

WATER PERMIT NO. 7843-3

Name of Applicant: **John H Thompson**

Address: **47333 295th St, Beresford SD 57004** Phone: **605 957-5544**

Amount of Water Claimed: **1.67 cfs** Total Acres: **120**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **irrigation** County: **Union**

Type of Waste Disposal System:

Location: **2 miles southeast of Beresford**

PRIORITY Date Received: **5-10-13**

Application/License Fee: **\$ 950**

Corrected Application Received: **5-22-13**

Period of Annual Use: **July 1 – September 30**

Remarks:

Diversion Point: **SE 1/4 NE 1/4 Sec 15-T95N-R50W**

Land to be Irrigated: **NE 1/4 Sec 15-T95N-R50W**

Depth of Well: **80**

Well Driller: **Thein Well Co**

Remarks:

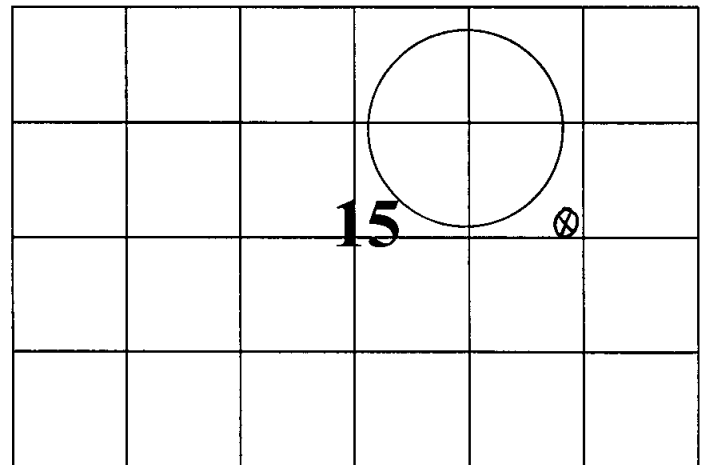
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **5-22-13**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



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

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MAY 10 2013

WATER RIGHTS
PROGRAM

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7843-3</u> (office use only) Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u> <u>605-763-2006</u>
	Newspaper <u>Beresford Republic Box 111 57004</u>
	<u>Argus Leader</u> <u>5 Falls SO 57117</u> <u>Box 5034</u> <u>605-381-2200</u>

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 to Appear on Irrigation Permit John H. Thompson
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)Mailing Address 47333 295th St. Beresford SD 57004
(Address) (City) (State) (Zip Code)Home Phone 605-957-4602 Cell 605-957-5544 Email _____2. Amount of water claimed 1.67 *CFS or 750 **GPM ***AF Total Acreage 120
(*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable)3. Source of water supply well4. Location of point of diversion SE 1/4 NE 1/4 Sec 15 - T95N - R50W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)County Union5. County or counties where water will be used Union6. Annual period during which water is to be used July 1 to September 307. 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
<u>NE 1/4 Sec. 15 T95 R. 50</u>	<u>120</u>		
<u>Union Co. S.D.</u>			

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

I, John Thompson, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

SOUTH DAKOTA
WATER PERMIT NO. 7843-3

Date of first receipt of application May 10, 2013.

Date of return to applicant for corrections, amendments or changes May 14, 2013.

Date of receipt of corrected application May 22, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7843-3 to John H Thompson, 47333 295th St, Beresford SD 57004 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. 7843-3 appropriates 1.67 cubic feet of water per second from one well to be completed into the Brule Creek Aquifer (80 feet deep) located in the SE 1/4 NE 1/4 Section 15 for irrigation of 120 acres located in the NE 1/4 Section 15; all in T95N-R50W.
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: July 1 – September 30.
3. The date from which applicant may claim right is May 10, 2013.
4. The date of approval of Permit No. 7843-3 is July 29, 2013.
5. One-fifth of the construction is to be completed on or before January 29, 2016.
6. All construction is to be completed on or before July 29, 2018.
7. Water is to be put to beneficial use on or before July 29, 2022.
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. 7843-3 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: *Jeanne Goodman*

Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

AUG 07 2013

date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled ☒ Yes ☐ No Drilled by Thein Well Co.
(if yes, please provide copies of logs)

b) If existing wells, how many Provide copy of log(s), if available. Drilled by

c) Well Depth 80 Depth to Top of Water Bearing Material 32 ft. Depth to Water from Surface 32 ft.

d) Distance to nearest existing domestic well:

On applicant's property On property owned by others 2600 feet

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

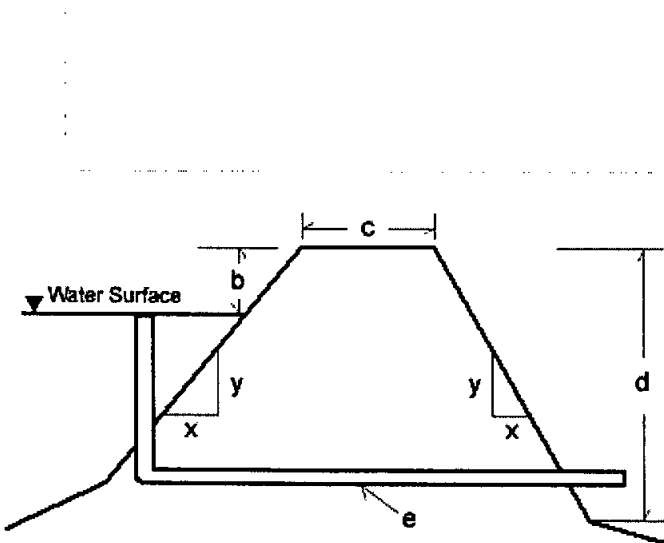
a) Surface Dimensions Depth

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 (e.g. 3 to 1 is a typical slope)

