCE

5. County or counties where water will be used LAWRENCE

6. Annual period during which water is to be used JAN. DEC; PRIMARILY MAY - SEPTEMBER

7. 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)

WATER TO BE USED FOR THE PROCESSING OF SAND AND GRAVEL AT FISHER SAND & GRAVEL COMPANY'S McGUIGAN PIT, A COMMERCIAL AGGREGATE SOURCE.

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)

STATE OF SOUTH DAKOTA)
SS
County of LAWRENCE)

I, RAY LEAHY, 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 Ray Leahy

Subscribed and sworn to before me this 3rd day of DECEMBER 1996

My Commission Expires
July 7, 2004

Angie M. Smith
Notary Public

Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 12 1/4" Depth 1080 ft.
- b) Casing Type STEEL Diameter 8" Thickness 3/8"
- c) Screen Type NO SCREEN Diameter OPEN HOLE Thickness _____
- d) Gravel Pack Thickness NO GRAVEL PACK Length of Gravel Pack GROUTING USED
- e) Depth to Top of Water Bearing Material 530'
- f) Depth to Water (ground surface to water level) FREE-FLOWING WITH SHUT-OFF VALVE @ 540'
- g) Distance to nearest existing domestic well: 3,300 ft.
- On applicants property _____ On property owned by others X

2. Wastewater Disposal System Information

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

3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

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

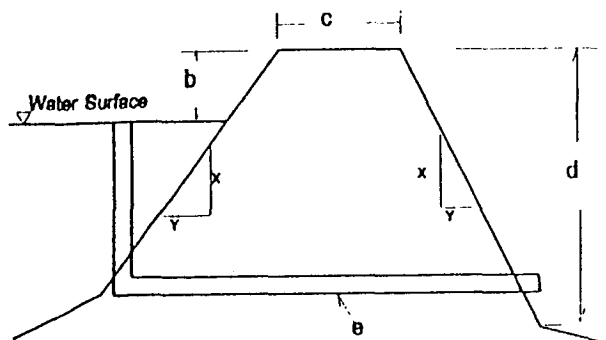
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Water Consumption at McGuigan Pit, Spearfish, So. Dak.

The primary use of water from this well will be for the washing of sand and rock. The following is a calculation of the water use from this well:

Washing operations will entail not exceed 5 months in any year. Time period: 5 months = 22 weeks at 5 days/week = 110 days. 110 days at 12 hours/day = 1,320 hours.

1,320 hours at 80% efficiency = 1,056 hours of production.

Production of the wash plant used is 200 tons per hour.

1,056 production hours X 200 tons/hour = 211,200 tons of product. With the use and recirculation system of the ponds, water usage will approximately 80 gallons of water per ton of finished product. 211,200 tons of finished product X 80 gallons of water/ton = 16,896,000 gallons.

16,896,000 gallons at 325,851 gal./acre-feet = 52 acre-feet.

This facility will use a maximum of 52 acre-feet in any given year.

Annual volume of water to be used at the facility = 52 acre-feet

Prepared by:

Ray Leahy
Mining Engineer
Fisher Sand and Gravel Co.

RECEIPT

Division of Water Rights

415196

South Dakota Department of Environment and Natural Resources

Pierre, _____ December 4, 19 96

RECEIVED OF Fisher Sand & Gravel Company, HCR 30, Box 1A, Spearfish, SD 57783

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

Fee for Application for Permit No. <u>1646-1</u> to Appropriate Water, to construct and to put water to beneficial use _____	150	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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	150 00

