

Considered: _____

WATER PERMIT NO. 5041-3

MAP No. same

Name of Applicant Nels J. Sorensen

Post Office Address RT. 3 Box 23 Vermillion S.D.

Amount of Water Claimed 1.8 cfs Total Acres 131

Source of Water Supply groundwater (100 ft. well)

Water to be used for IRR County Clay

About _____ miles S of Vermillion

PROOF OF PUBLICATION: Received 1st 1-31-85 Not Received _____

APPLICATION: Approved 3-6-85 Subject to _____

F.F. & C.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY _____ Date Received OCT. 16, 1984 Fee \$250.00 Remarks _____

1-14-85

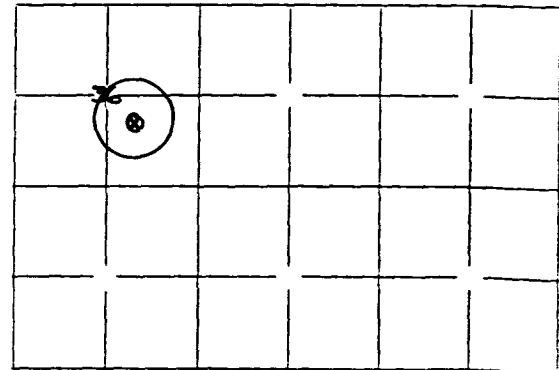
Corrected Application Received _____ Period of Annual Use May 1 - Oct. 31

WATER QUALITY APPROVAL RECEIVED 1-14-85 APPROVED (CONDITIONAL) (Circle one)

WI-1 Description same as Application YES X NO _____ REMARKS _____

Diversion Point NW⁴ SE⁴ sec. 36 T92N-R52W

Land to be Irrigated SE⁴NW⁴, S²NE⁴, E²SW⁴, SE⁴
sec. 36 T92N-R52W



Well Log: Driller WeTmore Drilling Licensed YES X NO _____

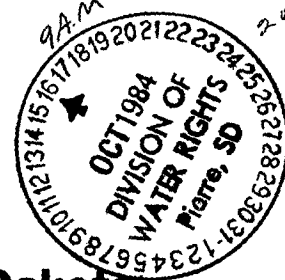
Depth of Well 100 Feet REMARKS _____

Type of Map Aerial PREPARED BY Brian Top SCS Reviewed and the Number _____

assigned on 1-15-85 By Kevin C. Larson

No. 5041-3

Plain Talk Well
Box 256, Vermillion



Map No. Same Water Division No. _____ District _____

Above for Office Use

APPLICATION FOR PERMIT To Appropriate Water within the State of South Dakota

Check one of the following:

New X Vested Right _____ Future Use _____

Change in Diversion _____ Additional Diversion X

Change in Acreage _____ Additional Acreage X

1. Name of Applicant Nels J. Sorensen Phone No. 624-4535

Post Office Address RR 3 Box 23 Vermillion State S.D. 57069
(Street, RR, or Box) (Town) (Zip Code)

If a corporation show date and place of incorporation N/A

2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract

3. Name of diversion work N/A

4. Amount of water claimed (cubic feet per second) 1.8 c.f.s.

5. Source of water supply Well

6. Location of point of diversion NE⁴, NE⁴, SW⁴ 36-92-52

County Clay

7. Annual period or periods during which water is to be used May - October

8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) irrigation

9. For irrigation use, Total number of acres to be irrigated 131

List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.
<u>NE⁴ SW⁴ 36-92-52</u>	<u>XX</u> 20
<u>SE⁴ SW⁴ 36-92-52</u>	<u>XX</u> 2.5
<u>NW⁴ SE⁴ 36-92-52</u>	<u>XX</u> 40
<u>SW⁴ NE⁴ 36-92-52</u>	<u>XX</u> 20

Land Description	No. Acres Irr.
<u>SE⁴ NW⁴ 36-92-52</u>	<u>XX</u> 2.5
<u>SE 1/4 NE 1/4</u>	2.5
<u>NE 1/4 SE 1/4</u>	20
<u>SW 1/4 SE 1/4</u>	21

Attach sheet if more space is needed 5 SE 1/4 SE 1/4 2.5

10. Time required to complete construction of water supply system one years. Additional time required to complete application of water to the proposed beneficial use 0-4 years. TOTAL 131.0

11. Choice of county newspaper for publication of Notice of Intent to Appropriate Water Plaintalk, Vermillion

12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

Well

B. Works proposed to transport water to place of use.

Underground pipe from well to pivot point.