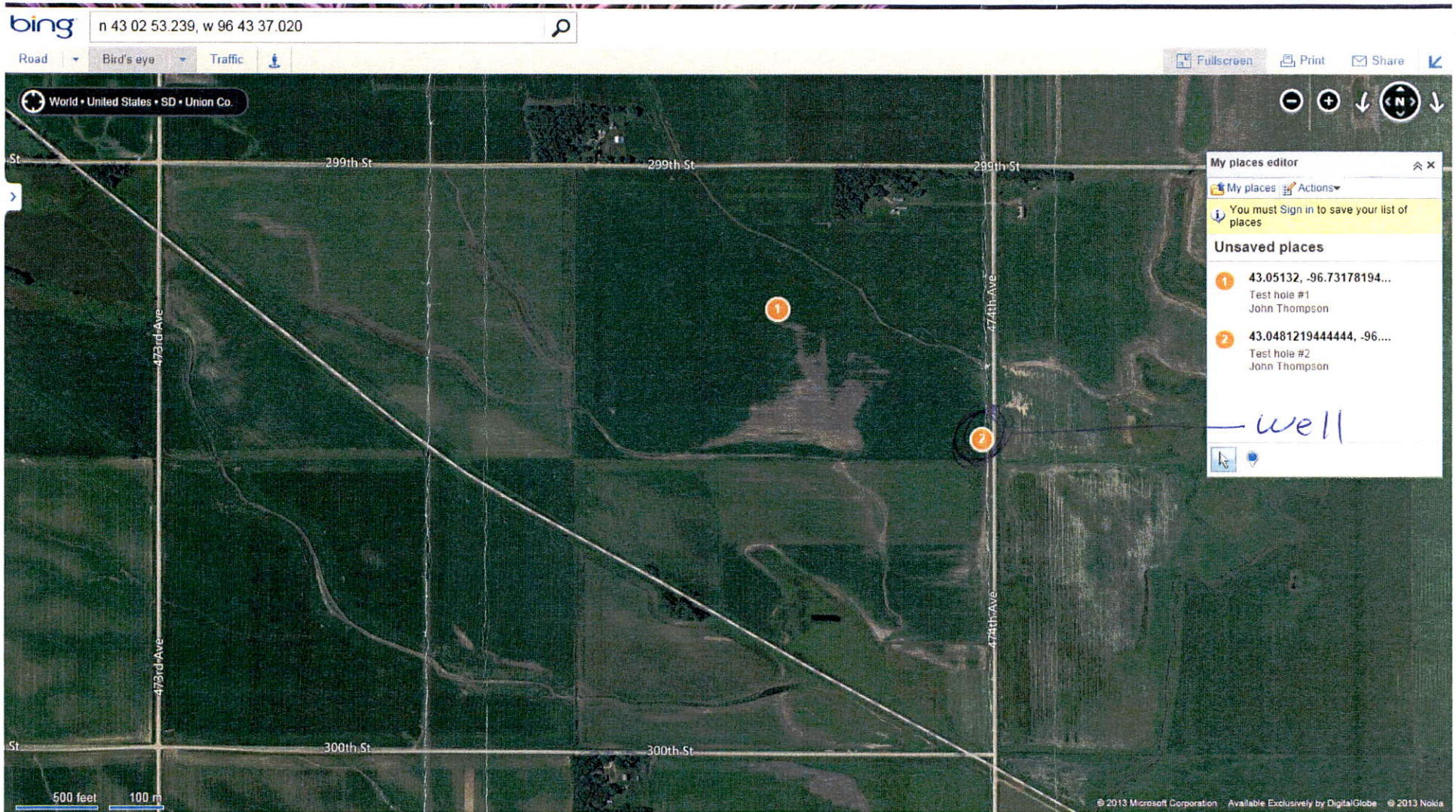
Upstream

Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres



The well is located
By No. 2

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well is in the SE corner
of property section 15 T. 95 N 50
Prairie Twp, Union county S.D. NE 1/4



Sec 9
T095N
R50W

Sec 10
T095N
R50W

Sec 11
T095N
R50W

Sec 16
T095N
R50W

Sec 15
T095N
R50W

Sec 14
T095N
R50W

Sec 21
T095N
R50W

Sec 22
T095N
R50W

Sec 23
T095N
R50W



THEIN WELL
P.O. BOX 778, 11355 HWY. 71 NE (ACROSS FROM RINGO LAKE)
SPICER, MINNESOTA 56288 • (320) 796-2111
www.theinwell.com • E-mail: theinwell@tds.net

WELLS ~ PUMPS
SALES ~ SERVICE

Since 1893

Well Log for John Thompson

Date: 04/17/13

Well Size: test hole 1

Casing Length:

Screen Length:

Total Well Depth:

SWL:

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Geological Material	Color	Hardness or Formation	From	To
Top soil			0	3
Clay	Yellow		3	39
Sand		Med-Crs	39	45
Clay	Blue		45	59
Sand		Fine	59	66
Clay/chalk			66	80
Clay	Blue		80	97
Clay/chalk	Blue		97	111

CLARA CITY, MN 56222 (320) 847-3207 • MONTICELLO, MN 55362 (763) 271-4200 • ROCHESTER, MN 55906 (507) 288-5554

MEMBER
NGWA

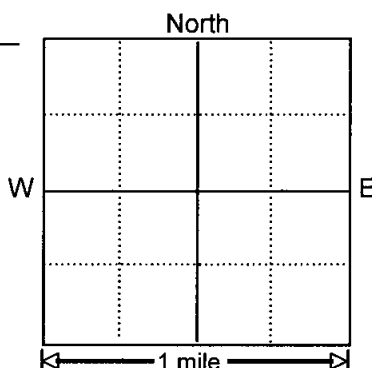
CERTIFIED MASTER WATER WELL CONTRACTOR
Equal Opportunity Employer

MEMBER
AWWA

SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT 11-02

Location SE 1/4 NE 1/4 Sec 15 Twp 95N Rg 50W

Well Owner:

County UnionPlease mark well
location with an "X"Name: John ThompsonAddress: 47333 295th StCity, State, Zip: Beresford SD 57004

Comments:

Test hole #1
GPS: N 43 03 04.752, W 96 43 54.415

Plugging Completion Date April 17, 2013

CHECK APPROPRIATE BOX

EXISTING WELL ☐TEST HOLE ☒

Well depth _____

Hole depth 111'

Casing material _____

Hole size 5.25

Casing size(s) _____

Casing condition _____

Describe plugging procedure:

tremie piped

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Describe grout or plugging material:

volclay grout

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Type of non-slip plug: _____

This well or test hole was plugged under license # 475 and this report is true and accurate.Drilling firm: Thein Well Co., Inc.

Signature of Licensed Representative: _____

Signature of Well Owner: John ThompsonDate: 5-8-13



THEIN WELL
P.O. BOX 778, 11355 HWY. 71 NE (ACROSS FROM RINGO LAKE)
SPICER, MINNESOTA 56288 • (320) 796-2111
www.theinwell.com • E-mail: theinwell@tds.net

WELLS ~ PUMPS
SALES ~ SERVICE

Since 1893

Well Log for John Thompson

Date: 04/14/13

Well Size: test hole 2

Casing Length:

Screen Length:

Total Well Depth:

SWL:

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Geological Material	Color	Hardness or Formation	From	To
Top soil			0	3
Clay	Brown		3	5
Sand		Med-Crs	5	27
Clay	Blue		27	32
Sand		Med-Crs	32	73
Clay	Blue		73	80

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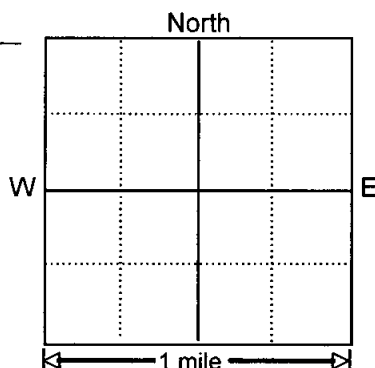
CERTIFIED MASTER WATER WELL CONTRACTOR
Equal Opportunity Employer

MEMBER
AWWA

SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT 11-02

Location SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 15 Twp 95N Rg 50W

Well Owner:

County UnionPlease mark well
location with an "X"Name: John ThompsonAddress: 47333 295th StCity, State, Zip: Beresford SD 57004

Comments:

Test hole #2
GPS: N 43 02 53.239, W 96 43 37.020

Plugging Completion Date April 17, 2013

CHECK APPROPRIATE BOX

EXISTING WELL ☐TEST HOLE ☒

Well depth _____

Hole depth 80'

Casing material _____

Hole size 5.25

Casing size(s) _____

Casing condition _____

Describe plugging procedure:

tremie piped

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Describe grout or plugging material:

volclay grout

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Type of non-slip plug: _____

This well or test hole was plugged under license # 475 and this report is true and accurate.Drilling firm: Thein Well Co., Inc.