By John Hatch
Chief Engineer

WATER WELL

SW 1/4 NW 1/4 SW 1/4 SECTION 29

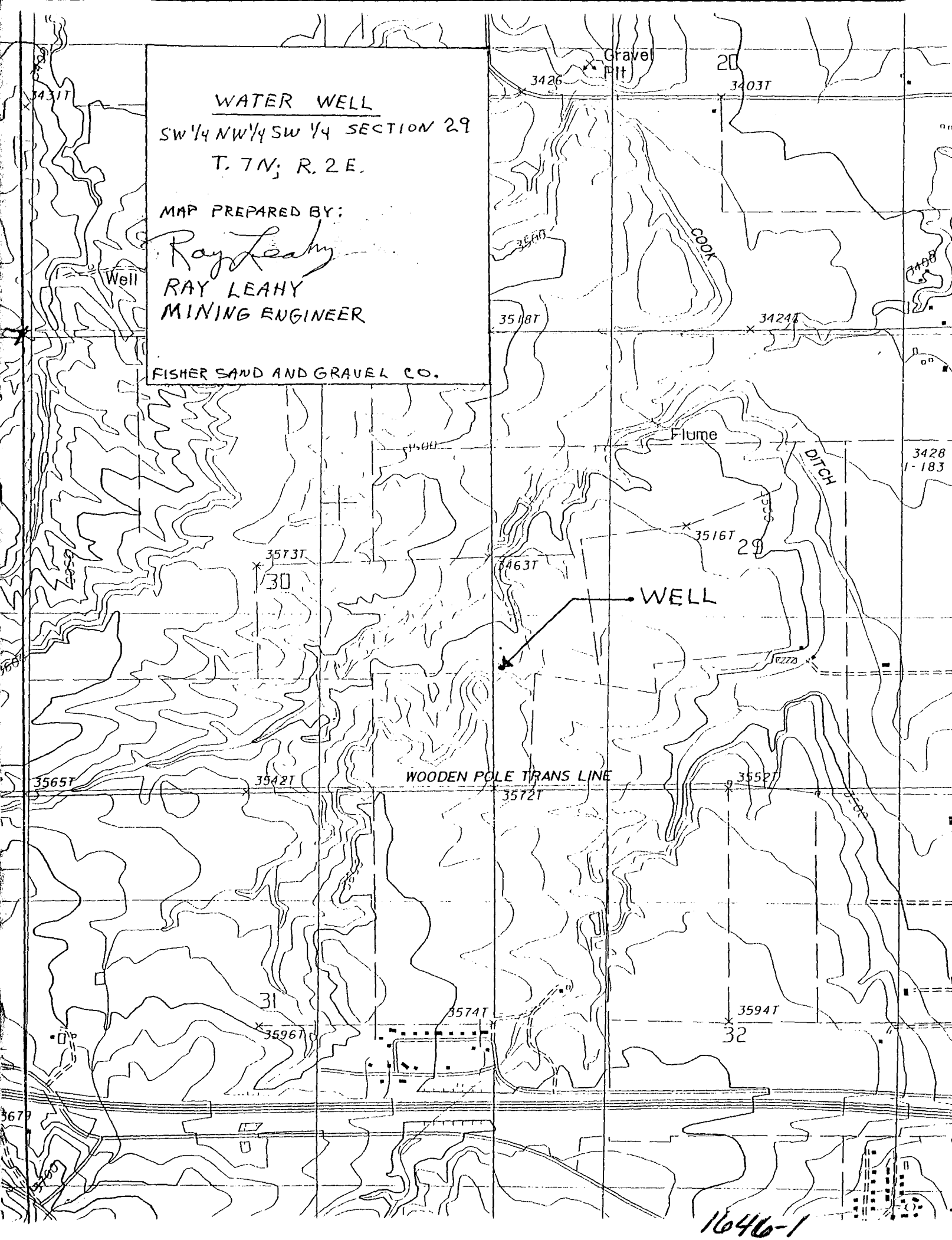
T. 7 N.; R. 2 E.

MAP PREPARED BY:

Ray Leahy

RAY LEAHY
MINING ENGINEER

FISHER SAND AND GRAVEL CO.





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

www.state.sd.us/denr

DIVISION 1

**TEMPORARY PERMIT TO USE PUBLIC WATERS
FOR HIGHWAY CONSTRUCTION PURPOSES**

This temporary permit to use public waters for highway construction purposes is issued to Stanley J Johnsen Concrete Contractor, Inc., of PO Box 2274, Rapid City, SD 57709-2274 authorizing withdrawal of 300,000 gallons of water at a maximum rate of 20,000 gallons per day from ground water (Minnelusa) located in the NW ¼ SW ¼ Section 29, T7N, R2E. The water will be used for construction purposes on Project No. NH-PH 90-1(111)8, PCEMS 3695, Lawrence County.

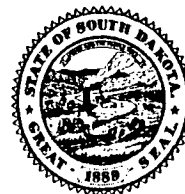
The well authorized for use under this temporary water permit is described in Water Permit No. 1646-1, held by Fisher Sand and Gravel Company. Use of water under this temporary water permit must comply with the following qualifications listed in Water Permit No. 1646-1:

- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well shall be valved and the flow reduced to the amount needed or to a minimum when not being used (directly or for storage purposes). The well shall also be equipped with a pressure gauge and a record keep of any pressure fluctuations. Such records shall be available to the Chief Engineer upon request. If this well is abandoned or the permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

This temporary permit becomes effective April 1, 2002 and expires on August 1, 2002.

This permit does not provide necessary right-of-way. Such arrangements should be made with the proper land owner.

