

WATER PERMIT NO. 7069-3

Name of Applicant: **Kelly O'Connor**

Address: **501 S Crawford Rd, Vermillion SD 57069**

Phone: **605 624-6345**

Amount of Water Claimed: **5.33 cfs**

Total Acres: **480 acres**

Source of Water Supply: **groundwater (3 wells)**

Water to be used for: **irrigation**

County: **Union**

Type of Waste Disposal System:

Location: **3 south of Elk Point**

Northwest 7, 8 miles ?

PRIORITY

Date Received: **9-15-08**

Application/License Fee: **\$425**

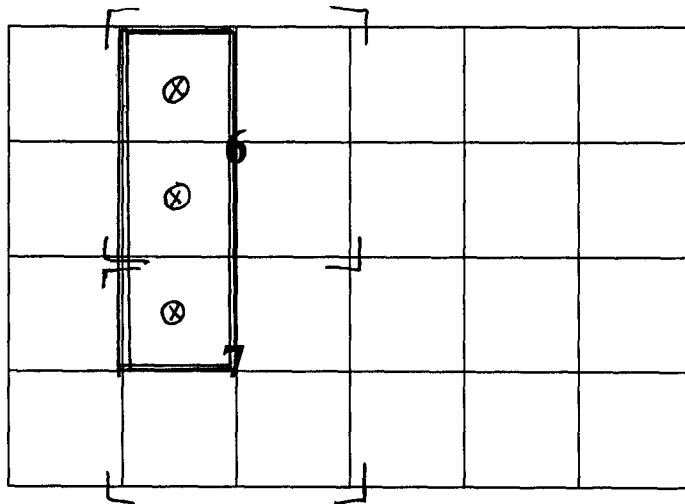
Corrected Application Received: **9-22-08**

Period of Annual Use: **June 1 – Sept 30**

Remarks:

Diversion Point: **Centers of NW ¼, SW ¼ Sec 6
and NW ¼ Sec 7; all in T92N-R50W**

Land to be Irrigated: **W ½ Sec 6 and NW ¼ Sec 7;
all in T92N-R50W**



Depth of Well: **210 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by: **Rachael Kinkelbar, Union Co FSA**

Reviewed and the Number Assigned on: **9-22-08**

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. <u>7069-3</u>	(office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>	
	Newspaper <u>Southern Union Coal Leader/Commer</u>	
	<u>605-356-2632</u>	<u>Elk Point</u>

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SEP 15 2008

WATER RIGHTS
PROGRAM

PO Box 38
57025

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.)

- Name of Applicant Kelly O'Connor Phone 605-624-6345
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 501 S. Crawford Rd Vermillion State SD 57069
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 5.33*CFS or 800 **GPM ea. well ***AF Total Acreage 480
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply well
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Union
3 wells - 1 in each quarter = 1 in NW1/4 6-92-50
1 in SW1/4 6-92-50
1 in NW1/4 7-92-50
- County or counties where water will be used Union
- Annual period during which water is to be used June, July, Aug, Sept
- 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
NW1/4 6-92-50	160		
SW1/4 6-92-50	160		
NW1/4 7-92-50	160		

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

put in 3 wells and irrigate 3 quarters.

STATE OF SOUTH DAKOTA) SS

County of Clay

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, Kelly O'Connor, 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 Kelly O'Connor

Subscribed and sworn to before me this 12th day of September 20 08

BRENDA J. MANN

SEAL

Notary Public
South Dakota

SEAL

Brenda J Mann
Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 7069-3**

Date of first receipt of application September 15, 2008.

Date of return to applicant for corrections, amendments or changes September 16, 2008.

Date of receipt of corrected application September 22, 2008.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7069-3 to Kelly O'Connor, 501 S Crawford Rd, Vermillion SD 57069 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. 7069-3 appropriates 5.33 cubic feet of water per second from three wells to be completed into the Lower Vermillion:Missouri Aquifer (approximately 210 feet deep) located in centers of the NW ¼, SW ¼ Section 6 and NW ¼ Section 7 to irrigate 480 acres located in the W ½ Section 6 and NW ¼ Section 7; all in T92N-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: June 1 – September 30.
3. The date from which applicant may claim right is September 15, 2008.
4. The date of approval of Permit No. 7069-3 is December 1, 2008.
5. One-fifth of the construction is to be completed on or before June 1, 2011.
6. All construction is to be completed on or before December 1, 2013.
7. Water is to be put to beneficial use on or before December 1, 2017.
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 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.
2. The wells authorized by Permit No. 7069-3 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

JAN 27 2009

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 24" Depth 210
- b) Casing Type PVC Diameter 16" Thickness 3/4"
- c) Screen Type PVC Diameter 16" Thickness 3/4"
- d) Gravel Pack 1/8" - 3/8" Pea Length of Gravel Pack 70'
- e) Depth to Top of Water Bearing Material 140'
- f) Depth to Water (ground surface to water level) 90'
- g) Distance to nearest existing domestic well:

On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information NA -

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

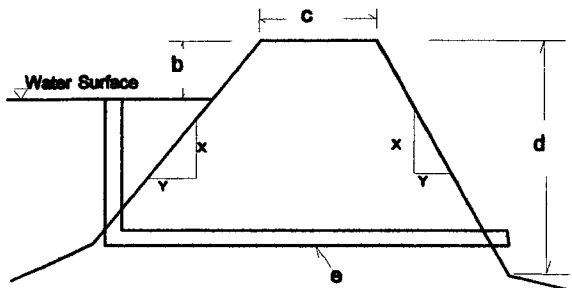
3. Dugout Information

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

4. Water Storage Dams NA,

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

Petersen Ag Systems Inc.



301 West South Street
Hartington NE 68739
402-254-9557

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WATER RIGHTS
PROGRAM

Farm: Union County Farms

Grower: Kelly O'Connor

3/7/2008

Systems:	Length	Spans	Total area including endgun
● Pivot 1	1303.67 ft	7 spans + 44 ft o.h.	133.84 acres



Pivot 1

Pivot Area: **122.57** acres
 Endgun Area: **11.27** acres
 Total Area: **133.84** acres

System Length: **1303.67** ft
 # of Spans: **7 + overhang**
 Deg. of Sweep: **360.0°**
 Endgun Throw: **100.0** ft

Color on map:



Spans

# of Spans: 7	Span 1 (180.2)	Span 2 (359.1)	Span 3 (538.0)	Span 4 (716.9)	Span 5 (895.8)	Span 6 (1074.8)	Span 7 (1253.7)	Overhang (1303.7)
Length:	179	179	179	179	179	179	179	44 ft
Pipe Size:	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	5 - 9/16"

Endgun Areas

Endgun 1: (Throw = 100.0 ft)