Signature of Licensed Representative: _____

Signature of Well Owner: John ThompsonDate: 5-8-13

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 5/10, 20 13

RECEIVED OF John H Thompson 47333 295th St Beresford SD 57004

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	850	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. _____	200	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	1050 00

No. **06333**

By 
Chief Engineer

August 7, 2013

PAYMENT REQUEST FORM

PAYEE: John H Thompson
47333 295th St
Beresford SD 57004

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Refund on water permit 7843-3

AMOUNT: \$100.00

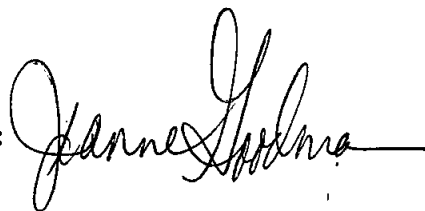
FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:



8-7-13

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

May 14, 2013

John H Thompson
47333 295th St
Beresford SD 57004

Dear Mr. Thompson:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation in Union County. In order to complete the application, the following is required.

- Enclosed is the application. Please complete Item No. 2, Amount of water claimed.

State Statutes limit diversions to 1 cubic feet of water per second (cfs) for each 70 acres irrigated. This would mean that you are allowed approximately 1.71 cfs or 770 gpm to irrigate the 120 acres. We understand that in order to accommodate certain irrigation methods, a greater diversion rate is required. Please justify in writing your request for a diversion rate greater than the statutory limit (please explain diversion rate requirement for the project).

- Enclosed is the aerial photo map submitted with the application. The map needs to reference a government section corner or quarter corner including section, township and range. For your use, I have enclosed a map with those designations. Please outline the acres to be irrigated and mark the proposed well location with an "X".
- The application/license fee for irrigation of 120 acres is \$950.00. You submitted a check for \$1,050.00. A refund of \$100.00 will be processed at a later date.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7843-3, John H Thompson**

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. 7843-3, John H Thompson, 47333 295th Street, Beresford SD 57004.

The Chief Engineer is recommending APPROVAL of Application No. 7843-3 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 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. 7843-3 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.

Jeanne Goodman, Chief Engineer
July 8, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7843-3
JOHN H. THOMPSON
JULY 08, 2013

Water Permit Application No. 7843-3 proposes to water at a maximum diversion rate of 1.67 cubic feet of water per second (cfs) from one well to be completed into the Brule Creek aquifer. The well is expected to be approximately 80 feet deep and is to be located in the SE ¼ NE ¼ Section 15, T95N-R50W. Water is to be used for the irrigation of 120 acres located in the NE ¼ Section 15, T95N-R50W. The proposed well site is approximately 2.75 miles southeast of the city of Beresford in Union County.

AQUIFER: Brule Creek aquifer (BRC)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Brule Creek aquifer consists of glacial and non-glacial sands and gravels which range from a medium sand to a coarse gravel that is primarily under artesian conditions, but can be found under water table conditions (Niehus, 1994). The aquifer underlies northern Union County, southern Lincoln County, and a portion of northeast Clay County (Hedges et. al, 1982; Niehus, 1994; Stephens, 1967). The aquifer is estimated to underlie 78,400 acres and contain approximately 298,500 acre-feet (ac-ft) of recoverable water in storage (Hedges et. al, 1982). However, Niehus (1994) further delineated the aquifer and estimated that the Brule Creek aquifer underlies 180 square miles (115,200 acres) and contains 570,000 ac-ft of water in storage in Lincoln and Union Counties. The aquifer is often overlain by till and underlain by the Niobrara Formation or Carlile Shale (Niehus, 1994). Water movement is generally south, except in the northern portion of the aquifer where water moves northeast to the hydraulically connected Newton Hills aquifer (Niehus, 1994). The Brule Creek aquifer has an average thickness of 33 feet, but can be up to 88 feet thick (Niehus, 1997). The average depth to the top of the aquifer is 46 feet (Niehus, 1997).

Two test hole logs were submitted with this application. The first test hole, "test hole 1" encountered aquifer materials between 39 and 45 feet below grade and 59 to 66 feet below grade. The second test hole, "test hole 2", identified aquifer materials from 5 to 27 feet below ground surface and from 32 to 73 feet below ground surface. The applicant stated that the proposed well site is at the location of "test hole 2". The well logs for two observation wells completed into the Brule Creek aquifer within one mile of the proposed well site, UN-80B and UN-77A, indicate that both layers of aquifer material identified in the test hole logs are part of the Brule Creek aquifer and that in this area the aquifer is under water table conditions (Water Rights, 2013a).

SDCL 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a 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 availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

If this application is approved, the actual water use will likely be less than 240 ac-ft/yr from the Brule Creek aquifer. The probability of unappropriated water being available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of the water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the aquifer is not older or lower than the Greenhorn Formation, therefore withdrawal/recharge issue must be considered.

Hydrologic Budget:

Recharge:

Recharge to the Brule Creek aquifer primarily occurs through infiltration of precipitation where the aquifer is near land surface (Niehus, 1994). Hedges and others (1985) estimated that for management and development programs for confined aquifers recharge rates range from 0.15 in/yr to 0.60 in/yr. That equates to a range of recharge of 1,440 ac-ft/yr to 5,760 ac-ft/yr using the area determined by Niehus (1994). The SD DENR-Water Rights Program determined a recharge rate for the unconfined portions of the Brule Creek aquifer to be 4.5 in/yr or 7,350 to 10,800 ac-ft/yr (Buhler, 2009). Note that the range is only for the unconfined portions of the aquifer.

Discharge:

Discharge from the Brule Creek aquifer occurs due to evapotranspiration, outflow to the Newton Hills aquifer and possibly the Big Sioux aquifer, and well withdrawals. Currently there are 18 water rights/permits appropriating water from the aquifer. These water rights/permits are shown in Table 1. Note that the City of Alcester has been connected to South Lincoln Rural Water since 1987 and that the City of Beresford connected to Lewis and Clark Regional Water System in 2012 (Friedeman, 2013). Therefore, it is likely neither city uses much water from their respective rights. However, since the connection for Beresford is so new and they have yet to establish how much of their annual use will be from their own water rights, the water use by Beresford should still be considered.