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



Issued: March 11, 2002

c: Mike Erickson, Minerals & Mining Program (via email)
SD DOT Environmental Office
Ray Leahy, Fisher Sand & Gravel, HCR 30 Box 1A, Spearfish, SD 57783

NOTE: A temporary permit application form is now available on the internet. You may complete an application form on-line and submit the application directly to the Water Rights Program. The address of the form is www.state.sd.us/denr/des/waterrights/temp_form.htm



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

May 16, 1996

Joe Graf
RR 2, Box 2245
Belle Fourche, SD 57717

Dear Mr. Graf:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21, Graf Drilling Company is authorized to construct a test well in the SE 1/4 NE 1/4 Section 30, T7N-R2E, for Fisher Sand and Gravel prior to approval of a water permit. The test well must be constructed in accordance with the South Dakota Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the South Dakota Well Construction Standards.

Very truly yours,

JAMES A. GOODMAN, P.E.
Natural Resources Engineer
for JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

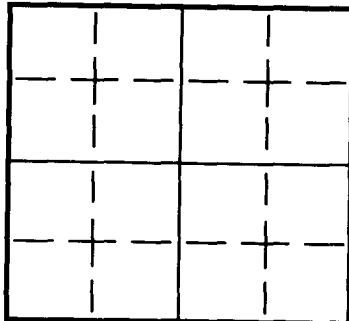
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 30 Twp 7N Rg 2ECounty LAWRENCE

North

Please mark well location with an "X"

Fisher Sand & Gravel
HCR 30, BOX 1A
Spearfish, SD
57783Well Completion Date 8-2-96

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? _____ ft. from _____ (identify source).

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test Holes
☐ Irrigation ☒ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

ROTARY

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
_____ LB/FT	<u>8 1/2</u> IN	<u>0</u> FT	<u>370</u> FT	<u>12 1/4</u> IN
<u>15.50</u> LB/FT	<u>5 1/2</u> IN	<u>360</u> FT	<u>720</u> FT	<u>7 3/8</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
_____	<u>1.35</u>	_____ lb./gal	<u>0</u> ft.	<u>370</u> ft.
_____	<u>60</u>	_____ lb./gal	<u>360</u> ft.	<u>720</u> ft.

Describe grouting procedure _____

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information OPEN HOLE 720-1080WAS A PACKER OR SEAL USED? ☐ YES ☐ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION:

Was well disinfected upon completion? X YES, How: CHLORINE
in LAST LOAD OF WATER NO, Why Not? _____

Laboratory sent to for water quality analysis _____

 Well Owner: Fisher Sand & Gravel
 Business Name: Fisher Sand & Gravel
 Address: St. Rt. 5, Spearfish, SD 642-5760

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
SURFACE	0	4
GRAVEL	4	7
RED BEDS	7	370
LIME STONE	370	402
RED BEDS - OPEACHE	402	510
HARD SAND LIME - YELLOW - WHITE	510	530
LOOSE SAND - LIMESTONE	530	700
LIME - RED - GRAY CLAY HARD SAND LAYERS	700	920
RED - MAROON CLAY	920	950
LIME - SAND - WHITE CLAY	950	980
GRAY LIME - GRAY SAND	980	1080

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow 75 through _____ inch pipeControlled by ☒ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? yes

WELL TEST DATA:

☐ Pumped Describe: _____☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

290 ft. After _____ Hrs. pumped 350 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate 6" Turbon GPM

REMARKS

This well was drilled under license # 327

And this report is true and accurate.

Drilling firm GRAF DRILLING

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 8-2-96



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

November 15, 1996

Fisher Sand & Gravel
ATTN: Ray Leahy
HCR 30, Box 1A
Spearfish, SD 57783

Dear Mr. Leahy:

After reviewing a well completion report filed by Graf Drilling for a well they completed for you on August 2, 1996, it appears that you need a water permit. On November 15, 1996 I visited with you about the new well and you stated during our phone conversation that the well produced approximately 300 gallons per minute (GPM) for Industrial use at Fisher Sand & Gravel in Lawrence County. A water permit must be obtained for this water use.

Enclosed is a copy of the South Dakota Water Well Completion Report which was filed by Graf Drilling upon completion of the well. Also enclosed is an application for a water permit for uses other than irrigation. Please return the completed application form with the correct fee to the "Water Rights Program, 523 East Capitol, Joe Foss Building, 523 East Capitol, Pierre, SD 57501" by December 6, 1996. If you have questions or need assistance, feel free to contact me at (605) 773-3352.

