

WATER PERMIT NO. 6802-3

Name of Applicant: **Dale L Bowne**

Address: **20892 478th Ave, White SD 57276**

Phone: **605 693-4200**

Amount of Water Claimed: **4.22 cfs**

Total Acres: **296 acres**

Source of Water Supply: **groundwater**

Water to be used for: **irrigation**

County: **Brookings**

Type of Waste Disposal System:

Location: **6 miles northwest of Brookings**

PRIORITY

Date Received: **2-2-07**

Application/License Fee: **\$350**

Corrected Application Received:

Period of Annual Use: **April 1 – Oct 31**

Remarks:

Diversion Point: **E ½ SW ¼ Sec 6-T110N-48W**

Land to be Irrigated: **S ½ Sec 6-T110N-R48W**

Depth of Well: **186 feet deep**

Well Driller: : **Kaiser Well Drilling**

Remarks:

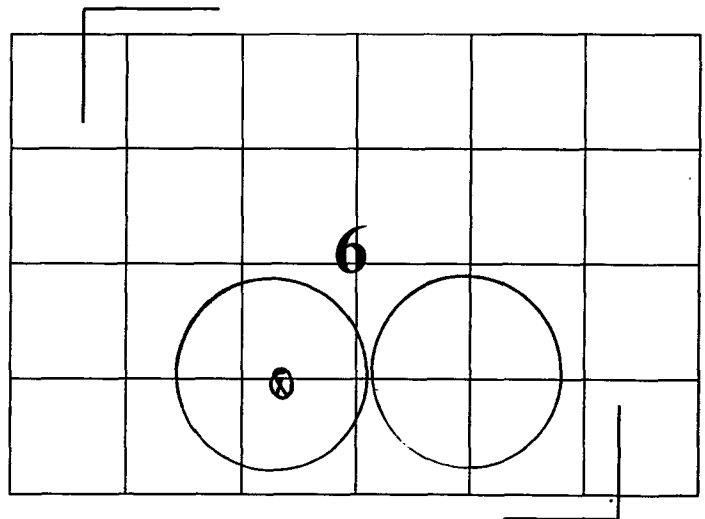
Type of Map: **aerial**

Prepared by: **Gary K?, NRCS**

Reviewed and the Number Assigned on: **2-5-07**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota
(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No.	6802-3	(office use only) Hydrologic Unit	10170202
	Basin	Sioux River		
	Newspaper	Brookings Register Brookings		
	692-6271	57006		

RECEIVED

FEB 02 2007

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____

(Use predates Mar 2, 1955)

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

1. Name of Applicant Dale L. Bowne Phone 605-693-4200
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 20892 478th Ave White State SD 57276
(Street, RR, or Box and City) (Zip Code)
2. Amount of water claimed 4.22*CFS or 1900**GPM ***AF Total Acreage 296
(*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) County Brookings Co.
1 Well in SW1/4 of Sect 6 T110N-R48W (E 1/2 SW1/4)
5. County or counties where water will be used Brookings
6. Annual period during which water is to be used during crop growing season April-Oct 31
7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
SE 1/4 of SW 1/4 Sec 6 T110N R48W	37	SW 1/4 of SW 1/4 Sec 6 T110N R48W	37
SE 1/4 of NW 1/4 Sec 6 T110N R48W	37	SW 1/4 of NW 1/4 Sec 6 T110N R48W	37
SE 1/4 of NE 1/4 Sec 6 T110N R48W	37	SW 1/4 of NE 1/4 Sec 6 T110N R48W	37
SE 1/4 of SE 1/4 Sec 6 T110N R48W	37	SW 1/4 of SE 1/4 Sec 6 T110N R48W	37

8. Give a description of the project. (Attach sheet if more space is needed)

STATE OF SOUTH DAKOTA) SS
County of Brookings)

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)

I, Dale Bowne, 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.

Applicant's signature Dale L Bowne

Subscribed and sworn to before me this 31st day of January 2007

Karen England

Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 6802-3**

Date of first receipt of application February 2, 2007.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6802-3 to Dale L Bowne, 20892 478th Ave, White SD 57276 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. 6802-3 appropriates 4.22 cubic feet of water per second from one well to be completed into the Rutland Aquifer (186 feet deep) located in the E ½ SW ¼ Section 6 to irrigate 296 acres located in the S ½ Section 6; all in T110N-R48W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is February 2, 2007.
4. The date of approval of Permit No. 6802-3 is March 26, 2007.
5. One-fifth of the construction is to be completed on or before September 26, 2009.
6. All construction is to be completed on or before March 26, 2012.
7. Water is to be put to beneficial use on or before March 26, 2016.
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 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 authorized by Permit No. 6802-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Garland Erbele

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

APR 20 2007

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 18" Depth 186'
- b) Casing Type 12" Steel Diameter 12" Thickness 1/2"
- c) Screen Type 55 Screen Diameter 12" Thickness 1/4"
- d) Gravel Pack #40 Length of Gravel Pack 16'
- e) Depth to Top of Water Bearing Material 170'
- f) Depth to Water (ground surface to water level) 26.25'
- g) Distance to nearest existing domestic well:
On applicants property 3/4 mile On property owned by others 3/4 mile