The amount of water that can be expected to be withdrawn through water rights/permits authorizing water use for non-irrigation purposes at the current appropriation level can be estimated by assuming water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and those limited by volume will pump the entire volume annually. Non-irrigation use is also shown in Table 1. Excluding Alcester annual non-irrigation water use from the Brule Creek aquifer is estimated to be 853.1 acre-feet per year.

Permit No.	Name	Status	Type	CFS	Acres	Non-Irr Use (ac-ft)
672-3	City of Alcester	LC	MUN	0.44		191.1
758-3	City of Alcester	LC	MUN	0.17		73.8
1384-3	Jim Andrews	LC	IRR	1.94	136	
2193-3	Larry D Andrews	LC	IRR	1.94	136	
2194-3	Larry D Andrews	LC	IRR	1.94	136	
4685-3	Allen Andrews	LC	IRR	1.77	136	
4909-3	City of Beresford	LC	MUN	1.92		834.0
5536-3	Don Lerseth	LC	IRR	1.77	136	
5660-3	City of Beresford	LC	REC			0.0
5950-3	Larry D Andrews	LC	IRR	1.65	116	
6556-3	James Andrews	PE	IRR	1.15	80	
6558-3	Marlow Christensen	LC	COM/LCO	0.044		19.1
6933-3	Steven Andrews	PE	IRR	2.22	249.1	
6961-3	Norman Kramer	PE	IRR	1.56	160	
6962-3	Norman Kramer	PE	IRR	1.56	160	
6963-3	Norman Kramer	PE	IRR	1.44	80	
7166-3	Steven Andrews	PE	IRR		41.4	
7561-3	Jerry or Joyce Hansen	PE	IRR	1.78	132	
LC= Water Right, PE= Water Permit, IR = Irrigation, MUN= Municipal, REC= Recreation, COM= Commercial, LCO= Livestock Confinement Operation						

Table 1- Water rights/permits appropriating water from the Brule Creek aquifer (Water Rights, 2013b)

Table 2 shows the historic irrigation water use from the Brule Creek aquifer. Estimated average annual water use from the Brule Creek aquifer is 1,382.1 ac-ft/yr. The estimated average annual water use is much less than, approximately 6,000 to 9,400 ac-ft/yr less than, the estimated average annual recharge to the aquifer. Therefore, there is a reasonable probability that unappropriated water is available for this proposed appropriation.

Year	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage (ac-ft)
2011	12	3541	670.82
2010	12	3541	91.7
2009	11	3458.2	332.99
2008	11	3458.2	755.39
2007	7	2160	702.51
2006	7	2160	733.58
2005	7	2160	637.91
2004	8	2480	667.95
2003	8	2480	469.76
2002	9	2900	504.96
2001	10	2940	521.45
2000	10	2940	702.65
1999	10	2940	790.66
1998	10	2940	987.91
1997	10	2940	651
1996	9	2788	446.51
1995	10	2868	1041.22
1994	10	2868	1192.57
1993	10	2942	11
1992	9	2868	6
1991	9	2868	993
1990	8	2584	859
1989	7	2164	1029
1988	7	2164	939
1987	7	2164	279
1986	7	2164	253
1985	7	2164	300
1984	7	2164	412
1983	7	2164	15.35
1982	7	2164	221.4
1981	13	5344	32.19
1980	11	5064	68.29
1979	11	5064	139.31
Min	7	2160	6
Max	13	5344	1192.57
Average	9	2897	529

Table 2- Historic irrigation water use from the Brule Creek aquifer (Water Rights, 1979-2012)

Observation Well Data:

Administrative Rule of South Dakota Section 74:02:05:07 requires that “the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The DENR-Water Rights Program monitors 10 observation wells completed into the Brule Creek aquifer (Water Rights, 2013a). The observation wells closest to the proposed well site are listed in Table 3.

Obs Well	Distance to Proposed Well Site	Figure
UN-77A	0.6 miles south	1
UN-80B	0.6 miles northeast	2
UN-77B	2.5 miles south	3
LN-80B	2.8 miles northeast	4

Table 3- Observation wells near well site proposed by Application No. 7843-3 (Water Rights, 2013a)

Water levels in the observation wells show good response to climatic conditions. The water levels rise (recharge) during wet years and gradually decline during dry years. The hydrographs show minimal effects from pumping, and it does not appear to be significant over the period of record. The climatic effects on water levels mask the temporal impacts of well withdrawal. This indicates that recharge to and natural discharge from the aquifer greatly exceeds well withdrawals. Recognizing that natural discharge can be captured for pumping, the hydrographs document that unappropriated water is available from the Brule Creek aquifer for these proposed appropriations. The hydrographs for the observation wells are shown in Figures 1 through 4.

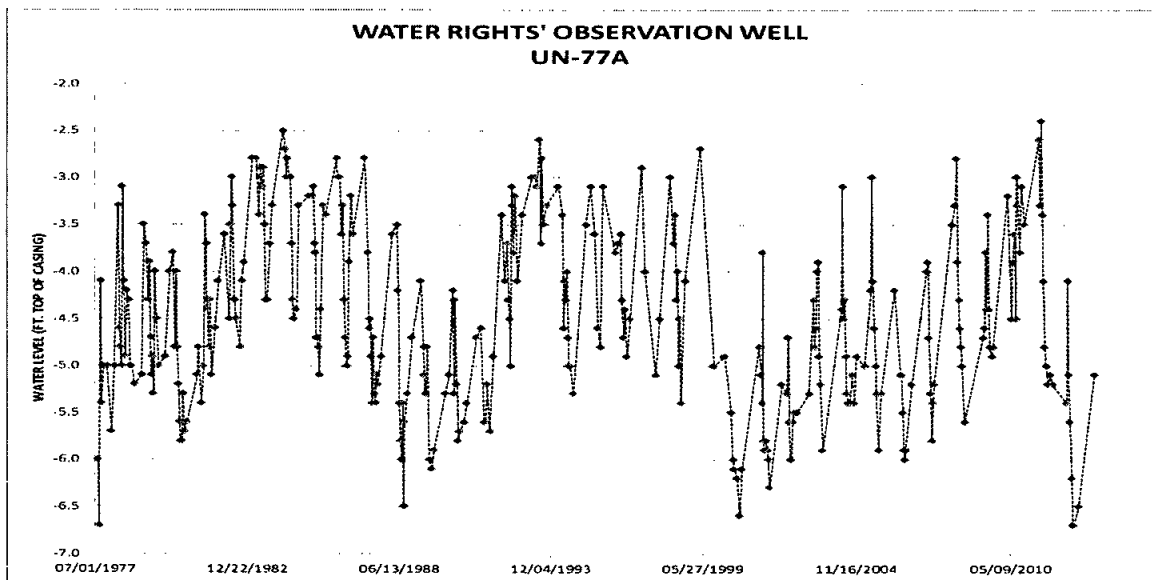


Figure 1- Hydrograph for observation well UN-77A (Water Rights, 2013a)