Sincerely,

Barry A. McLaury
DENR, Water Rights Program



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

December 5, 1996

Fisher Sand & Gravel Company
Ray Leahy
HCR 30, Box 1A
Spearfish SD 57783

Dear Mr. Leahy:

We received your *Application for a Permit to Appropriate Water* on December 4, 1996.

The map is being returned because it must be signed by one of the following: SD Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties (i.e. local NRCS office).

The \$150 check submitted as the application filing fee has been receipted. The application states the maximum diversion rate from the well is 275 gallons per minute. The application filing fee for this amount of water is \$275. An additional fee of \$125 is required if the fee is based on diversion rate. However, calculating the fee based on the annual volume (acre feet) of water used at the facility instead of maximum diversion rate should result in a smaller filing fee. Please estimate the annual volume of water to be used at the facility and apply the following fee schedule.

first 120 acre feet of water	\$150
second 120 acre feet of water	\$ 75
each additional unit of 120 acre feet of water.	\$ 25

If the facility will use less than 120 acre feet of water annually, the submitted \$150 filing fee is correct. Please indicate the estimated volume of water the facility will use each year.

If you have any questions regarding the filing fee or map, please contact Eric Gronlund, with this office.

Sincerely,

Karen Schlaak

Karen Schlaak
Environmental Scientist
605 773-3352

enclosure

December 17, 1996

Fisher Sand and Gravel Company
HCR 30, Box 1A
Spearfish, S.D. 57783

Water Rights Program
Attn: Eric Gronlund
Joe Foss Building
523 East Capitol
Pierre, S.D. 57501

Dear Eric,

Please find enclosed water use calculations for the
McGuigan Pit located near Spearfish, South Dakota.

Also find enclosed the map of the water well. As we
discussed on Tuesday, if this should not suffice, I will
certainly get the map signed by a South Dakota Registered
Land Surveyor.

Thank you.

Sincerely,



Ray Leahy
Fisher Sand and Gravel Company



**Water Rights Division
File Documentation**

NAME OF PERSON OR FILE: Ray Leahy, Fisher Sand & Gravel

ADDRESS: HCR 30, Box 1A, Spearfish, SD COUNTY: Lawrence

DATE: February 18, 1997 TELEPHONE: (605) 642-5760

RE: Diversion Rate claimed for Application No. 1646-1

COMMENTS:

Mr. Leahy contacted me today to clear up a discrepancy in Fisher Sand & Gravel Co.'s application. The application claimed 275 GPM but the Completion Report for the well indicated the well was capable of producing 350 GPM. Mr. Leahy indicated that the application should have been for 350 GPM. I informed Mr. Leahy that we would change the application. Since the application fee (\$150.00) was based on 52 AF. The application fee will not change.



Ken Buhler
Natural Resources Engineer

**WATER PERMIT APPLICATION NO. 1646-1
FISHER SAND & GRAVEL COMPANY
FEBRUARY 7, 1997**

Water Permit Application No. 1646-1 proposes to appropriate 0.78 cubic feet of water per second (52 acre-feet annually) from one well (Minnelusa Aquifer) 1080 feet deep located in the NW¼ SW¼ Section 29, T7N-R2E. The water is for industrial use at a sand and gravel processing operation.

INTRODUCTION:

SDCL 46-2A-9 requires that a permit to appropriate water may only be issued if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the questions of water availability and the affects on existing rights.

WATER SOURCE: Minnelusa Formation (MNLS)

General Information:

The Minnelusa Aquifer is an assemblage of alternating beds of sandstone and dolomitic limestone with lesser amounts of red and black shale and chert. Because the lithology of the Minnelusa is so variable, the porosity of the formation is also variable and difficult to determine. Well sorted sand lenses have porosities approaching 25%, but generally the sands have porosities of 10%. The average porosity of the Minnelusa is estimated to be 10% and the effective porosity is assumed to be 5% (Rahn, 1979). The Minnelusa formation underlies approximately 199,680 acres of Lawrence County and contains an estimated 5,591,040 acre-feet of recoverable water in storage (Allen, 1984). There is no aquifer-test data available for the Minnelusa Aquifer in this area; therefore, the aquifer transmissivity and storage coefficient are unknown. Estimates from regional studies of the aquifer indicate the aquifer transmissivity may range from 30 to 1000 ft²/d, and the storage coefficient ranges from 6.6×10^{-5} to 2×10^{-4} (Kyllonen, 1987).

The well completion report submitted with this application indicates the top of the Minnelusa Formation is 510 feet below ground surface at this site and the well flows 75 gpm. The completion report indicates the well was constructed in accordance with the S Well Construction Standards.