# of Areas: 4	Start / Stop Angle (Deg. from North)	Start / Stop Angle (Deg. from Pivot Start)	Start / Stop Location (Lat/Long)		Area (acres)
Area 1	18.2° / 70.1°	- NA - / - NA -	42° 48' 2.574" -96° 47' 59.785"	42° 47' 54.725" -96° 47' 48.805"	2.81
Area 2	108.1° / 160.7°	- NA - / - NA -	42° 47' 46.335" -96° 47' 48.628"	42° 47' 38.185" -96° 47' 59.476"	2.85
Area 3	200.6° / 250.6°	- NA - / - NA -	42° 47' 38.288" -96° 48' 11.400"	42° 47' 46.060" -96° 48' 21.737"	2.71
Area 4	290.7° / 343.9°	- NA - / - NA -	42° 47' 54.894" -96° 48' 21.603"	42° 48' 2.714" -96° 48' 10.089"	2.89

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402-254-9557

SEP 15 2008
WATER RIGHTS
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Farm: Union County Farms

Grower: Kelly O'Connor

3/7/2008

Systems:	Length	Spans	Total area including endgun
● Pivot 2	1303.67 ft	7 spans + 44 ft o.h.	133.11 acres



Pivot 2

Pivot Area: **122.57** acres
 Endgun Area: **10.54** acres
 Total Area: **133.11** acres

System Length: **1303.67** ft
 # of Spans: **7 + overhang**
 Deg. of Sweep: **360.0°**
 Endgun Throw: **100.0** ft

Color on map:



Spans

# of Spans: 7	Span 1 (180.2)	Span 2 (359.1)	Span 3 (538.0)	Span 4 (716.9)	Span 5 (895.8)	Span 6 (1074.8)	Span 7 (1253.7)	Overhang (1303.7)
Length:	179	179	179	179	179	179	179	44 ft
Pipe Size:	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	5 - 9/16"

Endgun Areas

Endgun 1: (Throw = 100.0 ft)

# of Areas: 4	Start / Stop Angle (Deg. from North)	Start / Stop Angle (Deg. from Pivot Start)	Start / Stop Location (Lat/Long)		Area (acres)
Area 1	19.7° / 68.2°	- NA - / - NA -	42° 48' 28.770" -96° 47' 59.384"	42° 48' 21.428" -96° 47' 49.051"	2.63
Area 2	111.4° / 161.4°	- NA - / - NA -	42° 48' 11.955" -96° 47' 49.006"	42° 48' 4.447" -96° 47' 59.705"	2.71
Area 3	200.7° / 248.2°	- NA - / - NA -	42° 48' 4.608" -96° 48' 11.485"	42° 48' 11.864" -96° 48' 21.526"	2.57
Area 4	291.3° / 339.8°	- NA - / - NA -	42° 48' 21.334" -96° 48' 21.581"	42° 48' 28.733" -96° 48' 11.335"	2.63

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Farm: Union County Farms

Grower: Kelly O'Connor

3/7/2008

Systems:	Length	Spans	Total area including endgun
● Pivot 3	1303.67 ft	7 spans + 44 ft o.h.	133.74 acres



Pivot 3

Pivot Area: **122.57** acres
 Endgun Area: **11.17** acres
 Total Area: **133.74** acres

System Length: **1303.67** ft
 # of Spans: **7 + overhang**
 Deg. of Sweep: **360.0°**
 Endgun Throw: **100.0** ft

Color on map:



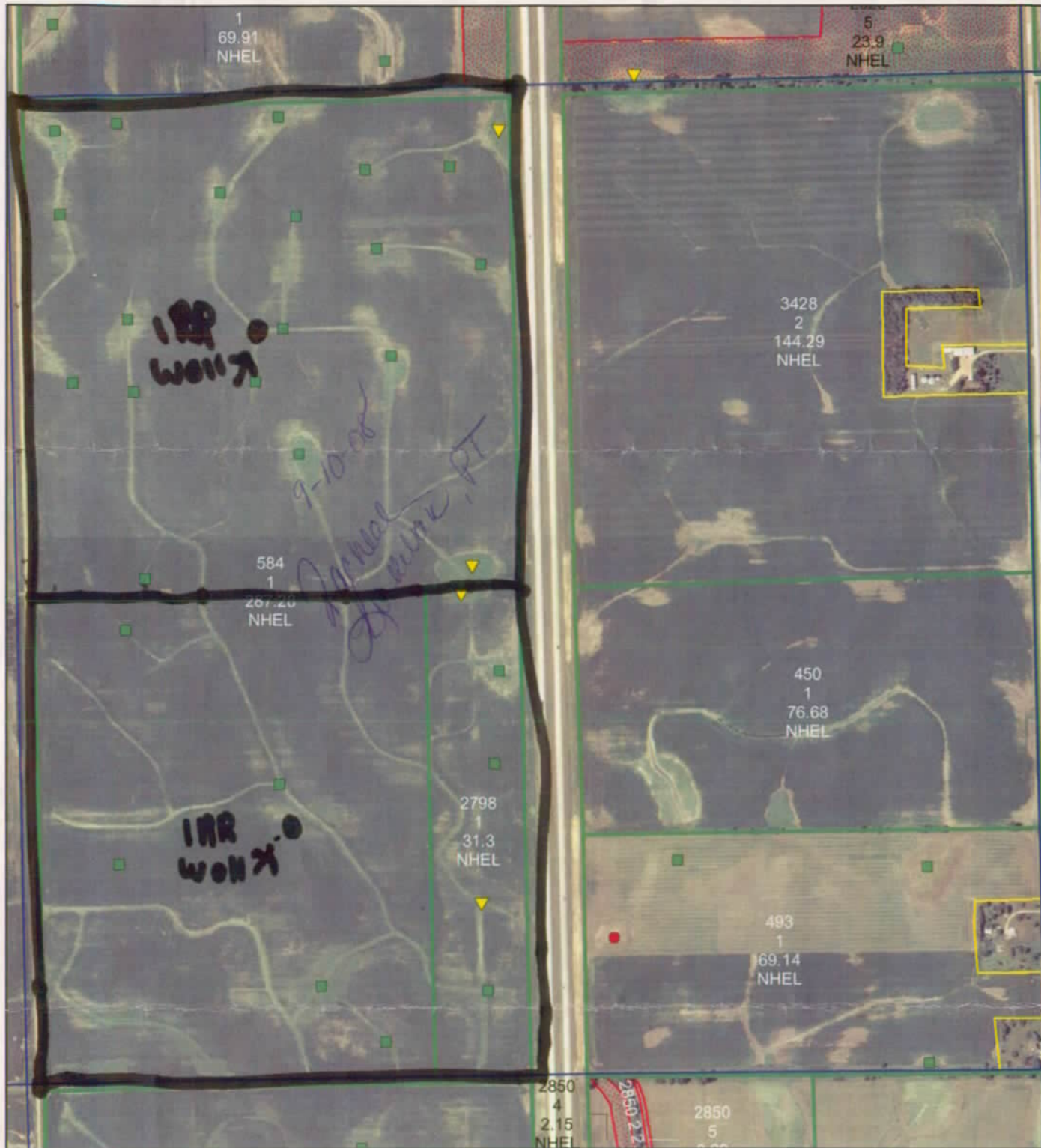
Spans

# of Spans: 7	Span 1 (180.2)	Span 2 (359.1)	Span 3 (538.0)	Span 4 (716.9)	Span 5 (895.8)	Span 6 (1074.8)	Span 7 (1253.7)	Overhang (1303.7)
Length:	179	179	179	179	179	179	179	44 ft
Pipe Size:	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	6 - 5/8"	5 - 9/16"