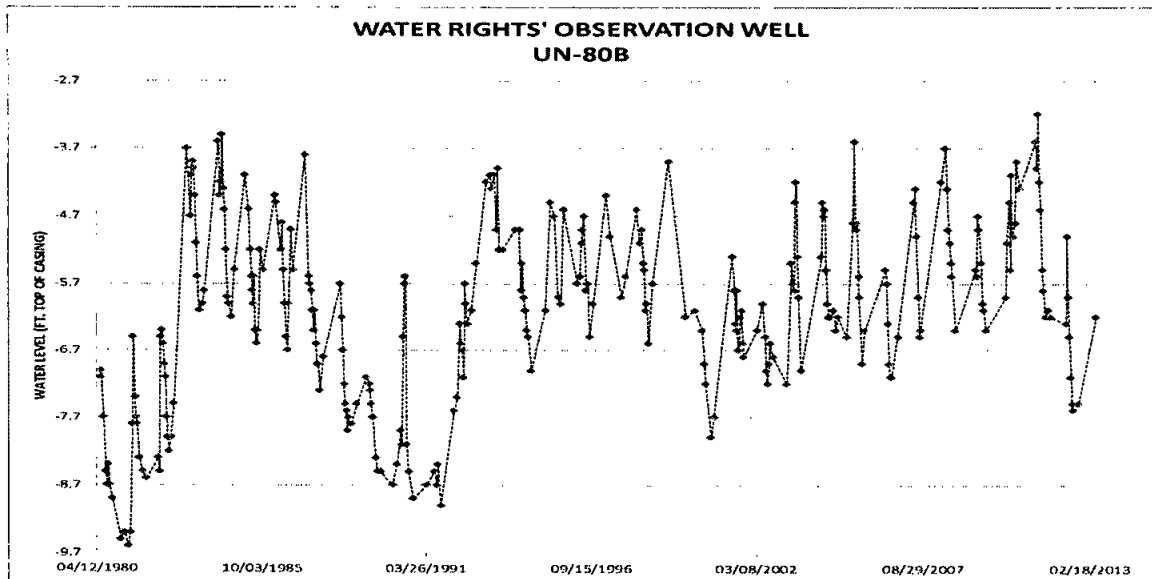


Figure 2- Hydrograph for observation well UN-80B (Water Rights, 2013a)

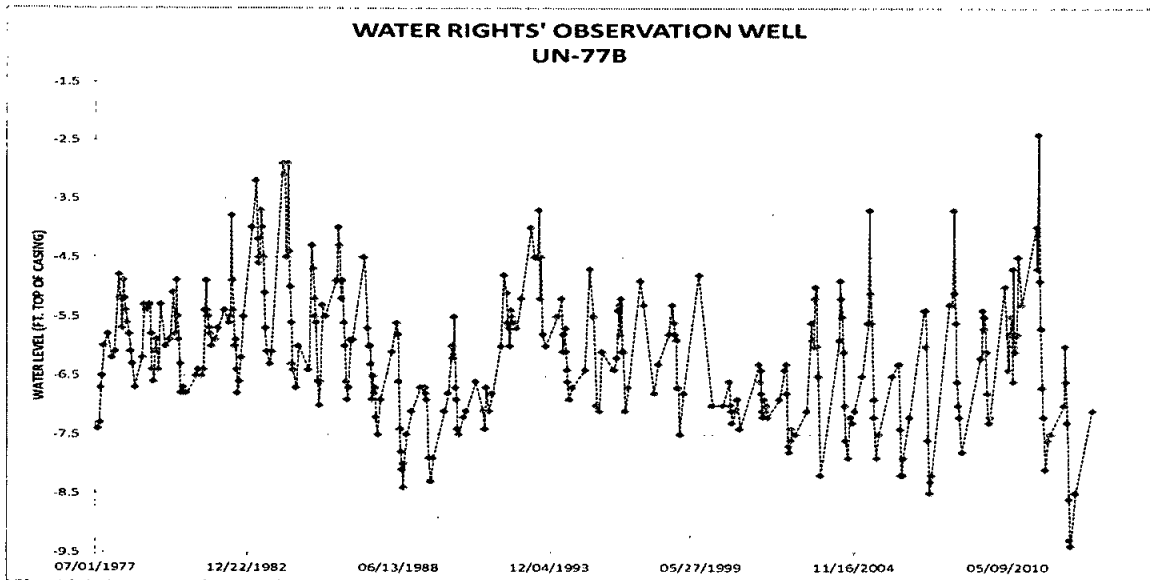


Figure 3- Hydrograph for observation well UN-77B (Water Rights, 2013a)

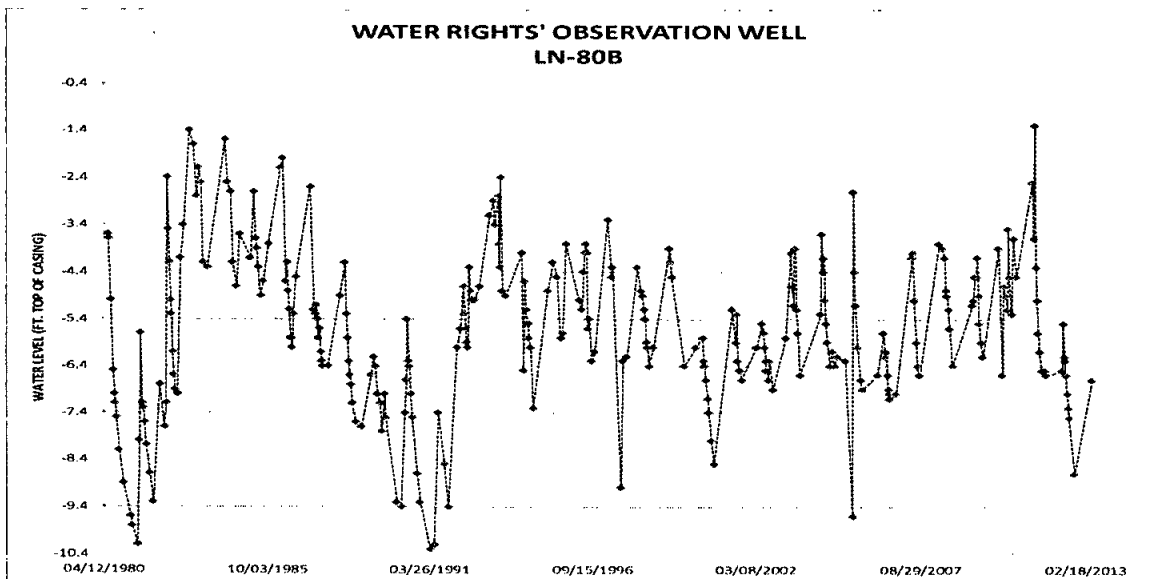


Figure 4- Hydrograph for observation well LN-80B (Water Rights, 2013a)

EXISTING WATER RIGHTS:

There are only two water rights/permits that authorize the withdrawal of water from the Brule Creek within approximately two miles of the proposed well site. Water Permit No. 6961-3 authorizes a dugout completed into the Brule Creek aquifer approximately 0.6 miles south-southeast and Water Permit No. 6962-3 authorizes an irrigation well very near to the dugout. The diversions from the dugout and the well are both for 1.56 cfs for the irrigation of the same 160 acres (Water Rights, 2013b). However, the dugout is likely not an adequate well as defined in the SD Well Construction standards and protection is likely limited. There are a number of domestic wells on file with the SD DENR-Water Rights Program within approximately two miles of the proposed well site, but none are within approximately three-quarters of a mile (Water Rights, 2013c). The area is served by South Lincoln Rural Water System and the Lewis

and Clark Regional Water System. Thus, many of the domestic wells in the area are likely no longer used as a primary source of water.