Water Availability:

The availability of unappropriated water from the Minnelusa Formation in this area can be evaluated by considering SDCL 46-6-3.1. This statute requires that an application to appropriate groundwater can not be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of average estimated annual recharge.

Recharge to the Minnelusa is from infiltration of precipitation on the outcrop, from stream flow losses, and possibly upward leakage from the Madison Aquifer. Average annual recharge has not been estimated for the aquifer. Kyllonen, (1987), suggests that water levels in wells in the Minnelusa aquifer declined significantly in the vicinity of Spearfish between 1907 and 1956 because of reduced recharge to the Madison and Minnelusa aquifers in the early 20th century. He adds that "The system probably has established local equilibrium, as indicated by relatively constant water levels since 1950."

The Water Rights Program monitors 22 observation wells completed into the Minnelusa Aquifer in the Black Hills area. The relatively limited period of record available from observation wells completed into the Minnelusa Aquifer, (most of the wells are less than 15 years old), does not lend itself easily to interpretation. Water level records from the observation wells show good response to seasonal and climatic conditions, that is, rising water levels during wet periods and gradually declining water levels during dry periods. Observation well data suggest that at the existing level of development, natural influences dominate the water level of the aquifer and the effects of pumping as yet are not obvious. Therefore, it is apparent that water is available from the Minnelusa for additional development. Observation well LA-62A is located approximately 4 miles north of this well and observation well LA-86A is located approximately 1 mile south of this well.

AFFECTS ON EXISTING RIGHTS:

There are 150 Water Rights/Permits appropriating water from the Minnelusa Aquifer in South Dakota. In Lawrence County alone there are 47 water rights/permits. The aquifer is used for primarily for domestic, commercial, municipal, suburban housing, and irrigation uses. There are several domestic wells on file with the Water Rights Program for this area and there are four Permits/Rights within one mile of the well that is to be used to supply this permit, they include:

Permit/Right No	Owner	Location	Distance from 1646-1
891-1	Billy J. Evans	7N2E29BA	1/2 mile
1500-1	Nuhome Inc	7N2E31DB	3/4 mile
1337-1	Vern Backens	7N2E32BB	3/4 mile
1344-1	Old Apostolic Lutheran	7N2E32AA	1 mile

Since the Minnelusa is under artesian conditions in this area, pumping may cause a decline in the potentiometric surface over fairly widespread areas. Any well interference this proposed use would have on area water rights/permits and domestic wells is not expected to be adverse. Drawdown will occur and will potentially affect the other wells in the area but this is not expected to be significant. In any event, pumps could be installed or lowered in the wells to maintain water use. It is interesting to note that the water levels in this area fluctuate considerably under natural conditions. It may be necessary to lower pumps during extended periods of drought.

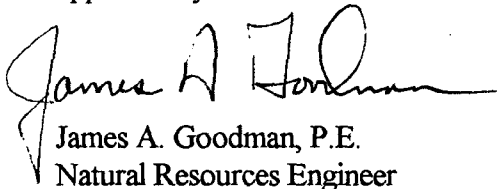
CONCLUSIONS:

1. The Minnelusa Aquifer is a viable aquifer in this area, and water is available for this appropriation.
2. The Minnelusa Aquifer is confined in this area. Drawdown will occur as a result of this diversion. Well interference should not be a problem in this area.
3. This is a flowing well. The well must be controlled and maintained in order to prevent the waste of water.
4. The Well Completion Report submitted with this application indicates the well was constructed in accordance with the SD Well Construction Standards.



Ken Buhler
Natural Resources Engineer

approved by



James A. Goodman, P.E.
Natural Resources Engineer

REFERENCES:

- Allen, J.C., D.Iles, A.Petres, 1984, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3 & 4: Groundwater Resources Inventory, US Army Corp of Engineers Contract DAWC 45-82-C-015, SD DENR-Division of Geological Survey, Vermillion SD
- Kyllonen, D.P., K. Peter, 1987, Geohydrology and Water Quality of the Inyan Kara, Minnelusa, and Madison Aquifers of the Northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming, U.S. Geological Survey Water-Resources Investigations Report 86-4158, Rapid City, SD
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota, US Army Corps of Engineers, Draft Report-Final
- Water Rights Program, 1997, "Domestic Well Log Files, Observation Well Files, and Water Permit Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1646-1, Fisher Sand & Gravel Company**

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. 1646-1, Fisher Sand & Gravel Company, c/o Ray Leahy, HCR 30, Box 1A, Spearfish, SD 57783.