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

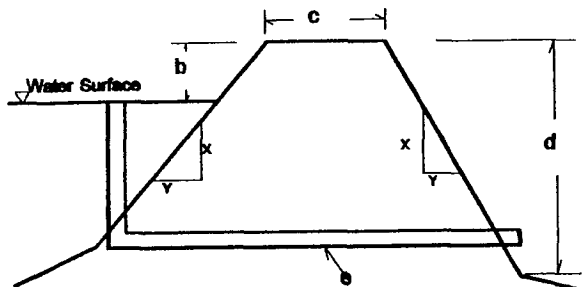
3. Dugout Information

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

4. Water Storage Dams

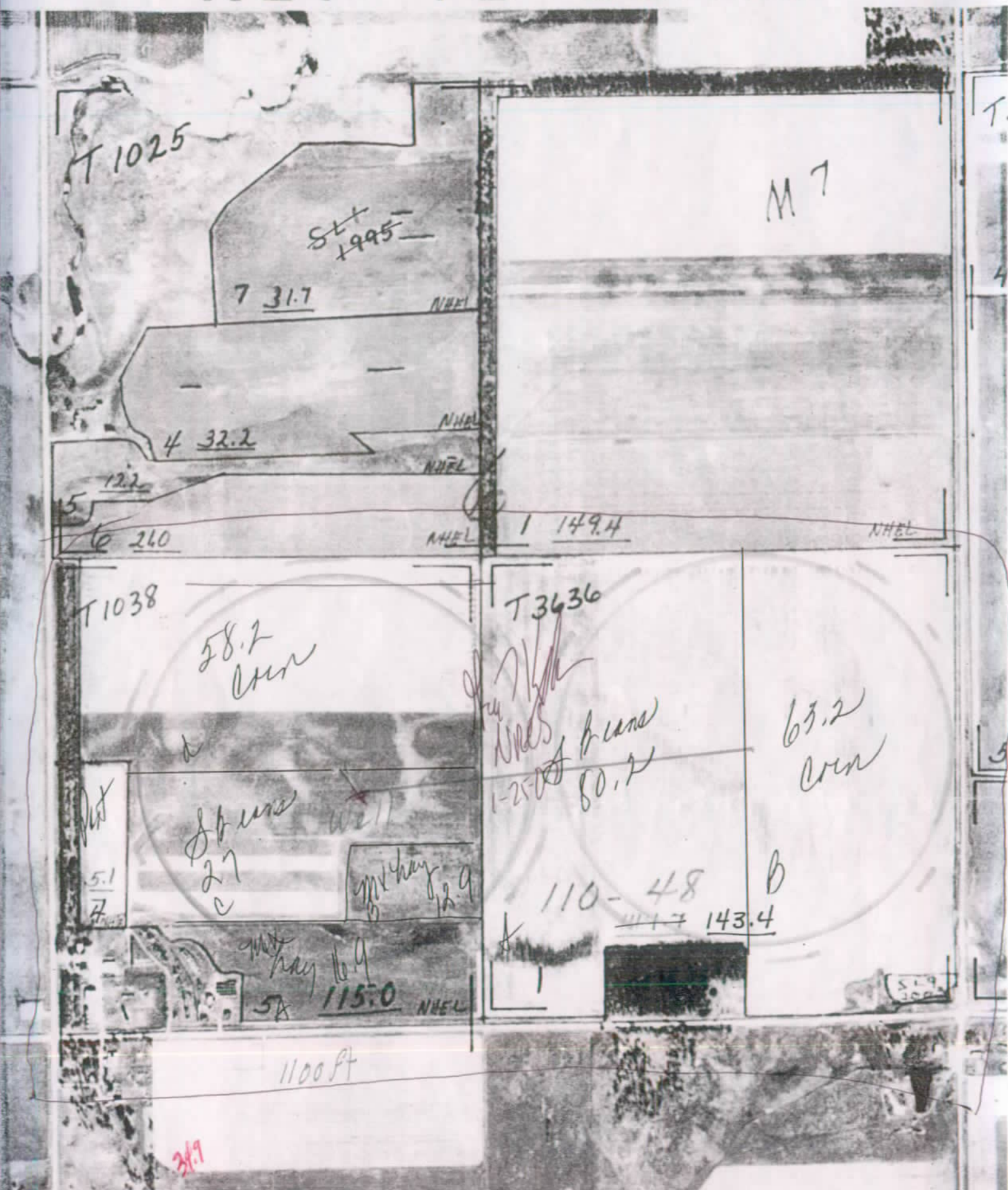
If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- 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

FEB 22 2000



SOUTH DAKOTA WATER WELL COMPLETION REPORT

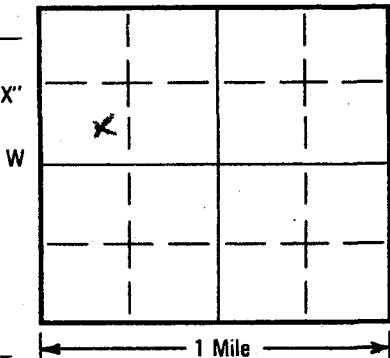
07-92

Location SW $\frac{1}{4}$ 6 Twp 110 Rg 44

County Brookings

North

Please mark well location with an "X"



Well Completion Date

4-21-05

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 300 ft. from line road (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Direct Rotary

CASING DATA:

- ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>5/16</u> LB/FT	<u>3</u> IN	<u>246</u> FT	<u>166</u> FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type Portland No. of Sacks 52 Grout Weight 511 lb./gal From 0 ft. To 160 ft.

Describe grouting procedure pressure pull method

SCREEN:

☐ Perforated pipe ☐ Manufactured
 Diameter 3 IN Length 20 FEET
 Material plastic
 Slot Size 1034 Set From 166 Feet to 186 Feet
 Other information _____

WAS A PACKER OR SEAL USED?