Endgun Areas

Endgun 1: (Throw = 100.0 ft)

# of Areas: 4	Start / Stop Angle (Deg. from North)	Start / Stop Angle (Deg. from Pivot Start)	Start / Stop Location (Lat/Long)		Area (acres)
Area 1	22.5° / 75.6°	- NA - / - NA -	42° 48' 54.993" -96° 47' 59.305"	42° 48' 46.294" -96° 47' 49.048"	2.88
Area 2	104.9° / 165.1°	- NA - / - NA -	42° 48' 39.791" -96° 47' 49.084"	42° 48' 30.648" -96° 48' 1.505"	3.27
Area 3	194.4° / 244.4°	- NA - / - NA -	42° 48' 30.620" -96° 48' 10.331"	42° 48' 37.533" -96° 48' 21.764"	2.71
Area 4	294.5° / 337.0°	- NA - / - NA -	42° 48' 48.431" -96° 48' 21.907"	42° 48' 54.947" -96° 48' 12.824"	2.31



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USDA - Farm Service Agency Union County, SD

6-92N-50W

1:8,931

April 24, 2008

N



Legend

- Tract Boundaries
- Section-Township-Range
- Easements
- CRP
- Common Land Units
- Rangeland

Wetland Determination Identifiers

- Restricted Use
- ▼ Limited Restrictions
- Exempt from Conservation Compliance Provisions

USDA FSA maps are for FSA Program administration only. There is no guarantee or representation to the user as to the accuracy, currency, suitability or reliability. FSA MAPS DO NOT REPRESENT A LEGAL SURVEY. The user accepts the data and assumes all risks associated with its use. Wetland points reflect records available with NRCS and may or may not constitute a full inventory of the property. The USDA Farm Service Agency assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data.

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

SEP 15 2008

WATER RIGHTS
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Date:**Geophysical Information**Spontaneous X
Potential:
Natural
Gamma:Single Point X
Resistivity:
Extra:

<u>Elevation (ft.)</u>	<u>Depth (ft.)</u>	<u>Description</u>
1227.0 - 1217.0	0.0 - 10.0	TILL, YELLOWISH-GRAY, SILTY AND SANDY; HIGHLY CALCAREOUS
1217.0 - 1207.0	10.0 - 20.0	TILL, LIGHT-GRAY, SILTY AND SANDY; HIGHLY CALCAREOUS
1207.0 - 1107.0	20.0 - 120.0	TILL, MEDIUM-LIGHT-GRAY, SILTY AND SANDY; HIGHLY CALCAREOUS, VERY SANDY FROM 110 TO 120 FEET
1107.0 - 967.0	120.0 - 260.0	SAND, COARSE; FINE GRAVEL, CONSISTS OF QUARTZ, IGNEOUS ROCK FRAGMENTS, LIMESTONE AND SHALE PEBBLES, TRACE OF COAL

DRILLER HAS BEDROCK AT 245 FEET.

Record 7 of 198

Legal Location: SE SE SE SE SEC. 12, T. 092 N., R. 51 W.

County:	CLAY	Location:	092N51W12DDDD 1
Basin:	MISSOURI	Latitude:	42 47' 37"
Hydrologic Unit Code:	10170101	Longitude:	96 48' 20"
Land Owner:		Ground Surface Elev. (ft.):	1228 T

Project:		Geologist:	K. MCCORMICK
Drill Date:	10/30/2001	Geologist's Log:	X
Company:	SDGS	Driller:	S. JENSEN
Drilling Method:	ROTARY	Driller's Log:	
Test Hole Number:	R2-2001-66	Total Drill	322.0
Samples:			

Hole Depth
(ft.):

Well Information

SDGS Well Name:	Aquifer:
Water Rights Well:	Management Unit:
Other Well Name:	Casing Top Elev. (ft.):
Casing Type:	Casing Diameter (in.):
Screen Type:	Screen Length (ft.):
Total Casing 0.0 and Screen (ft.):	Casing Stick-up (ft.):
Well Maintenance Date:	

Geophysical Information

Spontaneous X Potential:	Single Point X Resistivity:
Natural X Gamma:	Extra:

Elevation (ft.)	Depth (ft.)	Description
1228.0 - 1227.0	0.0 - 1.0	TOPSOIL
1227.0 - 1211.0	1.0 - 17.0	CLAY, YELLOW, SILTY, SLIGHTLY SANDY; OXIDIZED, CALCAREOUS, SOME GRAY CLAY MIXED IN BELOW 9 FEET, BECOMES PEBBLY AT BASE OF THIS SECTION (TILL)
1211.0 - 1203.0	17.0 - 25.0	CLAY, GRAY, SILTY, SANDY, PEBBLY; YELLOW CLAY MIXED WITH GRAY FROM 17 TO 20 FEET; BROWN CLAY MIXED IN WITH GRAY FROM 20 TO 25 FEET; PARTIALLY OXIDIZED; CALCAREOUS TO NONCALCAREOUS (TILL)
1203.0 - 1198.0	25.0 - 30.0	CLAY, GRAY, SILTY, PEBBBLY, SLIGHTLY SANDY; WEAKLY TO NONCALCAREOUS, A LITTLE BROWN CLAY MIXED WITH GRAY AT TOP OF THIS SECTION (TILL)
1198.0 - 1166.0	30.0 - 62.0	CLAY, MEDIUM- TO DARK-GRAY, SILTY, PEBBLY, SLIGHTLY