The Chief Engineer is recommending APPROVAL of Application No. 1646-1 because 1) there is 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) in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used (directly or for storage purposes). The well shall also be equipped with a pressure gauge and a record kept of any pressure fluctuations. Such records shall be available to the Chief Engineer upon request. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

See report on application for additional information.



JOHN HATCH, Chief Engineer
February 14, 1997



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

February 24, 1997

Fisher Sand & Gravel Company
%Ray Leahy
HCR 30, Box 1A
Spearfish, SD 57783

Dear Mr. Leahy:

Water Permit Application No. 1646-1 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 Black Hills Pioneer printed at Spearfish, SD (Ph # (605) 642-2761). 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 57501-3181

February 24, 1997

Black Hills Pioneer
P.O. Box 7
Spearfish, SD 57783-0007

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 1646-1 to be published twice. Please publish the first notice on March 5, 1997, 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 Fisher Sand & Gravel Company, %Ray Leahy, HCR 30, Box 1A, Spearfish, SD 57783 (Ph # (605) 642-5760/).

A copy of BOTH publications must be SENT to the WATER RIGHTS PROGRAM. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

FIRST TRANSMITTAL NOTICE

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

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application No. _____ 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 March 5, 1997, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1646-1 to Appropriate Water

Notice is given that Fisher Sand & Gravel Company, HCR 30, Box 1A, Spearfish SD 57783 has filed an application for a water permit to appropriate 0.78 cubic feet of water per second (52 acre-feet of water annually) from one well (Minnelusa Formation) 1,080 feet deep located in the NW 1/4 SW 1/4 Section 29-T7N-R2E. The water is for industrial use at a sand and gravel processing operation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1646-1 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. In accordance with SDCL 46-2A-23, the chief engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and chief engineer. The applicant must file a petition if contesting 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 March 24, 1997.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Affidavit of Publication

STATE OF SOUTH DAKOTA)

COUNTY OF LAWRENCE

Billy T. Masterson, Jr. of said County and State being first duly sworn, on his oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Billy T. Masterson, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and That I, Billy T. Masterson, Jr., the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

#402 Notice of Application
NO. 1646-1
To Appropriate Water

a printed copy of which is hereto attached, was printed and published in said newspaper for 2 successive and consecutive weeks, the first publication being made on the 5th day of March, 1997, and the last publication on the 12th day of March, 1997, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 36.45, insures soley to the benefit of the publisher of the BLACK HILLS PIONEER, 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 to any other person whomsoever.

Subscribed and sworn to before me this 15th day of March, 1997.

Notary Public, Lawrence County, South Dakota
My commission expires: 10-24-2004



NOTICE OF APPLICATION NO. 1646-1 to Appropriate Water

NOTICE IS GIVEN that Fisher Sand & Gravel Company, HCR 30, Box 1A, Spearfish, SD 57783 has filed an application for a water permit to appropriate 0.78 cubic feet of water per second (52 acre-feet of water annually) from one well (Minnelusa Formation) 1,080 feet deep located in the NW 1/4 SW 1/4 Section 29-T7N-R2E. The water is for industrial use at a sand and gravel processing operation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1646-1 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. In accordance with SDCL 46-2A-23, the chief engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

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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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application.

Nettie H. Myers,
Secretary,
Department of Environment
and Natural Resources.

#402
March 5, 12



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JUN 11 1997

Fisher Sand & Gravel Company
%Ray Leahy
HCR 30, Box 1A
Spearfish, SD 57783

Dear Mr. Leahy:

Enclosed is Water Permit No. 1646-1 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
605 773-3352

enclosures

PLEASE NOTE: Certain changes may be made to your water permit usually without affecting the priority date. The location of a point of diversion may be changed or additional points of diversion may be approved if the water source remains unchanged; no additional water is appropriated; and, if irrigating, no additional land is irrigated. The change may be allowed without application or publication, if the Water Rights Program is contacted and the chief engineer makes a finding that the change does not increase the potential for interference with existing diversions.

A new water permit application is required to change water sources, increase the permitted diversion rate, or increase the irrigated acreage. If the application is approved, the water permit will receive a new priority date.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

December 18, 2003

1646-1

Fisher Sand and Gravel Co.
PO Box 1120
Spearfish SD 57783

RECEIVED
DEC 20 2003
WATER RIGHTS
PROGRAM

Dear Sir:

On October 22, 2003 the investigation of your water use system, including the extent of application of water to beneficial use, as developed under Water Permit No. 1646-1, was completed by Ken Buhler, a staff engineer with our program. Your 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, we will complete processing the water license. The check or money order for the fee should be made payable to the "Water Rights Program".