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION:

Was well disinfected upon completion? _____

Laboratory sent to for water quality analysis

Yellow River

Well Owner: Dale Bounie

Business Name: _____

Address: 20892 475 Ave
White SD 57274

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top Soil</u>	<u>0</u>	<u>1</u>
<u>yellow clay</u>	<u>1</u>	<u>15</u>
<u>yellow sand (top) snow</u>	<u>15</u>	<u>17</u>
<u>yellow clay</u>	<u>17</u>	<u>23</u>
<u>yellow mixed fine to medium</u>	<u>23</u>	<u>32</u>
<u>Soft yellow clay</u>	<u>32</u>	<u>42</u>
<u>Blue clay</u>	<u>42</u>	<u>95</u>
<u>Rock</u>	<u>95</u>	<u>16 1/2</u>
<u>Blue clay</u>	<u>96 1/2</u>	<u>170</u>

STATIC WATER LEVEL 26' 3" Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

- ☒ Pumped Describe: Art 1.2L
☐ Bailed 150+
☐ Other _____

Pumping Level Below Land Surface

26 ft. After 2 Hrs. pumped 150+ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS Medium gravel gray 170-180 w/ 157
coarse gravel gray 180-186
w/ 304-45

This well was drilled under license # 687

And this report is true and accurate.

Drilling firm Kaiser Well Drilling

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

4/21/05

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date Feb 2, 20 07

RECEIVED OF Dale L Bowne, 20892 478th Ae, White SD 57276

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

Fee for Application for Permit No. <u>6802-3</u> to Appropriate Water, to construct and to put water to beneficial use	300	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>6802-3</u>	50	00
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	350.00

No.

02918

By Harland Erbele
Chief Engineer (115)

File No.

Water Rights Program - File Documentation

NAME: Dale L Bowne

ADDRESS: White SD

DATE: 2-5-07 **COUNTY:** Brookings **TELEPHONE:** 605 693-4200

RE: Pending application

COMMENTS:

I called Dale Bowne because he did not complete the amount of water claimed on his application. Mr. Bowne indicated he did not know what amount the system would be capable of producing. I told him the maximum amount he could request based on the irrigation of 296 acres would be **4.22 cfs or 1900 gpm**. Mr. Bowne stated he would like to request that amount. Mr. Bowne further stated he would not be using that total amount.

Karen Schlaak

Karen Schlaak
Environmental Scientist



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6802-3, Dale L. Bowne**

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. 6802-3, Dale L. Bowne, 20892 478th Avenue, White SD 57276.

The Chief Engineer is recommending APPROVAL of Application No. 6802-3 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) it is in the public interest with the following qualification:

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 authorized by Permit No. 6802-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
March 2, 2007

NOTE: Please review the staff engineer's report. Conclusion No. 4 states it is unlikely that one well will produce the requested rate of 4.22 cubic feet of water per second (1,900 gpm).

REPORT ON WATER PERMIT APPLICATION NO. 6802-3

For Dale L. Bowne

February 21, 2007

Application No. 6802-3 proposes to appropriate 4.22 cfs (1,894 gpm) from one well approximately 186 feet deep located in the E ½ SW ¼ of section 6 to irrigate 296 acres located in the S ½ of section 6; all in T110N R48W in Brookings County.

AQUIFER – RUTLAND (RUT)

The Rutland is a buried outwash (sand and gravel) that is under artesian conditions at this site. The aquifer underlies 240 square miles and contains an estimated 400,000 acre-feet of water in storage in Brookings County (Hamilton, 1989). The aquifer extends into Deuel County to the north, into Minnesota to the east and into Moody County to the south. Ground water movement is from northeast to southwest in the area of this application (Hamilton, 1989). According to the Brookings County Study the location of this proposed well is on the edge of the aquifer. Also the county study indicates that water from this aquifer ranges from suitable to marginal for irrigation use depending upon soil texture and drainage (Hamilton, 1989).

The test well filed with the application indicates medium gravel from 170 to 180 feet and coarse gravel from 180 to 186 feet all below land surface. The test well had a water level about 26 feet below land surface and was capable of producing 150 gpm using air to develop. No other production information is available.

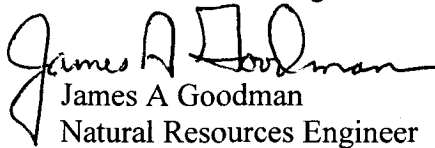
The Water Rights Program monitors an observation well completed into the Rutland aquifer located about three miles southeast of this application. This is observation well BG-80I. Water levels for this observation well show good response to pumping and to climatic conditions. A hydrograph for this observation well is included with this report. In general, the water level record indicates that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2007).

REVIEW OF EXISTING WATER PERMITS/RIGHTS

There are four existing/permitted irrigation wells within a four mile radius of this application that also obtains water from the Rutland aquifer. The nearest permitted irrigation well is located about one and one-half miles south of this application. Interference is not expected to be a concern at this distance. However, this is somewhat of an unknown because there should be measurable drawdown at this distance. Of the four permits, only one reported any water use in 2005 and two of the other permits are new and may not be developed yet. The observation wells indicate fluctuation can be expected. An observation well BG-2005A was added to our observation well network for the purpose of evaluating drawdown in this area. A hydrograph for this observation well is also included with this report.