C. Works proposed to apply water to beneficial use.

Center Pivot system.

Estimated Total Cost \$ 30,000

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map. (see instructions concerning preparation.)

STATE OF SOUTH DAKOTA)

County of Clay) ss.

I, Nels J. Sorensen the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed Nels J. Sorensen

Subscribed and sworn to before me this 11th day of October, 1984

Jane E. Brown
(Notary Public (or other qualified officer))

My Commission Expires 10/24/87

WATER RIGHT APPLICATION APPROVAL

The Water Management Board hereby approves Water Right Application No.

5041-3

Nels J. Sorensen

RT. 3 Box 23

Vermillion

(Applicant)

(Post Office Address)

South Dakota

(State)

With the following qualifications.

The irrigation well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

This permit is approved subject to the irrigation water use questionnaire being submitted each year.

Date of first receipt of application October 16, 1984

Date of return to applicant for correction, amendments or changes required —, 19—

Date of receipt of corrected application —, 19—

Approved March 6, 1985, Recorded in Book — Page —

WATER RIGHT PERMIT NO. 5041-3

The Water Management Board hereby grants and issues this Water Right Permit No. 5041-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as qualified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is January 14, 1985
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before September 6, 1987
3. The whole of said work is to be completed on or before March 6, 1990
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is March 6, 1994
5. The water appropriated shall be used for the purpose of Irrigation

6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

7. The amount of the appropriation herein granted shall not exceed 1.80 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for beneficial uses served, and if for irrigation purposes said appropriation must be limited to not more than 2 acre feet per acre per year and be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is actually and beneficially applied

for irrigation on or before March 6, 1994; said water to be used during the following described

annual period: May 1 to October 31

APR 23 1985

Witness my hand this — day of —, 19—

THE WATER MANAGEMENT BOARD

By:

Chief Engineer, Water Rights

Certificate of Construction Issued —, 19—

Water License Issued —, 19—

D. Well Information

- (1) Drill Hole, Diameter 22", Depth 102'
- (2) Casing, Type PVC, Diameter 16", Thickness 3/4"
(wood, concrete, steel, etc.)
- (3) Screen, Type 120 mesh PVC, Diameter 16", Length 40'
- (4) Gravel Pack, Thickness 3", Length of gravel pack 22'

E. Dugout Information or Estimates

- (1) Surface dimensions, _____, Depth _____

F. Fill out for Either a Well or a Dugout.

(1) Water Bearing Materials. (Attach a copy of test well log)

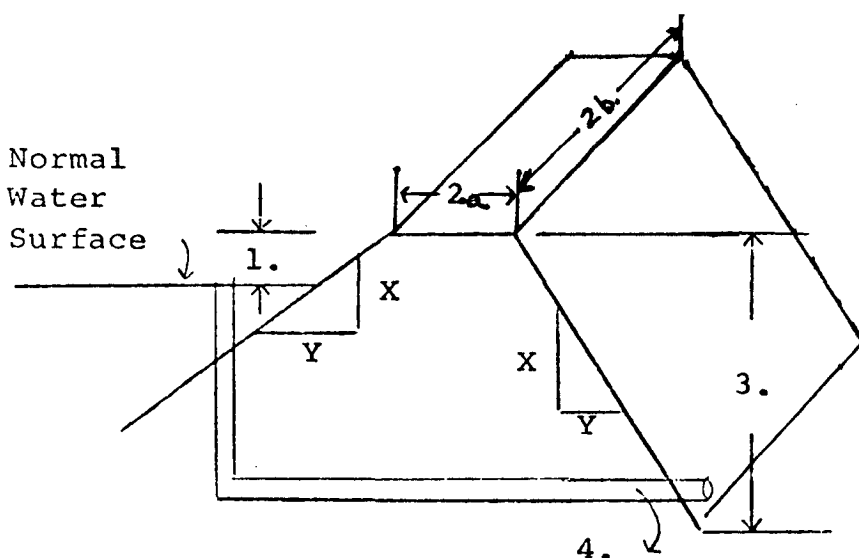
- Depth to top of water bearing material 18'
- Depth to bottom of water bearing material 102'
- Depth to water (ground surface to water level) 7'

(2) Distance to nearest existing household or livestock watering well.

- On same owner's property 80 rds.
- On property owned by others 121 rds.