		SANDY (TILL)
1166.0 - 1151.0	62.0 - 77.0	SAND AND GRAVEL, MEDIUM SAND TO MEDIUM GRAVEL; A FEW COBBLES, SOME GRAY CLAY; UNSORTED
1151.0 - 1139.0	77.0 - 89.0	CLAY, LIGHT- TO MEDIUM-GRAY, SANDY; WEAKLY CALCAREOUS (TILL)
1139.0 - 1111.0	89.0 - 117.0	CLAY, LIGHT- TO MEDIUM-GRAY, SILTY, SANDY, SLIGHTLY PEBBLY; WEAKLY TO MODERATELY CALCAREOUS (TILL)
1111.0 - 1099.0	117.0 - 129.0	CLAY, GRAY, SILTY, SANDY, PEBBLY; FIRM, WEAKLY TO MODERATELY CALCAREOUS, LOCALLY VERY SANDY (TILL)
1099.0 - 1086.0	129.0 - 142.0	SAND, VERY FINE TO FINE; SOME GRAY CLAY
1086.0 - 1019.0	142.0 - 209.0	SAND AND GRAVEL, FINE TO COARSE SAND TO MEDIUM GRAVEL; APPARENT OVERALL INCREASE IN GRAIN SIZE WITH DEPTH
1019.0 - 992.0	209.0 - 236.0	SAND, MEDIUM TO COARSE; CLAY-RICH ZONES FROM 209 TO 211 FEET AND 223 TO 228 FEET
992.0 - 967.0	236.0 - 261.0	SAND, GRAVEL, AND CLAY, MEDIUM SAND TO FINE GRAVEL
967.0 - 957.0	261.0 - 271.0	CLAY, MEDIUM- TO WHITISH-GRAY; SOFT, WEAKLY TO MODERATELY CALCAREOUS
957.0 - 937.0	271.0 - 291.0	SANDSTONE; INTERBEDS OF SILTSTONE(?) AND CLAY, CLAY IS MEDIUM-GRAY, WEAKLY TO MODERATELY CALCAREOUS, A FEW CUTTINGS ARE GREENISH-GRAY SILTSTONE THAT IS HIGHLY CALCAREOUS (DAKOTA FORMATION)
937.0 - 931.0	291.0 - 297.0	SHALE, PINKISH-GRAY TO DARK-BROWN; GREASY (DAKOTA FORMATION)
931.0 - 906.0	297.0 - 322.0	SANDSTONE AND SHALE; INTERBEDDED, SHALE INTERBEDS ARE PINKISH-GRAY TO GRAY, SOME COAL (DAKOTA FORMATION)

Legal SW NE NE NE SEC. 14, T. 092 N., R. 51 W.
Location:

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/22, 20 08

RECEIVED OF O'Connor Brothers 31244 470th Ave Burbank SD 57010

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

Fee for Application for Permit No. <u>7069-3</u> to Appropriate Water, to construct and to put water to beneficial use	375	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>7069-3</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	425 00

No.

63700

By [Signature]
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 16, 2008

Kelly O'Connor
501 S Crawford Rd
Vermillion SD 57069

Dear Mr. O'Connor:

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 are the aerial photo maps submitted with the application. Please outline the acres to be irrigated in each section and mark the proposed well location for each quarter with an "X".
- I am returning your check for \$900.00. Since the entire 480 acres are included on this one application, the application/license fee will be \$425.00. If you had submitted 3 separate applications, the \$900.00 fee would have been correct.

Upon return of the above, further processing of your application will continue. 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
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7069-3, Kelly O'Connor**

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. 7069-3, Kelly O'Connor, 501 S. Crawford Road, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 7069-3 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 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.
2. The wells authorized by Permit No. 7069-3 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
November 4, 2008

**Report on Water Permit Application No. 7069-3
for Kelly O'Connor
October 17, 2008**

Application No. 7069-3 proposes to appropriate 2,392 gallons per minute (5.33 cfs) from three wells approximately 210 feet deep located in the centers of the NW $\frac{1}{4}$, SW $\frac{1}{4}$ of Section 6 and NW $\frac{1}{4}$ of Section 7 to irrigate 480 acres located in the W $\frac{1}{2}$ Section 6 and NW $\frac{1}{4}$ Section 7; all in T92N R50W in Union County. The annual period during which water will be used is June 1 through September 30.

AQUIFER: Lower Vermillion Missouri

This report will address the availability of unappropriated water from the Lower Vermillion Missouri aquifer.

WATER AVAILABILITY

Aquifer Characteristics:

The Lower Vermillion Missouri aquifer is a buried outwash (sand and gravel) that is under water table and confined conditions in the area of this application. The aquifer underlies 24,800 acres and contains an estimated 372,000 acre feet of recoverable water in storage in Union County (Hedges, 1982). The majority of the aquifer, 100,800 acre-feet, underlies Clay County to the west (Hedges, 1982). To the south, the aquifer blends with the Missouri Elk Point aquifer. The general direction of water movement in the aquifer is toward the south (Niehus, 1994). The aquifer is confined in the area of this application although water levels in nearby observation wells indicate water table conditions.

Observation Well Data:

The Water Rights Program monitors two observation wells, CL-66B and UN-77I, located within two and a half miles of this application location. Water levels for these wells show good response to climatic conditions, that is, rising water levels during wet years (recharge) and gradually declining water levels during dry years due to natural discharge and to pumping. The water level record indicates that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2008). Hydrographs for these observation wells are included with this report.