However, reasonable domestic use is assured by SDCL 46-6-6.1 and ARSD 74:02:04:20(7). SDCL 46-6-6.1 and ARSD 74:02:04:20(7) ensures not only that interference will not be adverse to domestic well users but also in existing appropriative rights. Depending on the exact characteristics of the Brule Creek aquifer at the well site, some existing well owners may need to lower their pumps to accommodate for lower water levels. When considering SDCL 46-6-6.1 and ARSD 74:02:04:20(7), there is a reasonable probability that any well interference from this proposed diversion is not likely to be adverse.

CONCLUSIONS:

1. Water Permit Application No. 7843-3 proposes to appropriate water at a maximum diversion rate of 1.67 cfs from one well to be completed into the Brule Creek aquifer for the irrigation of 120 acres in Union County.
2. There is a reasonable probability that unappropriated water is available from the Brule Creek aquifer to supply this proposed appropriation.
3. There is a reasonable probability that the diversion rate requested by this application can be made without adversely impacting existing water rights/permits and domestic users.



Adam Mathiowetz
SD DENR-Water Rights Program

Approved by:



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Buhler, K.A. Report on Water Permit Application No. 7166-3 for Steve Andrews. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Friedeman, B. Personal Communication. May 28, 2013. SD DENR-Drinking Water Program.
- Hedges, L.S. J. Allen, and D.E. Holly. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge. South Dakota DENR-Geological Survey, Vermillion, SD.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Niehus, C.A. 1997. Major Aquifers in Lincoln and Union Counties, South Dakota. SD DENR-Geological Survey Information Pamphlet 49. SD DENR-Geological Survey, Vermillion, South Dakota.
- Niehus, C.A. 1994. Water Resources of Lincoln and Union counties, South Dakota. USGS WRI Report 93-44195. U.S. Geological Survey, Rapid City, South Dakota/
- Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water Resources. SD DENR- Geological Survey, Vermillion, South Dakota.
- Water Rights. 1979-2012. Irrigation Questionnaire Summary. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013a. Observation Well Files. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013b. Water Right/Permit Files. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013c. Well Completion Reports. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.

STATE OF SOUTH DAKOTA
SS
COUNTY: UNION
CITY: BERESFORD
NEWSPAPER: BERESFORD REPUBLIC

Allyson M. Hill, being first duly sworn, on oath, says that the BERESFORD REPUBLIC IS a weekly newspaper published in said city and county, State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive, and has met all the requirements for at least one year next prior to the first publication of the attached public notice, and that said notice, a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper

1 time(s) as follows: that the first publication of said notice in said newspaper aforesaid was on Thursday the 18 day of July, 2013, and that the succeeding publications were severally on

Thursday, the ____ day of _____, 2013;

Thursday, the ____ day of _____, 2013;

Thursday, the ____ day of _____, 2013

Affiant further says that the full amount of the fees charged for the publication of said notice inures to the benefit of the publishers of said newspaper; that no agreement of understanding for the division thereof has been made with any other person, that no part therefore has been agreed to be paid to any person whomsoever; and that the fees charges for the publication thereof are:

DOLLARS \$ 19.92
Allyson M. Hill Allyson M. Hill
Subscribed and sworn to before me this 31 day of July, 2013.

[Signature]
Notary Public
My commission expires 11/14/2018



TION NO. 7843-3 to Appropriate Water

Notice is given that John H. Thompson, 47333 295th St, Beresford SD 57004 has filed an application for a water permit to appropriate 1.67 cubic feet of water per second from one well to be completed into the Brule Creek Aquifer (80 feet deep) located in the SE 1/4 NE 1/4 Section 15 for irrigation of 120 acres located in the NE 1/4 Section 15; all in T95N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7843-3 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 this 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 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 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 July 29, 2013.

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.

Published once at the total approximate cost of \$19.92

CUSTOMER NUMBER:	078200	Argus Leader	
AD ORDER NUMBER:	1420399		
	7/18, 2013	P.O. Box 677349, Dallas, TX 75267-7349	\$62.37pd

John H Thompson
47333 295th St
Beresford, SD 57004

RECEIVED
JUL 22 2013
WATER RIGHTS PROGRAM

PAYMENT DUE UPON RECEIPT

AFFIDAVIT OF PUBLICATION-

Customer Number: 078200
Invoice Number: 1420399

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

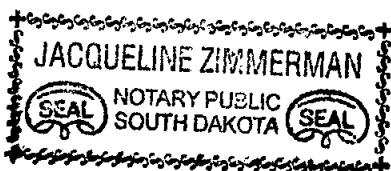
Linda Schulte being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Thursday the 18 day of June 2013 ,
the day of 2013 ,
the day of 2013 ,
the day of 2013 ,
the day of 2013 ,
the day of 2013 ,
the day of 2013 ,

and that \$62.37pd was charged for publishing the same

Linda Schulte
Subscribed and sworn to before me 7/18/2013

J. Zimmerman
Notary Public, South Dakota
My Commission expires December 22, 2015



NOTICE OF APPLICATION
NO. 7843-3 to Appropriate Water

Notice is given that John H. Thompson, 47333 295th St, Beresford SD 57004 has filed an application for a water permit to appropriate 1.67 cubic feet of water per second from one well to be completed into the Brule Creek Aquifer (80 feet deep) located in the SE 1/4 NE 1/4 Section 15 for irrigation of 120 acres located in

the NE 1/4 Section 15; & S 195N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7843-3 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 this 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 this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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Published once at the total approximate cost of \$62.37.
1420399 Jul. 18, 2013



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

July 9, 2013

Beresford Republic
PO Box 111
Beresford SD 57004

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7843-3 to Appropriate Water. Please publish the notice once on July 18, 2013. 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 and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is John H Thompson, 47333 295th St, Beresford SD 57004 (Ph # 605-957-4602).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

July 9, 2013

Argus Leader
PO Box 5034
Sioux Falls SD 57117

ATTENTION: Legal Public Notice

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

July 9, 2013

John H Thompson
47333 295th St
Beresford SD 57004

Dear Mr. Thompson:

Water Permit Application No. 7843-3 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 Argus Leader printed at Sioux Falls SD (Ph # 605-331-2200) and the Beresford Republic printed at Beresford SD (Ph # 605-763-2006). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and 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(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. 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 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.