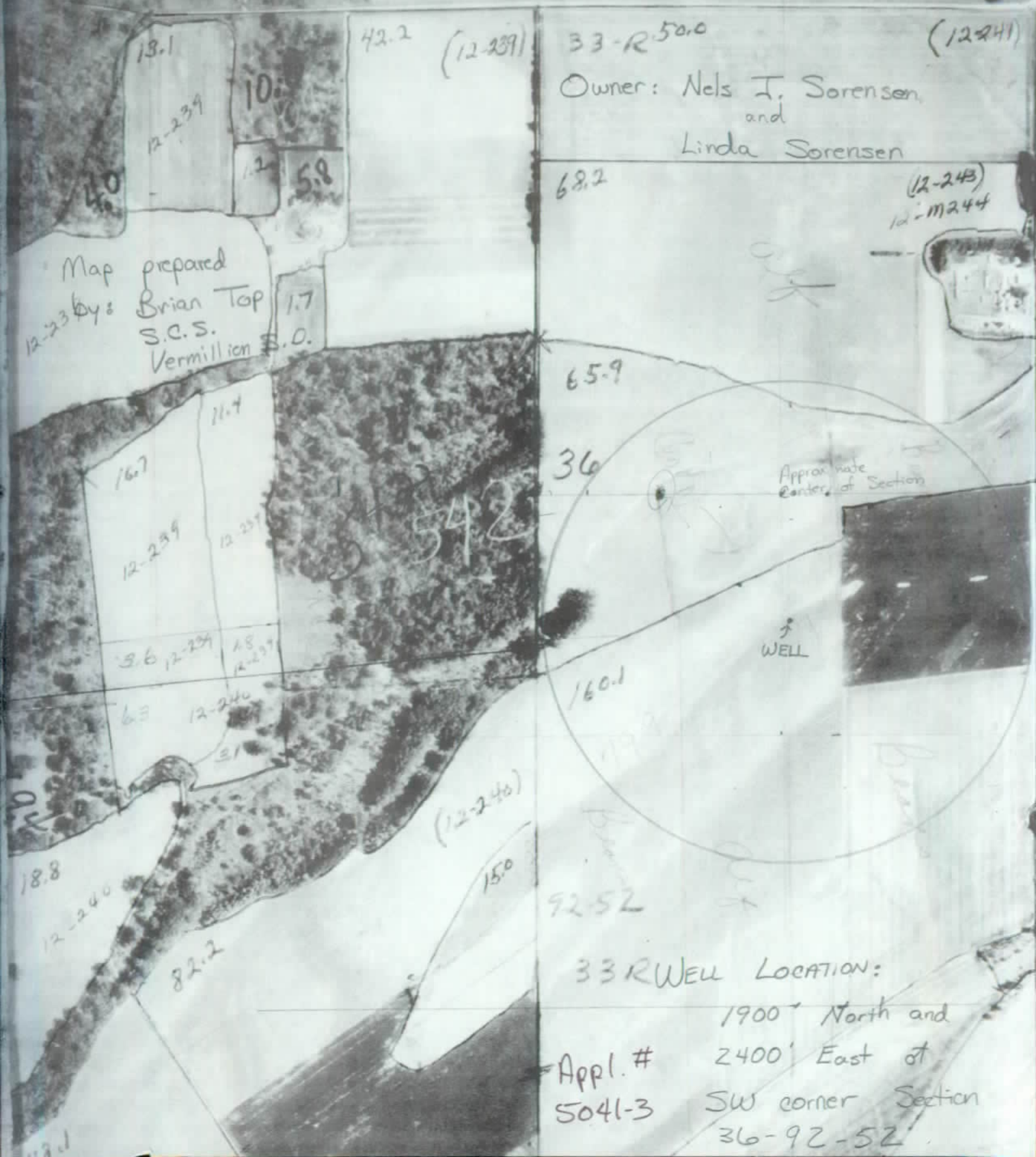
G. Water Storage Dams

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, length, maximum water depth, surface area, drainage area, storage capacity, dam slope, dimensions, location and size of outlet works, of each storage dam. The location of each water storage dam should be shown on the water right map.