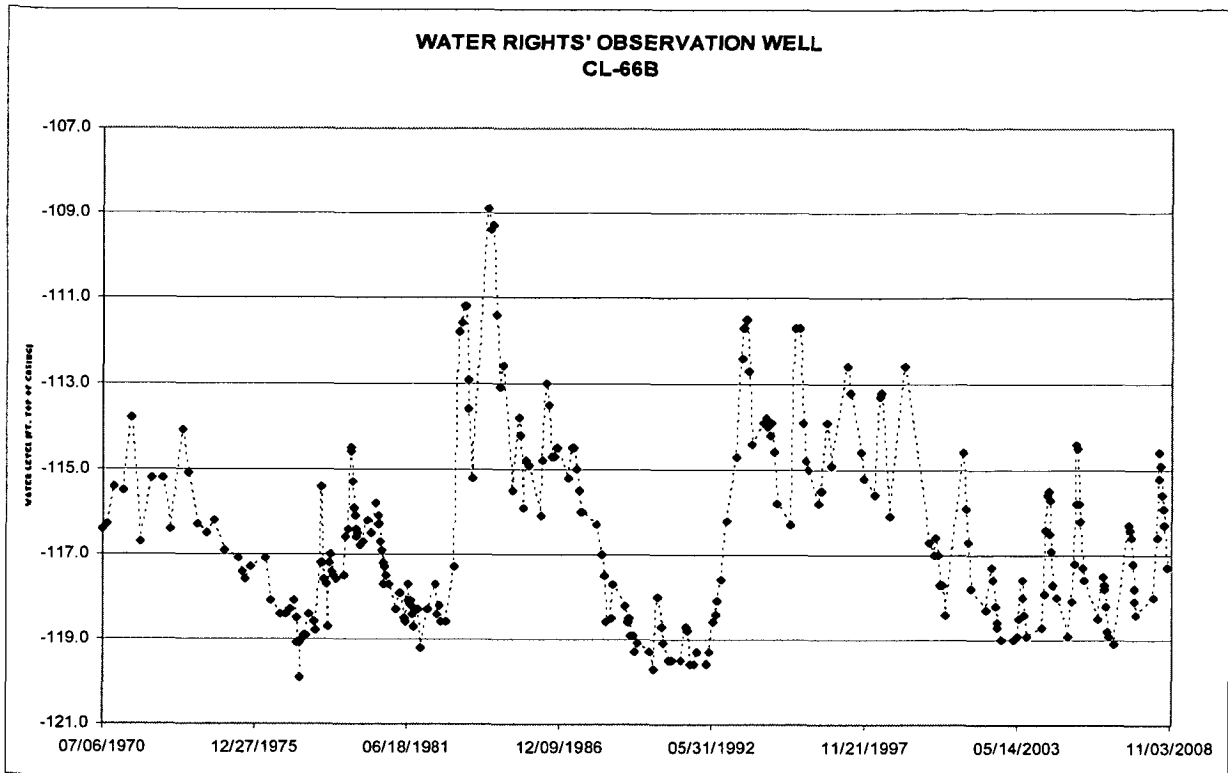


Figure 1. Hydrograph for Water Rights Observation Well CL-66B, completed into the Lower Vermillion Missouri Aquifer within two and a half miles of 7069-3

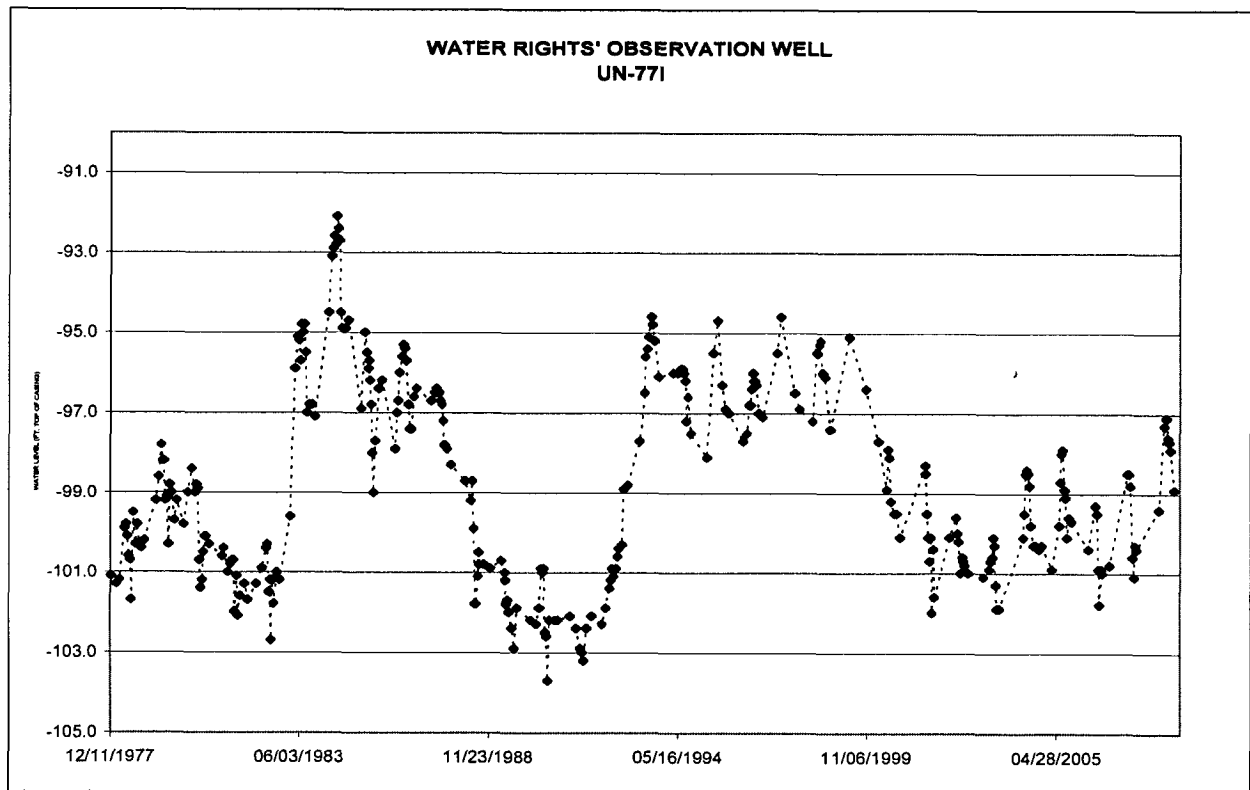


Figure 2. Hydrograph for Water Rights Observation Well UN-77I, completed into the Lower Vermillion Missouri Aquifer within two miles and a half miles of 7069-3

In general, the hydrographs show that over the period of record, withdrawals have not exceeded recharge.

Review of Existing Water Permits/Rights/Water Use:

Records of irrigation use from the Lower Vermillion Missouri aquifer date back to 1979.

Table 1 shows the number of appropriations, the total amount of water appropriated, and the reported amount of water pumped for each year. The average number of appropriations is just over 40, with the average appropriation being about 16,500 acre-feet and the average pumpage reported at over 1,400 acre-feet.

IRRIGATION USE (ac-ft/yr) LVM			
Year	Number of Appropriations	Appropriation (ac-ft/yr)	Pumpage Reported (ac-ft/yr)
2007	50	16655.45	2909.12
2006	43	15254.45	2674.51
2005	45	15844.45	1410.24
2004	39	15013.45	1747.48
2003	40	15199.45	1800.56
2002	40	15199.45	1762.32
2001	38	14879.45	2036.96
2000	38	14879.45	2041.72
1999	38	14879.45	900.63
1998	36	14150.45	1032.91
1997	36	13656.14	1085
1996	36	14096.04	997.6
1995	37	14309.24	506.61
1994	39	14673.74	517.28
1993	39	15308	0
1992	39	15308.24	168.8
1991	39	15308.24	1670.1
1990	38	15657.34	2113.2
1989	38	15657.34	2301.2
1988	38	15657.34	2083.8
1987	37	15435.34	1115.4
1986	45	20477.34	1047.5
1985	46	20661.34	1328.2
1984	47	20754.3	691
1983	38	15480.34	716.3
1982	37	15862.84	870.04
1981	49	23003	1543
1980	47	22683	2417
1979	49	22683	1163
AVERAGE	40.72	16504.40	1401.78
MAXIMUM	50	23003	2909.12
MINIMUM	36	13656.14	0

Table 1. Irrigation usage from the Lower Vermillion Missouri aquifer (Water Rights, 1979-2008).

There are seven existing water permits/rights for irrigation located within two and a half miles of this application. Water levels do fluctuate as a result of area pumping but this does not affect the availability of water from the aquifer.

Recharge:

Recharge to the Lower Vermillion Missouri aquifer is probably from the underlying Dakota aquifer (Niehus, 1994); although it has not been quantified.