Instruction to Newspaper - Publish the Notice on July 18, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7843-3 to Appropriate Water

Notice is given that John H Thompson, 47333 295th St, Beresford SD 57004 has filed an application for a water permit to appropriate 1.67 cubic feet of water per second from one well to be completed into the Brule Creek Aquifer (80 feet deep) located in the SE 1/4 NE 1/4 Section 15 for irrigation of 120 acres located in the NE 1/4 Section 15; all in T95N-R50W.

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Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

AUG 07 2013

John H Thompson
47333 295th St
Beresford SD 57004

Dear Mr. Thompson:

Enclosed is Water Permit No. 7843-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

This application was submitted with a \$1,050.00 fee. The correct fee is \$950.00. Therefore, \$100.00 will be refunded to you. The refund check should be received within the next couple of weeks.

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,

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

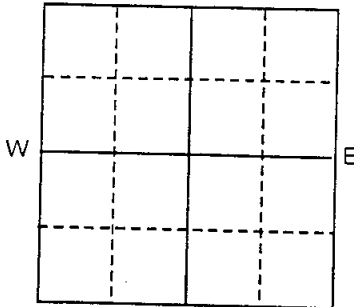
enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NE 1/4 Sec 15 Twp 95N Rg 50WCounty Union

North

Please mark well
location with an "X"

Well Completion Date

August 1, 2013

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	45.0 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
Bentonite	12	Lb/gal	0.0 Ft	45.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie piped

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 12 Inches Length 20 / 8 Feet
Material PVC/SS
Slot Size 100 / 60 Set From 45.0 Feet to 73.0 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 to which water
quality sample sent for analysis
n/aWell Owner: John Thompson

Business Name:

Address: 47333 295th StCity, State, Zip: Beresford SD 57004

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Black top soil	0	3
Reddish brown clay	3	5
Brown sand	5	27
Hard blue clay	27	32
Brown sand	32	72
Blue clay	72	80

STATIC WATER LEVEL 9.0 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

32.0 Ft. After 2.0 Hrs. pumped 800.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS: N 43 2.886
W 96 43.609

RECEIVED

OCT - 7 2013

WATER RIGHTS
PROGRAMThis well was drilled under license # 475 and this
report is true and accurate.Drilling firm: Thein Well Co., Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 14, 2025

NOTICE

TO: JOHN THOMPSON, 47333 295TH ST, BERESFORD, SD 57004

FROM: Ron Duvall, Engineer III
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2024 Irrigation Questionnaire(s)

Our records indicate your 2024 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7900-3, 7901-3, 7843-3 & 7916-3. The request for the Questionnaire was dated October 23, 2024. The Water Management Board has directed owners of water permits who have not submitted the 2024 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7900-3, 7901-3, 7843-3 & 7916-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held on **Wednesday, March 5, 2025, at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 7900-3, 7901-3, 7843-3 & 7916-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 5, 2025**, hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Amanda Dewell at (605) 773-3352 or email at amanda.dewell@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: MHLBIX**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 24, 2025

7843-3, 7900-3
7901-3, 7916-3

John Thompson
47333 295th St
Beresford SD 57004

Dear Mr. Thompson:

I am writing to acknowledge the receipt of your 2024 irrigation questionnaire(s).

You may disregard the January 14, 2025, "Notice" concerning the reporting requirements for Water Permit No(s). 7843-3, 7900-3, 7901-3 & 7916-3. The information was received prior to the March 5, 2025, Water Management Board meeting and the above listed permit number(s) have been removed from the agenda.

If you have any questions or concerns, please contact me.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

**Report of Examination of Works and/or Application of Water to Beneficial Use
For Permit No. 7843-3**

I have this day, December 18, 2024, made a thorough examination of the water use systems owned by John Thompson, 47333 295th St., Beresford, SD 57004, holder of Permit No. 7843-3, bearing the priority date of May 10, 2013. This permit authorizes the diversion of 1.67 cu. ft. per second of the waters of groundwater (Brule Creek Aquifer) authorizing the irrigation of 120 acres located in Union County.

Inspection contacts: John Thompson

A. Works used to divert the water:

Well Information

- 1) Well Drilling Firm: Thein Well Co., Inc.
- 2) No. of Wells: 1
- 3) Depth(s): 80 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 45 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 12 inches
- 2) Length: 28 feet
- 3) Type: PVC
- 4) Length: 20 feet
- 5) Type: Stainless Steel
- 6) Length: 8 feet
- 7) Static water level: 9 feet

Pump:

- 1) Make: Franklin
- 2) Model: FPS
- 3) Capacity: 700 gpm

Motor:

- 1) Make: Franklin
- 2) Model No.: Unknown
- 3) Horsepower rating: 40 hp

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

- 1) Type: PVC Size: 8 inches Length: 1,700 feet

C. Works used to apply water to beneficial use:

Center Pivot:

- 1) Make: Zimmatic
- 2) Overall length: 1,301 feet
- 3) Number of towers: 7
- 4) End gun: Yes Range: 104 feet
- 5) Capacity: 800 gpm

Chemigation Equipment:

- 1) Does chemigate: Yes
- 2) Main line check valve: Yes
- 3) Inspection port/air relief: Yes
- 4) Low pressure drain: Yes
- 5) Discharge is 20' from source: No
- 6) Interlock type: Mechanical
- 7) Injection pump: Positive displacement
- 8) Injection check valve: Yes
- 9) Injection line check valve or positive displacement pump: Yes

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: Yes
- 3) Exceptions to compliance are: None

E. Condition and Location:

- 1) The system is in good condition with the point(s) of diversion located as follows:
The well is 2,460 feet south and 50 feet west of the northeast corner of Section 15-T95N-R50W (Latitude 43.04811, Longitude -96.72685– SE1/4 of the NE1/4).
- 2) The works are capable of diverting and conveying to the places of use 1.78 cu. ft. per second of water from the well which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

<u>Section 15-T95N-R50W</u>	
<u>NW1/4NE1/4</u>	<u>33acres</u>
<u>NE1/4NE1/4</u>	<u>21 acres</u>
<u>SW1/4NE1/4</u>	<u>33 acres</u>
<u>SE1/4NE1/4</u>	<u>33 acres</u>

comprising a total of 120 acres of land and the license should be issued for 1.67 cfs.