1. Freeboard _____
- 2a Crest width _____ b. length _____
3. Height of Dam _____
4. Outlet dimensions:
Pipe diameter _____
Spillway width _____
- X & Y slope:
Upstream _____
Downstream _____
Surface area of impoundment _____
- Drainage area above dam _____

NOT TO SCALE



#1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

10-85

Location NW 1/4 Sec ~~25~~ Twp ~~92~~ N Rg ~~52~~ W

36 4RW

County

Clay

Please mark well location with an "X"

W

E



Well Completion Date 5-2-88

PROPOSED USE

☐ Domestic ☐ Municipal ☐ Test Holes
☒ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	16 IN	0 FT	100 FT	20 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUT:

Was the well grouted? ☒ YES ☐ NO

To what depth? 0-20' FEET

What is grouting material? cement

If cement, number of sacks? 14

Describe grouting procedure tremie pipe pumped

What was grout weight? 16.5 LB/GAL

SCREEN ☐ Perforated pipe ☒ Manufactured

Diameter 16 IN Length 20 FEET

Material pvc slotted

Slot Size 100 Set From 80 Feet To 100 Feet

Slot Size Set From Feet To Feet

Slot Size Set From Feet To Feet

Other information

Was a packer or seal used? ☐ YES ☒ NO

If so, what material?

Describe packer(s) and location?

Was well disinfected upon completion? ☒ YES ☐ NO

Explain chlorinated 200 ppm

Bacteriological Analysis ☐ YES ☒ NO

Laboratory sent to

Well Owner

Name NELS SORENSON

RT3 BOX 23

Address VERMILION SD, 57069

Well Log

Depth

Formation

From

To

top soil	0	2
fine sand	2	76
coarse sand & gravel	76	100
shale	100	102

STATIC WATER LEVEL 21 Feet

If flowing, closed in pressure PSI

GPM flow through inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other, specify

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped☐ Bailed☐ Other

Describe Line shaft turbine pump used

Pumping Level Below Land Surface

41 ft. After 2 Hrs. pumped 1100 GPM

ft. After Hrs. pumped GPM

ft. After Hrs. pumped GPM

REMARKS



This well was drilled under license # 341

And this report is true and accurate

Drilling firm Wetmore Drilling

Signature of License Representative

Signature of Well Owner

Date

NOTICE OF WELL CONSTRUCTION

Clay

(1) WELL CONSTRUCTION

Location of well: NE 1/4 1/4 Section 25 Township 91-92N Range 51-52
 Well owner: Neil Sorenson (Name) RR 3 Vermillion (Address)
 Date well drilling completed: 12-28-83 Purpose of well: Irrigation
 (domestic, irrigation, municipal, industrial, other)

WELL LOG

Layers, top to top in feet	Description of layer
0 - 1	top soil
1 - 8	clay
8 - 81	fine sand
81 - 110	coarse sand
110 - 112	shale

Attach sheet if more space is needed

Depth to top of water producing aquifer: 81 ft.
 Depth to static water level: 15 ft.
 Name of producing aquifer (if known):
 Total depth of drill hole: 112 ft.
 Depth to bottom of casing: 110 ft.

Casing information: In the space below show kind, size, weight, lengths per diameter, etc., for production casing and surface casing, if used.

82' x 16" PVC

Screen information: In the space below show length of screen below bottom of casing, diameter and kind of screen or casing perforations.

16" x 28' x 100 slot Stainless Steel Screen

If a flowing well, flow of completed well: G.P.M.

James Wetmore
 Name of Drilling Contractor

(2) PUMP INSTALLATION

Company name and size of pump: Western Land Beller 14C HP: 100
 Type of pump: Linershaft Capacity of installed pump: 3 stage 1500 G.P.M.
 Depth of pump placement: 60 ft., Date of pump installation: 1-10-84

(3) WATER SURFACE MEASURING TUBE

On some wells an air-tight water surface measuring tube is required: See Section 46.40B of Chapter 46.4, MINIMUM WELL CONSTRUCTION STANDARDS.

Show exact vertical length of water surface measuring tube, when installed: 60 ft., tube diameter: 2 1/2, tube material: PVC

James Wetmore
 Name of Pump Installation Contractor



6-7-84

SOUTH DAKOTA WATER WELL COMPLETION REPORT

10-35

Loc. No. S 40 S 26 T 21 N R 5 W

County

C 24

North



1 mile

Well Completion Date 7/90

PROPOSED USE

- ☐ Domestic ☐ Municipal ☐ Test Poles
☒ Irrigation ☐ Industrial ☐ Stock

Method of Drilling REVERSE ROTARY

CASING DATA

- ☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>SC 40</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>100</u> FT	<u>26</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUT

Was the well grouted? ☒ YES ☐ NO

To what depth?

0-20 FEET

What is grouting material?

PORTLAND CEMENT

If cement, number of sacks?