CONCLUSIONS

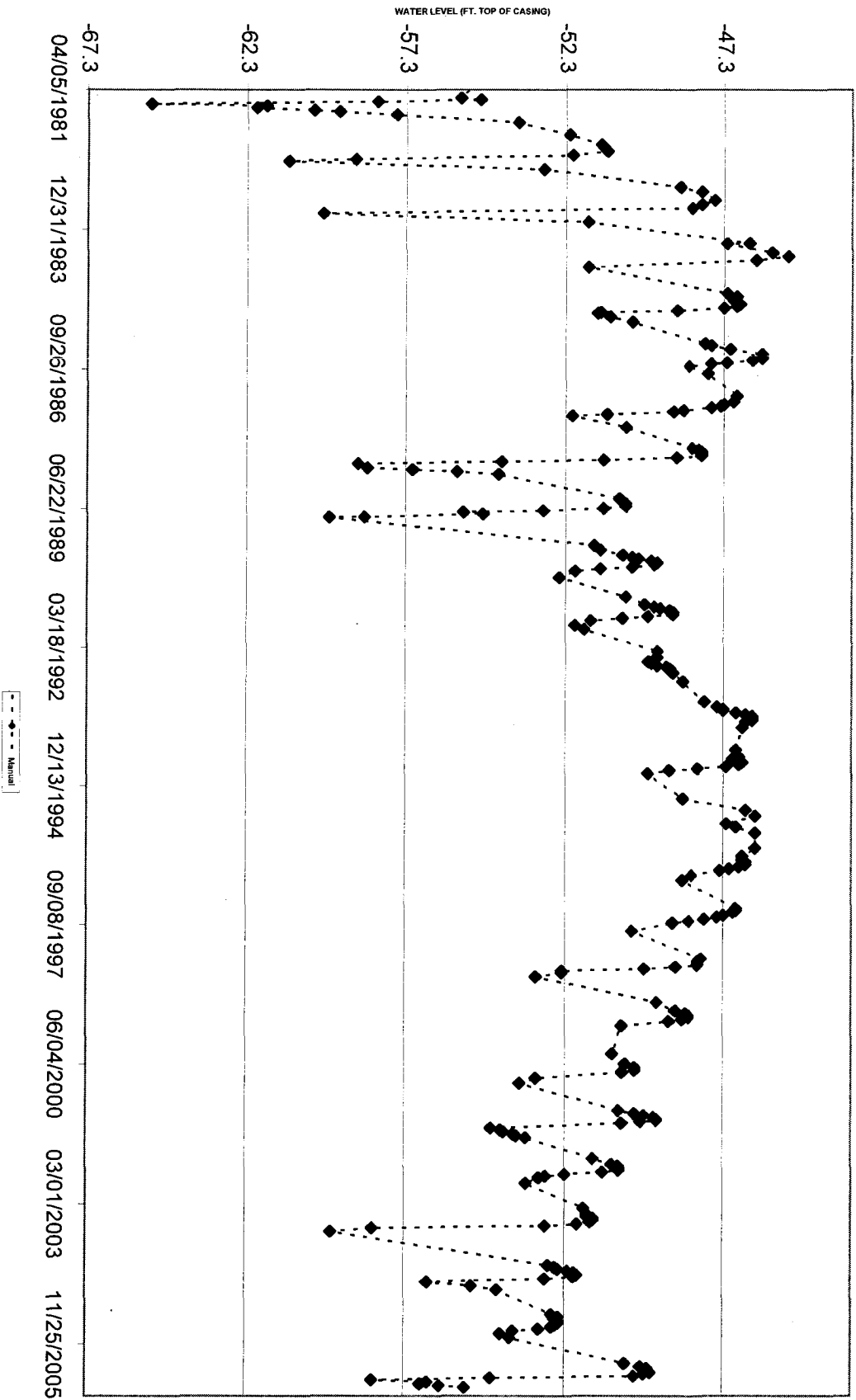
1. Water is available from the Rutland aquifer.
2. The aquifer is under artesian conditions. Drawdown will occur as a result of pumping. At the distance between wells interference is not expected to be adverse.
3. The well authorized by this application must be constructed in accordance with SD Well Construction Standards.
4. It is unlikely that one well constructed into this aquifer will be able to yield the requested rate of 4.22 cfs.
5. There are some wells in this part of Brookings County that free flow at the land surface from this aquifer. Pumping by irrigation wells will probably lower the head pressure sufficiently during the irrigation season to stop some of these wells from flowing.