A licensed water right will be similar to a property right that can not 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 your water use system or payment of the fee, please contact Genny McMath with our program at (605) 773-3352.

Sincerely,

Karen Schlaak
Water Rights Program
(605) 773-3352

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date December 26, 2003

RECEIVED OF Fisher Sand and Gravel, HCR 20 Box 1-A, Spearfish SD 57785

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>1646-1</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. 00101A

By Darland Ebele
Chief Engineer gm

Permit No. 1646-1
Belle Fourche 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, **October 22, 2003**, made a thorough examination of the water use system constructed by **Fisher Sand and Gravel Co.** of **PO Box 1120, Spearfish, SD 57783** holder of Permit No. **1646-1**, bearing the priority of **December 4, 1996** authorizing the diversion of **0.78** cu. ft. per second (**52** acre-feet annually) of the waters of **groundwater (Minnelusa aquifer)** for **industrial** purposes, in **Lawrence** County.

Inspection contact & relationship to permit holder, if applicable: **Bradford Hofland, foreman**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: **Graf Drilling**
- 2) No. of Wells: **one**
- 3) Depth(s) **1080** feet
- 4) Well log is available **Yes**
- 5) Comment:

Casing:

- 1) Diameter **8 5/8 & 5 1/2** inches
- 2) Length **370 & 360** feet respectively
- 3) Type: **steel**

Screen:

- 1) Type: **none- open hole completion**
- 2) Length **360** feet (open hole interval)
- 3) Static water level **flowing well** feet

Pump:

- 1) Make: **Goulds**
- 2) Model: **8 stage turbine pump**
- 3) Size: **6-inch**
- 4) Capacity **350** GPM

Motor:

- 1) Make: **Franklin Electric**
- 2) Horsepower rating **40** hp

B. Works used to transport water to place of use:

buried pipeline from pond pump to the wash plant

C. Works used to apply water to beneficial use:

Report of Examination of Works

Permit No. 1646-1

Water from the well is pumped to small storage pond via a natural drainage. Water is pumped from the storage pond located 1922 feet south and 315 feet east of the northwest corner of Sec. 29, T7N-R2E, with a Berkley Centrifugal Pump (MN 136EXBBL) powered by a 125 horsepower Lincoln Electric Motor, to the wash plant at a rate of 900 gallons per minute. A booster plant at the wash plant increases the pressure to 40 psi.

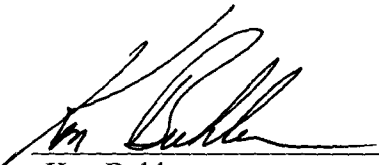
D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A
- 3) Exceptions to compliance are: N/A

The system is in good condition with the point(s) of diversion located as follows: 1420' north and 144' east of the southwest corner of Sec. 29, T7N-R2E, (SW¼SW¼NW¼SW¼ Sec. 29, T7N-R2E) with a Latitude of 44.536427 and a Longitude of -103.909937. The works are capable of diverting and conveying to the place of use 0.78 cu. ft. per second of water which is to be used for industrial use. Water has been put to beneficial use and the license should be issued for 0.78 cfs.