Conclusions:

1. Water is available from the Lower Vermillion Missouri aquifer.
2. The aquifer appears to be under confined conditions, however, the water levels respond as if the aquifer is under water table conditions at this location. Drawdown will result from pumping. Interference is not expected to be a problem.
3. If the wells covered by this Permit deplete the domestic supplies or interfere with prior water rights, restrictions, to the extent necessary, of the capacity of the wells or periods of operation or other arrangements may be required to protect these water supplies.
4. These wells must be constructed in accordance with SD Well Construction Standards.



Hayes Haas
Natural Resources Engineer

Bibliography:

Hedges, L.S. et al, 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, for the U.S. Army Corps of Engineers, SD DENR, SDGS, Vermillion, SD 57069

Niehus, C.A., 1994, Water Resources of Lincoln and Union Counties, South Dakota, USGS WRI Report 93-44195, United States Geological Survey, Rapid City, SD 57702

Water Rights, 2008, Unpublished Observation Well Records for Clay and Union Counties, SD DENR, Division of Water Rights, Pierre, SD, 57501

RECEIVED

NOV 24 2008

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Union) SS

I, Susan Odson

certify that the attached printed Notice was
taken

from the Leader-Courier

printed and published in Eik Point

County of Union and

state of South Dakota. The notice was
published

in the newspaper on the following two dates:

Nov. 13, 2008

Nov. 20, 2008

Cost of Printing \$47.54

Susan Odson
(Signature)

Affidavits Coordinator
(Title)

11/20/08

(Date Signed)

NOTICE OF APPLICATION NO. 7069-3 TO APPROPRIATE WATER

Notice is given that Kelly O'Connor, 501 S Crawford Rd, Vermillion, SD 57069 has filed an application for a water permit to appropriate 5.33 cubic feet of water per second from three wells to be completed into the Lower Vermillion: Missouri Aquifer (approximately 210 feet deep) located in centers of the NW 1/4, SW 1/4 Section 6 and NW 1/4 Section 7 to irrigate 480 acres located in the W 1/2 Section 6 and NW 1/4 Section 7; all in T92N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7069-3 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 December 1, 2008.

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'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.
Publish November 13 and 20, 2008
46-2-71



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

November 5, 2008

Southern Union County Leader-Courier
PO Box 31
Elk Point SD 57025

ATTENTION: Legal Public Notice

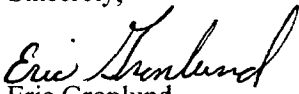
Enclosed is a Notice on Application No. 7069-3 to Appropriate Water to be published twice. Please publish the first notice on November 13, 2008 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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 Kelly O'Connor, 501 S Crawford Rd., Vermillion SD 57069 (Ph # 605-624-6345).

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-----

No. 7069-3

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

Date _____

We are in receipt of your letter of November 5, 2008 enclosing Notice to Appropriate Water by Application No. 7069-3 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
www.state.sd.us/denr

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

November 5, 2008

Kelly O'Connor
501 S Crawford Rd
Vermillion SD 57069

Dear Mr. O'Connor:

Water Permit Application No. 7069-3 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 Southern Union County Leader-Courier printed at Elk Point SD (Ph # 605-356-2632). You will need to contact the newspaper 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 to authorize publication of your Notice 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 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 first Notice on November 13, 2008 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 7069-3 to Appropriate Water

Notice is given that Kelly O'Connor, 501 S Crawford Rd, Vermillion SD 57069 has filed an application for a water permit to appropriate 5.33 cubic feet of water per second from three wells to be completed into the Lower Vermillion:Missouri Aquifer (approximately 210 feet deep) located in centers of the NW $\frac{1}{4}$, SW $\frac{1}{4}$ Section 6 and NW $\frac{1}{4}$ Section 7 to irrigate 480 acres located in the W $\frac{1}{2}$ Section 6 and NW $\frac{1}{4}$ Section 7; all in T92N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7069-3 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 December 1, 2008.

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.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

JAN 27 2009

Kelly O' Connor
501 Crawford Road
Vermillion SD 57069

Dear Mr. O'Connor:

Enclosed is Water Permit No. 7069-3 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.

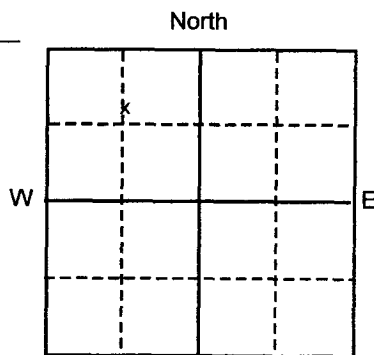
Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location ne 1/4 nw 1/4 Sec 7 Twp 92n Rg 50wCounty UnionPlease mark well
location with an "X"

Well Completion Date

7/13/09

1 Mile

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

3,000.0 ft. from septic tank (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT DIAMETER FROM TO HOLE DIAMETER

LB/FT 16.00 IN 0.0 FT 135.0 FT 22.00 IN

LB/FT IN FT FT IN

LB/FT IN FT FT IN

GROUTING DATA:

Grout Type No. of Sacks Grout Weight From To

bent grt 34 9.5 Lb/gal 0.0 Ft 126.0 Ft

Lb/gal Ft Ft

Describe grouting procedure
tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 16.00 Inches Length 60.0 FeetMaterial pvcSlot Size .060 Set From 135.0 Feet to 195.0 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? hth tablets
☐ No, Why Not?
Lab to which water
quality sample sent for analysisWell Owner: Dan & Kelly O'Connor

Business Name:

Address: 501 So Crawford RoadCity, State, Zip: Vermillion SD 57069

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Silt, brown, clayey	0	7
Clay, brown, silty, pebbly till	7	36
Clay, gray, silty, pebbly, till	36	130
Gravel, fine, sandy	130	198

STATIC WATER LEVEL 102.0 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

123.0 Ft. After 4.0 Hrs. pumped 850.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 800.0 GPM

REMARKS

This well was drilled under license # 666 and this report is true and accurate.Drilling firm: Hammond-Wetmore Drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

JAN 29 2010

Date: _____

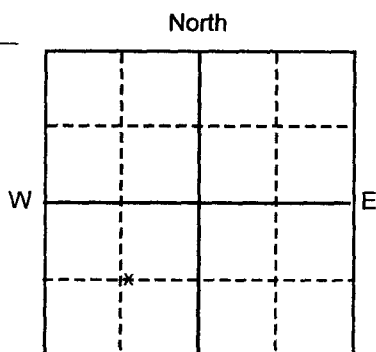
WATER RIGHTS
PROGRAM

7069-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location ne 1/4 sw 1/4 Sec 6 Twp 92n Rg 50wCounty UnionPlease mark well
location with an "X"