- 3) All structures, wells and lands on map: Yes

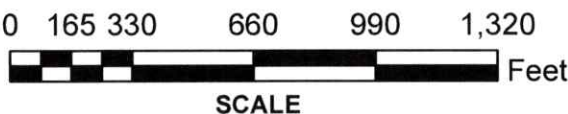
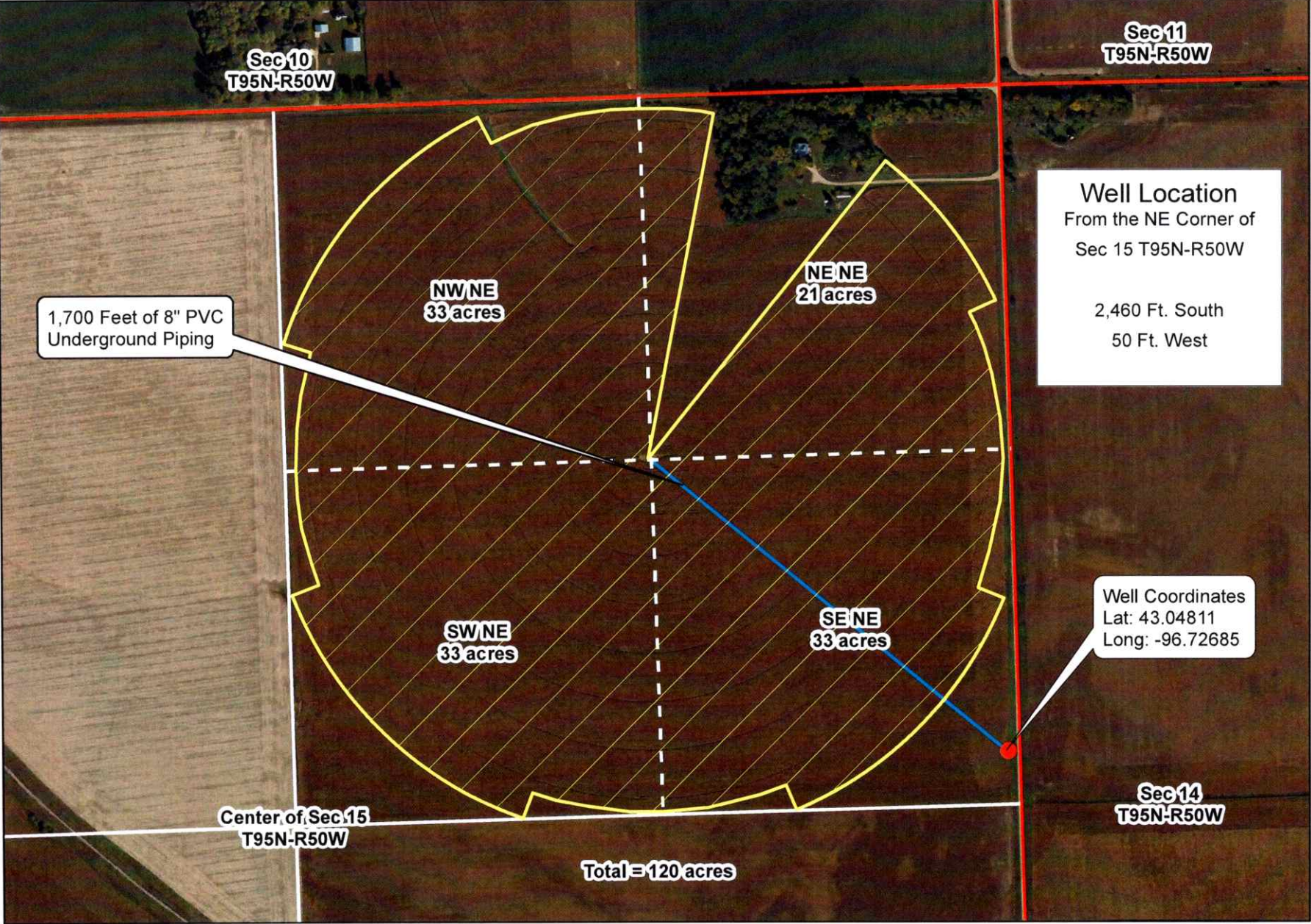
F. Comments or other permit(s) associated with the project: Thein Well Co. Inc. indicated that the pump is rated for 700 gpm (1.56 cfs), but the pivot is nozzled for 800 gpm (1.78 cfs). Also, the chemigation equipment was not on site. However, Mr. Thompson described the equipment to me.

Keith DeJong

Keith DeJong, PE Ret.
Water Rights Inspector
DANR, Water Rights Program

Date report completed: December 20, 2024

Water Permit No. 7843-3



Keith DeJong
Keith DeJong, PE Ret.
Staff Engineer
December 18, 2024



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

APR 07 2025

John H Thompson
47333 295th St
Beresford, SD 57004

Nos. 7843-3 & 7916-3

Dear Mr. Thompson:

Enclosed is Water License Nos. 7843-3 and 7916-3. These are the final water right documents completing your process of obtaining the Water Rights. Included with your licenses are maps prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, 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.

So 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. If you have any questions, please contact our office.

Sincerely,

Mark Mayer, PE
Director of Office of Water
(605) 773-3352

NOTE: The inspection found your system for Water Right No. 7843-3 to be capable of diverting 1.78 cfs (approx. 800 gpm). Diversion of water under this license is limited to 1.67 cfs (approx. 750 gpm).

The inspection found your system for Water Right No. 7916-3 to be capable of diverting 0.78 cfs (approx. 350 gpm). Diversion of water under this license is limited to 0.56 cfs (approx. 251 gpm).

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7843-3**

(1) John H Thompson, 47333 295th St, Beresford, SD 57004, made Application No. 7843-3, May 10, 2013, for a water permit to divert 1.67 cubic feet of water per second from groundwater, one well (Brule Creek Aquifer), Union County, South Dakota for irrigation purposes. Permit No. 7843-3, with a priority date of May 10, 2013, was approved July 29, 2013, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 29, 2018, and for the application to beneficial use of water on or before July 29, 2022.

(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 1.67 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 2,460 feet S and 50 feet W from the NE corner Section 15, T95N, R50W (SE $\frac{1}{4}$ NE $\frac{1}{4}$)
(Latitude 43.04811 and Longitude -96.72685)

(3) The amount of 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: July 1 – September 30.

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

Section 15, T95N, R50W
NE $\frac{1}{4}$ NE $\frac{1}{4}$ - 21 acres
NW $\frac{1}{4}$ NE $\frac{1}{4}$ - 33 acres
SW $\frac{1}{4}$ NE $\frac{1}{4}$ - 33 acres
SE $\frac{1}{4}$ NE $\frac{1}{4}$ - 33 acres
Total – 120 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 John H Thompson, the holder and/or owner of Water Right No. 7843-3 is issued a license to appropriate water, the right to use 1.67 cubic feet of water per second from groundwater, one well (Brule Creek Aquifer), with a priority date of May 10, 2013, 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. 7843-3 and subject to 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 authorized by Permit No. 7843-3 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. *(The well was drilled in 2013 by Thein Well Co. A copy of the well completion report is on file with the Water Rights Program.)*
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Mark Mayer
Mark Mayer, PE
Director of Office of Water

4/7/25
date