James A Goodman
Natural Resources Engineer

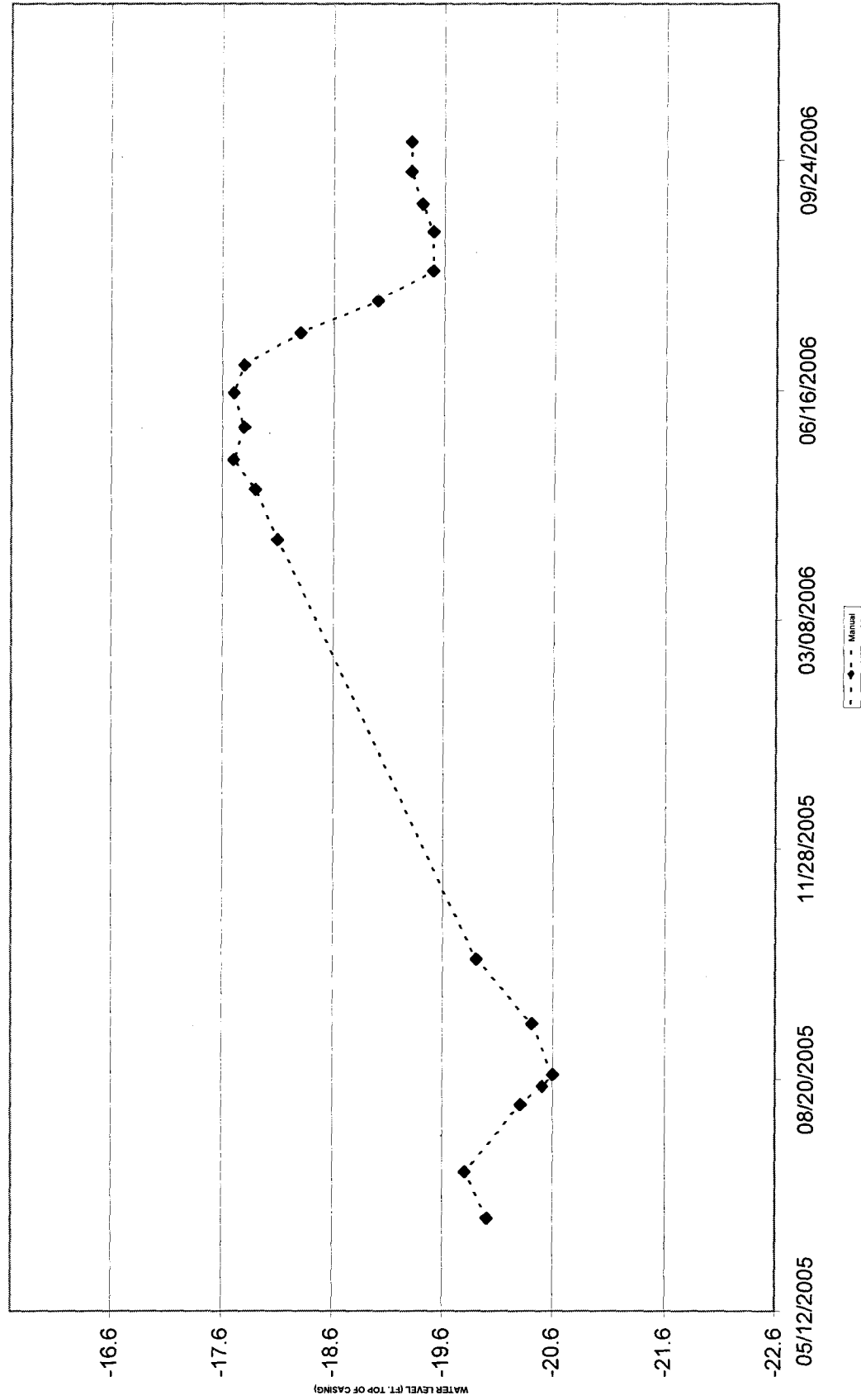
BIBLIOGRAPHY

- Hamilton, L.J., 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota, Water-Resources Investigations Report 88-4185, USGS, Huron, SD, 57350.
- Water Rights, 2007, Unpublished Observation Well Data for Brookings County, SD DENR, DES, Water Rights Program, Pierre, SD, 57501.

**WATER RIGHTS' OBSERVATION WELL
BG-801**



WATER RIGHTS' OBSERVATION WELL
BG-2005A



Affidavit of Publication

State of South Dakota

ss

County of Brookings

Amy B. Larsen of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed

that the

Legal# 130 "dale Bowne"

a printed copy of which, taken from the paper in which the same was published, is hereto attached marked Exhibit

said newspaper for 2 times, to-wit:

March 9, 2007

March 16, 2007

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Forty dollars and sixty-six cents. \$40.66

Subscribed and sworn to before me this

17th

day of

March

2007

Christina Nelson

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires April 27, 2012

RECEIVED

APR 11 2007

WATER RIGHTS
PROGRAM

Legal 130, 2x, 3/9, 16
NOTICE OF APPLICA-
TION NO. 6802-3 to
Appropriate Water

Notice is given that Dale L. Bowne, 20892 478th Ave, White SD 57276 has filed an application for a water permit to appropriate 4.22 cubic feet of water per second from one well to be completed into the Rutland Aquifer (186 feet deep) located in the E 1/2 SW 1/4 Section 6 to irrigate 296 acres located in the S 1/2 section 6; all in T110N-R48W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application no. 6802-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, 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 this 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 recommendations 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 26, 2007.

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



March 1, 2007

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

BROOKINGS REGISTER
PO BOX 177
BROOKINGS SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 6802-3 to Appropriate Water to be published twice. Please publish the first notice on March 9, 2007 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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 Dale Bowne, 20892 478th Ave, White SD 57276 (Ph # 605-693-4200).

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. 6802-3

Date _____

We are in receipt of your letter of March 1, 2007 enclosing Notice to Appropriate Water by Application No. 6802-3 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

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

www.state.sd.us/denr

March 1, 2007

DALE BOWNE
20892 478th AVE
WHITE SD 57276

Dear Mr. Bowne:

Water Permit Application No. 6802-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications 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 Notices and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

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.

Instruction to Newspaper - Publish first Notice on March 9, 2007 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6802-3 to Appropriate Water

Notice is given that Dale L Bowne, 20892 478th Ave, White SD 57276 has filed an application for a water permit to appropriate 4.22 cubic feet of water per second from one well to be completed into the Rutland Aquifer (186 feet deep) located in the E ½ SW ¼ Section 6 to irrigate 296 acres located in the S ½ Section 6; all in T110N-R48W.

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APR 20 2007

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

DALE L BOWNE
20892 478TH AVE
WHITE SD 57276

Dear Mr. Bowne:

Enclosed is Water Permit No. 6802-3 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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 6 Twp 110 Rg 48

County

Brookings

North

Please mark well
location with an "X"

W

E

Well Completion Date

5/15/2008

1 Mile

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? 50.0 ft. from septic (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	12.00 IN	0.0 FT	178.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Volclay	44	Lb/gal	0.0 Ft	170.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Tremmie Piped

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 20.0 FeetMaterial Stainless SteelSlot Size 70 Set From 178.0 Feet to 198.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorinated
☐ No, Why Not?
Lab sample sent to for
water quality analysis

Owner to obtain

Well Owner: Dale Bowne

Business Name:

Address: 30892 478th AveCity, State, Zip: White SD 57276

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Black Dirt	0	1
Brown Silty Clay	1	12
Sand & Gravel	12	31
Brown Clay	31	33
Sand & Gravel	33	40
Brown Clay	40	51
Gray Clay	51	130
Gray Sandy Clay	130	149
Continued on next page		

STATIC WATER LEVEL 30.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

43.0 Ft. After 20.0 Hrs. pumped 550.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

NOV 17 2008

WATER RIGHTS
PROGRAM

475

This well was drilled under license # _____

And this report is true and accurate.