Well Completion Date

7/12/09

1 Mile

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

3,200.0 ft. from septic tank

(identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>16.00</u> IN	<u>0.0</u> FT	<u>136.0</u> FT	<u>22.00</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>bent grt</u>	<u>32</u>	<u>9.5</u> Lb/gal	<u>0.0</u> Ft	<u>124.0</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 16.00 Inches Length 50.0 FeetMaterial pvcSlot Size .060 Set From 136.0 Feet to 186.0 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? hth tablets
☐ No, Why Not?
Lab to which water
quality sample sent for analysisWell Owner: Dan & Kelly O'Connor

Business Name:

Address: 501 So Crawford RoadCity, State, Zip: Vermillion SD 57069

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Silt, brown, clayey	0	5
Clay, brown, silty, pebbly till	5	36
Clay, gray, silty, pebbly, till	36	130
Gravel, fine, sandy	130	188

STATIC WATER LEVEL 103.0 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

127.0 Ft. After 4.0 Hrs. pumped 860.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 800.0 GPM

REMARKS

RECEIVED

JAN 29 2010

WATER RIGHTS
PROGRAMThis well was drilled under license # 666 and this
report is true and accurate.Drilling firm: Hammond-Wetmore Drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



7069-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 15, 2016

NOTICE

TO: KELLY O'CONNOR, 501 S CRAWFORD RD, VERMILLION, SD 57069

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2015 Irrigation Questionnaire(s)

Our records indicate your 2015 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7069-3. The request for the Questionnaire was dated October 23, 2015. The Water Management Board has directed that owners of water permits who have not submitted the 2015 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) 7069-3 qualification:

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

The hearing will be held at **Thursday, March 3, 2016 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) 7069-3 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 3, 2016** 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 Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

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 ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

February 3, 2016

7069-3

Kelly O'Connor
501 S Crawford Rd
Vermillion SD 57069

Dear Mr. O'Connor:

I am writing to acknowledge receipt of your 2015 irrigation questionnaire.

You may disregard the January 15, 2016, "Notice" concerning reporting requirements for Water Permit No. 7069-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7069-3

I have this day, October 31, 2016, made a thorough examination of the water use system constructed by Kelly O'Connor, 501 S Crawford Rd, Vermillion SD 57069 of Permit No. 7069-3, bearing the priority of September 15, 2008 authorizing the diversion of 5.33 cu. ft. per second from three wells of the waters of Lower Vermillion:Missouri Aquifer for irrigation purposes, of 480 acres, in Union County.

Inspection contact & relationship to permit holder, if applicable: **Kelly O'Connor, permit holder**

A. Works used to divert the water:

Well #1 Information (NW ¼ Sec 6-T92N-R50W):

- 1) Well Drilling Firm: Hammond-Wetmore Drilling, LLC
- 2) No. of Wells 1
- 3) Depth(s) 202 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 16 inches
- 2) Length 142 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 60 feet
- 3) Static water level 107 feet

Pump:

- 1) Make Grundfos Submersible
- 2) Model 800S600-2a
- 3) Capacity 800 GPM

Motor:

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

Well #2 Information (SW ¼ Sec 6-T92N-R50W):

- 1) Well Drilling Firm: Hammond-Wetmore Drilling, LLC
- 2) No. of Wells 1
- 3) Depth(s) 186 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 16 inches
- 2) Length 136 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 50 feet
- 3) Static water level 103 feet

Pump:

- 1) Make Grundfos Submersible
- 2) Model 800S600-2a
- 3) Capacity 800 GPM

Motor:

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

Well #3 Information (NW ¼ Sec 7-T92N-R50W):

- 1) Well Drilling Firm: Hammond-Wetmore Drilling, LLC
- 2) No. of Wells 1
- 3) Depth(s) 195 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 16 inches
- 2) Length 135 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 60 feet
- 3) Static water level 102 feet

Pump:

- 1) Make Grundfos Submersible
- 2) Model 800S600-2a
- 3) Capacity 800 GPM

Motor:

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

C. Works used to apply water to beneficial use:

Center pivot #1 (NW ¼ Sec 6-T92N-R50W):

- 1) Make Lindsay
- 2) Overall length 1301 feet
- 3) Number of towers 7
- 4) End gun Yes
- 5) Capacity 800

Center pivot #2 (SW ¼ Sec 6-T92N-R50W):

- 1) Make Lindsay
- 2) Overall length 1301 feet
- 3) Number of towers 7
- 4) End gun Yes
- 5) Capacity 800

Center pivot #3 (NW ¼ Sec 7-T92N-R50W):

- 1) Make Lindsay
- 2) Overall length 1301 feet
- 3) Number of towers 7
- 4) End gun Yes
- 5) Capacity 800

Chemigation Equipment:

- 1) Does chemigate No

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, began irrigating in 2009.

List any extended period of nonuse: Did not use in 2010 due to adequate rainfall.

- 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: Well #1-East 1320', South 1330' from NW Corner of Sec 6-T92N-R50W; Lat 42.81913/Long -96.80144; approximate center of NW ¼ Sec 6-T92N-R50W;
Well #2-East 1320', North 1340' from SW Corner of Sec 6-T92N-R50W; Lat 42.81181/Long -96.80143; approximate center of SW ¼ Sec 6-T92N-R50W.
Well #3-East 1320', South 1320' from NW Corner of Sec 7-T92N-R50W; Lat 42.80450/Long -96.80145; approximate center of NW ¼ Sec 7-T92N-R50W.
2. The works are capable of diverting and conveying to the place of use 5.33 cfs or 2400 gpm of water from three wells which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

Sec 6-T92N-R50W.

NW ¼ NW ¼ - 35 ac

SW ¼ NW ¼ - 35 ac

NW ¼ SW ¼ - 35 ac

SW ¼ SW ¼ - 36 ac

Sec 7-T92N-R50W.

NW ¼ NW ¼ - 35 ac

SW ¼ NW ¼ - 35 ac

NE ¼ NW ¼ - 32 ac

SE ¼ NW ¼ - 32 ac

NE ¼ SW ¼ - 33 ac

SE ¼ SW ¼ - 33 ac

NE ¼ NW ¼ - 32 ac

SE ¼ NW ¼ - 32 ac

comprising a total of 405 acres of land and the license should be issued for 5.33 cfs or 2400 gpm from three wells.