All structures, wells and lands on map Yes

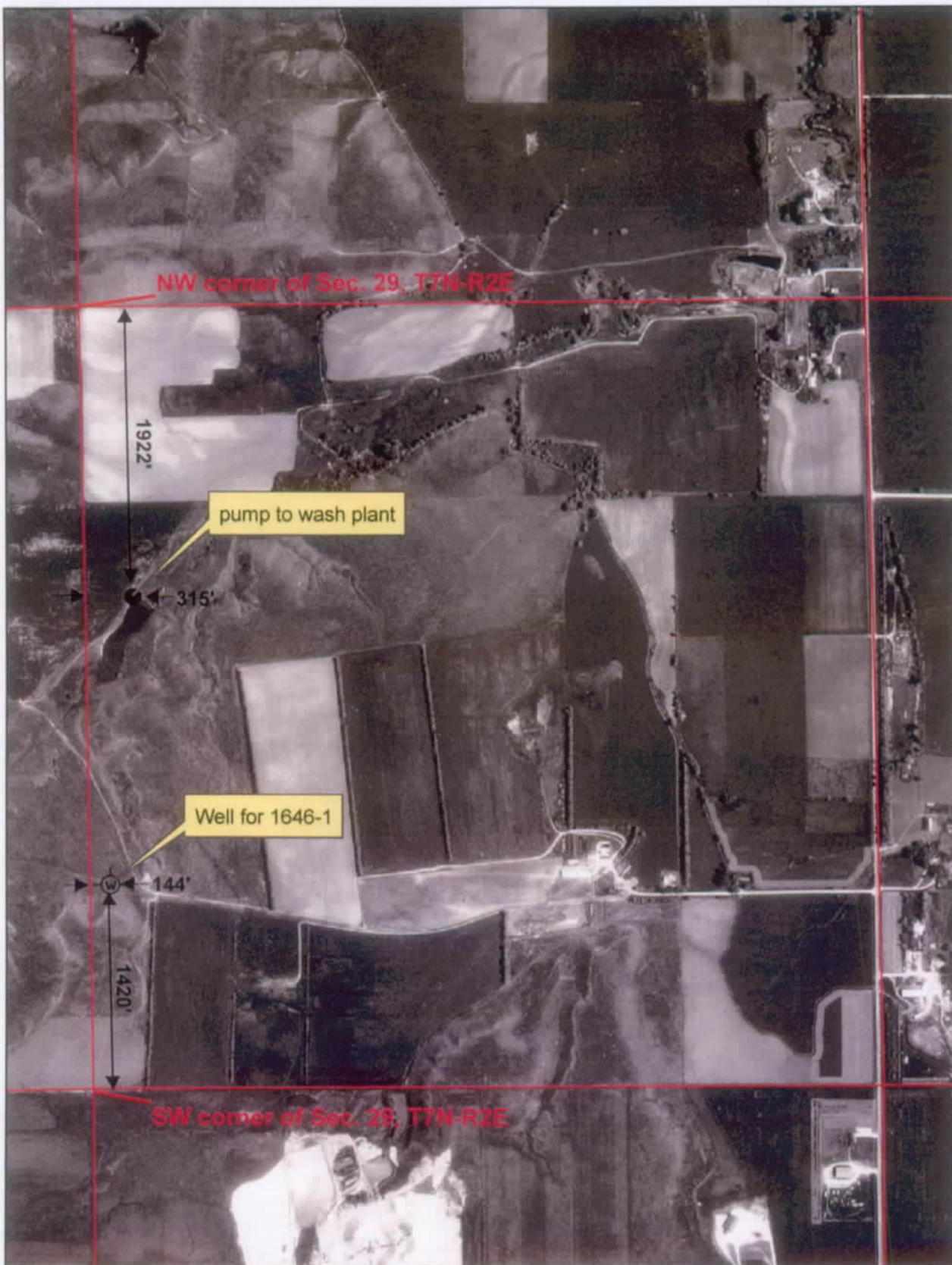
| Comments or other permit(s) associated with the project: N/A



Ken Buhler
Natural Resources Engineering Specialist
DENR, Water Rights Program

Date report completed: December 17, 2003

Map for Water Right No. 1646-1



0 750 1,500 3,000 Feet



Ken Buhler
Ken Buhler
Natural Resources Engineering Specialist
SD DENR-Water Rights Program
December 16, 2003

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1646-1

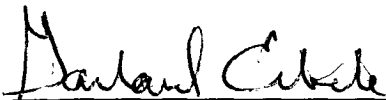
(1) Fisher Sand and Gravel Company, PO Box 1120, Spearfish SD 57783 made Application No. 1646-1, December 4, 1996 for a water permit to divert 0.78 cubic feet of water per second (52 acre-feet annually) from groundwater (one well), Lawrence County, South Dakota for industrial use purposes. Permit No. 1646-1, with a priority date of December 4, 1996 was approved March 24, 1997 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 24, 2002 and for the application to beneficial use of water on or before March 24, 2006.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 1646-1 is issued a license, bearing a priority date of December 4, 1996 to appropriate 0.78 cubic feet of water per second (52 acre-feet annually) from groundwater (one well) for industrial use in a sand and gravel operation.

The diversion point is located: 1,420 feet north and 144 feet east of the southwest corner of Section 29-T7N-R2E (NW ¼ SW ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 1646-1 including the following now applicable qualifications:

- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used (directly or for storage purposes). The well shall also be equipped with a pressure gauge and a record kept of any pressure fluctuations. Such records shall be available to the Chief Engineer upon request. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.



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

JAN 16 2004

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

JAN 16 2004

1772-1
1646-1

Fisher Sand and Gravel Company
PO Box 1120
Spearfish SD 57783

Dear Sir:

Enclosed are Water License Nos. 1772-1 and 1646-1. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 1014 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

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,

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

enclosures