Drilling firm: Thein Well Co.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: _____

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location $\frac{1}{4}$ $\frac{1}{4}$ Sec Twp Rg County

North

Please mark well location with an "X"

W

E

Well Completion Date

1 Mile

Distance to 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:

CASING DATA:

☐ Steel ☐ Plastic ☐ Other
If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☐ Manufactured
Diameter Inches Length FeetMaterial Slot Size Set From Feet to FeetOther information

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No
If so, what material? Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?
☐ No, Why Not?
Lab sample sent to for water quality analysis Well Owner: Dale BowneBusiness Name: Address: 30892 478th AveCity, State, Zip: White SD 57276

WELL LOG:

DEPTH

FORMATION	FROM	TO
Gray Clay	149	179
Sand & Clay	179	184
Sand	184	198
Gray Clay	198	200

STATIC WATER LEVEL

FEET

If flowing: closed in pressure PSIGPM flow through Inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other Reduced flow rate GPMCan well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:
☐ Bailed

☐ Other
Pumping Level Below Land Surface Ft. After Hrs. pumped GPM Ft. After Hrs. pumped GPMIf pump installed, pump rate: GPM

REMARKS

RECEIVED
NOV 17 2008
WATER RIGHTS
PROGRAM

This well was drilled under license #

And this report is true and accurate.

Drilling firm: Signature of License Representative: Signature of Well Owner or Equitable Property Holder: Date:

Permit No. 6802-3
Sioux 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, September 14, 2011, made a thorough examination of the water use system constructed by Dale Bowne, 20892 478th Avenue, White SD 57276 holder of Permit No. 6802-3, bearing the priority of February 2, 2007 authorizing the diversion of 4.22 cu. ft. per second from the Rutland Aquifer for irrigation purposes, in Brookings County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

One primary well is in place each with a 60 HP submersible pump. Also a smaller helper well is in place.

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

Primary well head is located approximately a few hundred feet northwest of pivot center.

C. Works used to apply water to beneficial use:

An 8 tower T/L center pivot

The system is in the following condition excellent. The point of diversion (wells) are located Large Well - Lat 44.35928 Lon -96.64017 --- approx. 1,720' North and 1,675' east of SW corner Section 6, T110N, R48W (NE ¼ SW ¼) & Small Well - Lat 44.35785 Lon -96.64065 --- approx. 1,200' North and 1,520' east of SW corner Section 6, T110N, R48W (SE ¼ SW ¼). The works are capable of diverting a total of 1.78 cfs from a primary well and a second helper well (if needed) which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

All in Section 6, T110N, R48W

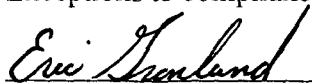
NW ¼ SW ¼	20 acres
NE ¼ SW ¼	40 acres
SW ¼ SW ¼	17 acres
SE ¼ SW ¼	40 acres
NW ¼ SE ¼	20 acres
SW ¼ SE ¼	19 acres

This breakdown of acres is a best estimate based on 1) information provided and 2) viewing the 2010 FSA aerial using ArcMap,

comprising a total of 156 acres of land and the license should be issued for 1.78 cfs based on the combined total from the two wells

Applicable permit qualifications have been complied with: **Yes**

Exceptions to compliance are: additional well constructed Date Report Completed: December 20, 2011



Eric Gronlund
 Natural Resources Engineer
 DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 6802-3

DATE OF INVESTIGATION:	September 14, 2011
NAME & ADDRESS OF PERMIT HOLDER	Dale L Bowne 20892 478 th Avenue White SD 57276
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Dale Bowne
DIVERSION POINT LEGAL LOCATIONS	Large Well - Lat 44.35928 Lon -96.64017 --- approx. 1,720' North and 1,675' east of SW corner Section 6, T110N, R48W Small Well - Lat 44.35785 Lon -96.64065 --- approx. 1,200' North and 1,520' east of SW corner Section 6, T110N, R48W

“LARGE” WELL INFORMATION:

- 1) Well Drilling Firm: **Thein Well Co**
- 2) No. of Wells 1 of 2
- 3) Depth(s) 198
- 4) Well log is available Yes
- 5) Comment: primary well

Casing:

- 1) Diameter 12 inches
- 2) Length 178 feet
- 3) Type steel

Screen:

- 1) Type stainless steel
- 2) Length 20 feet
- 3) Static water level 30 feet

Pump:

- 1) Make Submersible
- 2) Model
- 3) Size
- 4) Capacity 800 GPM

Motor:

- 1) Make
- 2) Model No
- 3) Horsepower rating 60 hp

“SMALL” WELL INFORMATION:

- 1) Well Drilling Firm: **Kaiser Well Drilling**
- 2) No. of Wells **2 of 2**
- 3) Depth(s) **186**
- 4) Well log is available **Yes**
- 5) Comment: **helper well**

Casing:

- 1) Diameter **3** inches
- 2) Length **166** feet
- 3) Type **plastic**

Screen:

- 1) Type **plastic**
- 2) Length **20** feet
- 3) Static water level **26 feet 3 inches**

Pump:

- 4) Make **not in place**
- 5) Model
- 6) Size
- 7) Capacity GPM

Motor:

- 8) Make
- 9) Model No.
- 10) Horsepower rating hp

SYSTEM TYPE:

Center pivot:

- 1) Make **T/L**
- 2) Overall length **approx. 1350** feet
- 3) Number of towers **8 tower**
- 4) Distance between towers feet
- 5) End gun **Yes (approx. 100)**
- 6) High or low pressure **low pressure**
- 7) Capacity **800** GPM

CHEMIGATION EQUIPMENT: No

PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by Yes
- 2) All structures, wells and lands on map Yes
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes

COMMENTS:

- Notice of Completion of Works filed at time of inspection
- Irrigation questionnaire reflects that irrigation began in 2008
- The irrigation questionnaires submitted the past few years have indicated between 132 – 35 being irrigated. Using the 2010 FSA aerial and ArcMap where the pivot circle is clearly visible, I arrive at 156 acres being irrigated..
- Originally, the permit was for two pivots in the S ½ of Section 6. However, Mr. Bowne stated that only one pivot is being constructed and it is offset to the east from where the original pivot in the SW ¼ was planned.

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

MAIL TO: PMB 2020
DENR - Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

Date Sept. 14 2011

FROM: Dale Bowne
(name)

(address)

(city) (state) (zip) (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.

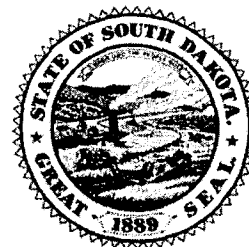
Water Permit No. 6802-3 states that the water use system is to be constructed by
March 26, 2012, and water is to be put to beneficial use by March 26 2016
(date) (date)

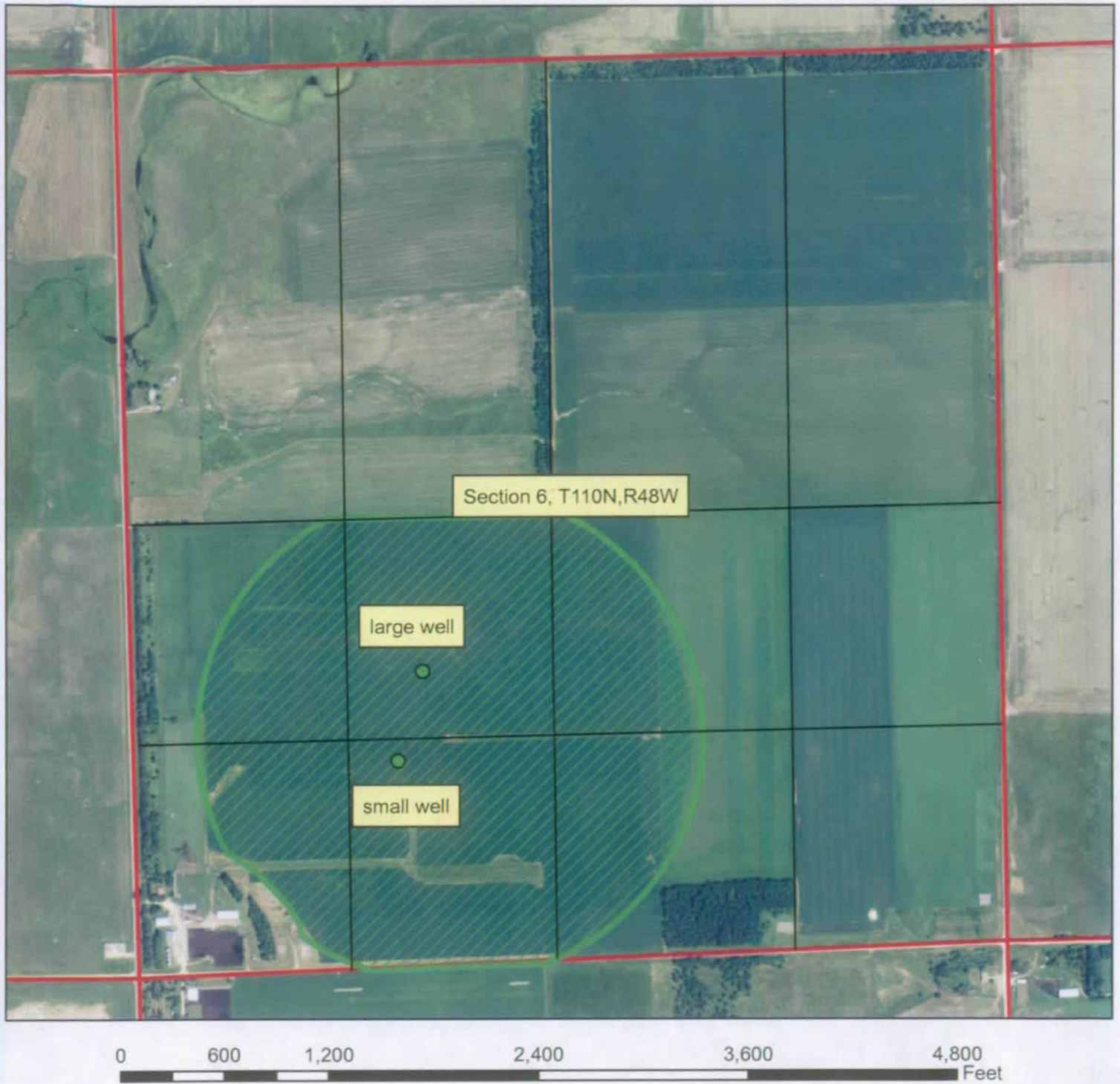
The water use system was completed on 2008
(date)

Applying the water to beneficial use was completed on 2008
(date)