3. All structures, wells and lands on map Yes

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

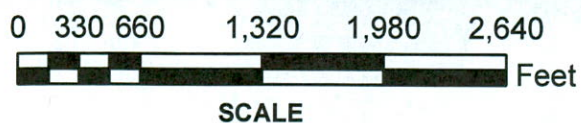
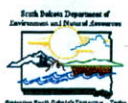
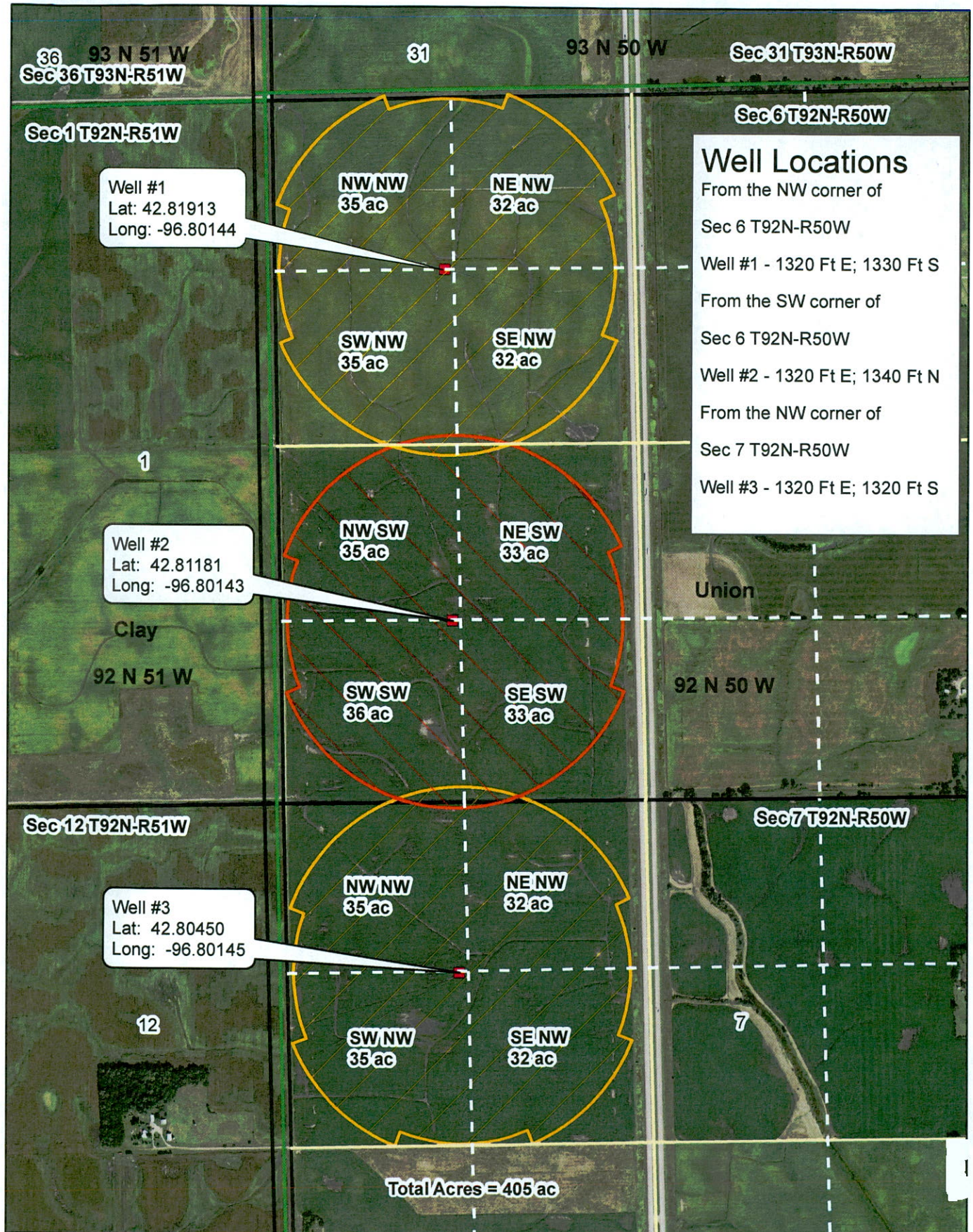
Two acres are overlapped between Center Pivot's #1 & #2 and two acres are overlapped between Center Pivot's #2 & #3.



Harold Holoch, PE
Staff Engineer
DENR, Water Rights Program

Date report completed: November 16, 2017

7069-3



Harold Holoch
Harold Holoch, PE
Staff Engineer
August 8, 2017



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

MAY 29 2018

7069-3

Kelly O'Connor
501 S Crawford Rd
Vermillion SD 57069

Dear Mr. O'Connor:

Enclosed is Water License No. 7069-3. 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 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.

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,

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

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7069-3

(1) Kelly O'Connor, 501 S Crawford Rd, Vermillion SD 57069 made Application No. 7069-3, September 15, 2008 for a water permit to divert 5.33 cubic feet of water per second from ground water, three wells (Lower Vermillion Missouri Aquifer), Union County, South Dakota for irrigation purposes. Permit No. 7069-3, with a priority date of September 15, 2008 was approved December 1, 2008 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 1, 2013 and the application to beneficial use of water on or before December 1, 2017.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 5.33 cubic feet of water per second for beneficial use.

The location of the diversion points are:

- **Well #1:** 1,320'E & 1,330'S of the NW corner of Section 6, T92N, R50W (approximate center of the NW ¼ Section 6) Latitude 42.81913, Longitude -96.80144;
- **Well #2:** 1,320'E & 1,340'N of the SW corner of Section 6, T92N, R50W (approximate center of the SW ¼ Section 6) Latitude 42.81181, Longitude -96.80143;
- **Well #3:** 1,320'E & 1,320'S of the NW corner of Section 7, T92N, R50W (center of the NW ¼ Section 7) Latitude 42.80450, Longitude -96.80145.

(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:

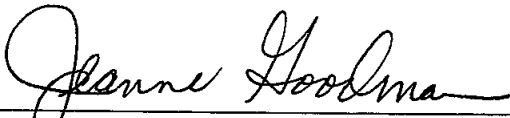
Section 6, T92N, R50W				Section 7, T92N, R50W			
NW ¼ NW ¼	35 acres	NW ¼ SW ¼	35 acres	NW ¼ NW ¼	35 acres		
NE ¼ NW ¼	32 acres	NE ¼ SW ¼	33 acres	NE ¼ NW ¼	32 acres		
SW ¼ NW ¼	35 acres	SW ¼ SW ¼	36 acres	SW ¼ NW ¼	35 acres		
SE ¼ NW ¼	32 acres	SE ¼ SW ¼	33 acres	SE ¼ NW ¼	32 acres		
Total 405 acres							

(4) Pursuant to South Dakota Water Law 46-5-30.1 Kelly O'Connor, 501 S Crawford Rd, Vermillion SD 57069 the holder and/or owner of Water Right No. 7069-3 is issued a license to appropriate water, the right to use 5.33 cubic feet of water per second from ground water, three wells (Lower Vermillion Missouri Aquifer) with a priority date of September 15, 2008 from the locations specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7069-3 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 Permit No. 7069-3 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. *All three wells were constructed in July, 2009 by Hammond-Wetmore Drilling LLC. Copies of the well completion reports are on file with the Water Rights Program.*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

MAY 29 2018

date