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

Dale Bowne





Large Well - Lat 44.35928 Lon -96.64017 --- approx. 1,720' North and 1,675' east of SW corner Section 6, T110N, R48W

Small Well - Lat 44.35785 Lon -96.64065 --- approx. 1,200' North and 1,520' east of SW corner Section 6, T110N, R48W



Eric Gronlund

Eric Gronlund
Water Rights Program, DENR
License Inspection - September 14, 2011

Approval of a Change of Diversion Point

NAME: Dale Bowne

ADDRESS: 20892 478th Avenue, White SD 57276

DATE: December 22, 2011 **COUNTY:** Brookings **TELEPHONE:**

BACKGROUND:

Water Permit No. 6802-3 appropriates 4.22 cubic feet of water per second from one well to be completed into the Rutland Aquifer (186 feet deep) located in the E ½ SW ¼ Section 6 to irrigate 296 acres located in the S ½ Section 6, T110N, R48W.

A licensing investigation of Water Permit No. 6802-3 on September 14, 2011 found one pivot in place capable of irrigating 156 acres served by one well (800 gpm) and another helper well. Mr. Bowne explained that he currently does not use the helper well but he may cut back production from the primary well and use the helper well. The helper well is in existence and the permit has a date to put water to beneficial use of March 26, 2016.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The water source authorized by Water Permit No. 6802-3 is the Rutland Aquifer. This is an existing well completed to a depth of 186 feet.

No additional appropriation of water is authorized. The water permit is limited to the developed rate of 800 gpm based on what Mr. Bowne stated the well produces and the capacity the center pivot is set to operate.

- **Review of Existing Diversions**

The report on the application prepared by Jim Goodman in February 2007 remains valid.

The well completion report database was reviewed and the nearest domestic well completed to a depth greater than 170 feet is located approximately 4 miles to the northeast of Bowne's wells. At this distance drawdown will not be significant or adversely impair the domestic well.

Also the water right database was reviewed for existing diversions from the Rutland Aquifer in the area. The nearest is located approximately 1 ½ miles south of the Bowne wells and there is another water right about 2 ½ miles to the southeast. The staff report on Bowne's application addressed the nearest well and concluded that interference is not expected to be adverse.

CONCLUSION

- The additional well location does not propose to appropriate additional water to the 800 gpm currently developed.
- The additional well is a helper well to the primary well. The primary well is currently capable of 800 gpm and if the helper well is used the primary wells production capability will be reduced accordingly.
- The well is completed into the Rutland Aquifer.
- Interference is not expected to be a concern.
- Existing domestic wells should not be adversely impacted by authorizing this change.

RECOMMENDED ACTION

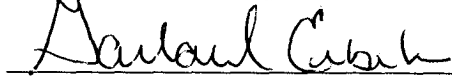
Based on the above criteria, it is recommended that the additional diversion point be authorized under Water Permit No. 6802-3.



Eric Gronlund
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This additional point does not increase the potential for adverse effects to existing diversions.



Garland Erbele, Chief Engineer
Water Rights Program



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

JAN 12 2012

6802-3

Dale L Bowne
20892 478th Ave
White SD 57276

Dear Mr. Bowne:

Enclosed is Water License No. 6802-3. 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.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the wells authorized by Water Right No. 6802-3, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

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

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 6802-3**

(1) Dale L Bowne, 20892 478th Ave, White SD 57276 made Application No. 6802-3, February 2, 2007 for a water permit to divert 4.22 cubic feet of water per second from ground water (one well – Rutland Aquifer), Brookings County, South Dakota for irrigation purposes. Permit No. 6802-3, with a priority date of February 2, 2007 was approved March 26, 2007 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 26, 2012 and for the application to beneficial use of said water on or before March 26, 2016.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on September 14, 2011 indicating the water use system was completed and water placed to beneficial use in 2008.

The inspection of the water use system found the addition of a helper well to the project. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14:01, the Chief Engineer made a finding that the additional diversion point does not increase the potential for adverse effects to existing diversions. The overall project is consistent with the original application.

(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 1.78 cubic feet of water per second for beneficial use. The location of the diversion points are:

- Large well: 1,720 feet north & 1,675 feet east of the SW corner of Section 6, T110N, R48W (NE $\frac{1}{4}$ SW $\frac{1}{4}$);
- Small well: 1,200 feet north & 1,520 feet east of the SW corner of Section 6, T110N, R48W (SE $\frac{1}{4}$ SW $\frac{1}{4}$).

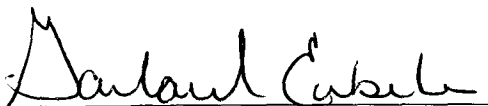
(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the following land:

Section 6, T110N, R48W			
NW $\frac{1}{4}$ SW $\frac{1}{4}$	20 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$	20 acres
NE $\frac{1}{4}$ SW $\frac{1}{4}$	40 acres	SW $\frac{1}{4}$ SE $\frac{1}{4}$	19 acres
SW $\frac{1}{4}$ SW $\frac{1}{4}$	17 acres		
SE $\frac{1}{4}$ SW $\frac{1}{4}$	40 acres	Total	156 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Dale L Bowne, 20892 478th Avenue, White SD 57276 the holder and/or owner of Water Right No. 6802-3 is issued a license to appropriate water, the right to use 1.78 cubic feet of water per second from ground water (two wells – Rutland Aquifer) with a priority date of February 2, 2007 from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 6802-3 and subject to the following qualifications:

- The wells 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 wells authorized by No. 6802-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***Large well drilled by Thein Well Company and small helper well drilled by Kaiser Well Drilling – logs on file with the Water Rights Program.***
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.


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

JAN 12 2012
date