12

Describe grouting procedure

1 BAG PER FOOT

What was grout weight?

104 LB/GALSCREEN ☒ Perforated pipe ☐ ManufacturedDiameter 16 IN Length 30 FEETMaterial PVC SC 40

Slot Size Set From Feet To Feet

Slot Size Set From Feet To Feet

Slot Size Set From Feet To Feet

Other information

Was a packer or seal used? ☐ YES ☒ NO

If so, what material?

Describe packer(s) and location

Was well disinfected upon completion? ☒ YES ☐ NOExplain 3 LB HTH CHLORINEBacteriological analysis ☐ YES ☒ NO

Laboratory sent to

Well Owner

Name NELS SCHRANSSENAddress WARRILLON S.D.

Well Log

Depth

Formation

Formation	Feet	Feet
<u>TOP SOIL + SANDY CLAY</u>	<u>0</u>	<u>10</u>
<u>MED SAND</u>	<u>10</u>	<u>20</u>
<u>VERY COARSE SAND</u>	<u>20</u>	<u>50</u>
<u>MED SAND</u>	<u>50</u>	<u>65</u>
<u>COARSE SAND</u>	<u>65</u>	<u>95</u>
<u>COARSE GRAVEL + ROCKS</u>	<u>95</u>	<u>100</u>

STATIC WATER LEVEL 16 Feet

If flowing, closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other, specify _____

Can well be completely shut in?

WELL TEST DATA

- ☒ Pumped TURBINE LINESHAFT TYPE
☐ Bailed Describe _____
☐ Other _____

Pumping Level Below Land Surface

35 ft After 1 Hrs pumped 950 GPM

ft After _____ Hrs pumped _____ GPM

ft After _____ Hrs pumped _____ GPM

REMARKS

This well was drilled under license # 444

And this report is true and accurate.

Drilling firm CHRISTENSEN WELL CO.

Signature of License Representative

William Christensen

Signature of Well Owner

Date

12/19/90

LAW 1-27-41. IT IS FURTHER CERTIFIED THAT THE PHOTOGRAPHIC PROCESS USED FOR MICROFILMING OF THE ABOVE RECORDS WAS IN A MANNER
 AND ON MICROFILM WHICH MEET THE RECOMMENDED REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR PERMANENT MICROPHOTOGRAPHIC
 REPRODUCTIONS. REDUCTION 15:1 ROLL NO U-4

DATE MICROFILMED 3-26-91CAMERA OPERATOR John Christensen

SOUTH DAKOTA WATER WELL COMPLETION REPORT

10 85

Location A 12 1/2 AA 1/2 Sec 36 Twp 52 Rg 52County Clay

North



Please mark well location with an 'X'

Well Completion Date _____

PROPOSED USE

☐ Domestic ☐ Municipal ☐ Test Holes
☒ Irrigation ☐ Industrial ☐ Stock

Method of Drilling

Rotary

CASING DATA

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>2 1/2</u> LB/FT	<u>16</u> IN	<u>41</u> FT	<u>101</u> FT	<u>16</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUT

Was the well grouted? ☒ YES ☐ NOTo what depth? 20 FEETWhat is grouting material? CementIf cement number of sacks? 25Describe grouting procedure pumped down pipeWhat was grout weight? 51.5 LB/GALSCREEN ☐ Perforated pipe ☒ ManufacturedDiameter 16 IN Length 140 FEETMaterial PVCSlot Size 100 Set From 41 Feet To 101 Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Other information _____

Was a packer or seal used? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

Was well disinfected upon completion? ☒ YES ☐ NOExplain chlorine solutionBacteriological analysis ☐ YES ☒ NO

Laboratory sent to _____

Well Owner

Name W. L. SorensonAddress Rt. 1 Box 23 Vermilion SD 57059

Well Log

(Depth)

Formation

From

To

<u>top soil</u>	<u>0</u>	<u>1</u>
<u>fine sand</u>	<u>1</u>	<u>11.1</u>
<u>coarse sand & gravel</u>	<u>11.1</u>	<u>12.1</u>

STATIC WATER LEVEL 21 Feet

If flowing closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other, specify _____

Can well be completely shut in? _____

WELL TEST DATA

☒ Pumped☐ Bailed

Describe: _____

☐ Other

Pumping Level Below Land Surface

25 ft. After 1 Hrs. pumped 1300 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

REMARKS

This well was drilled under license # 541

And this report is true and accurate

Drilling firm Watson

Signature of License Representative

James Watson

Signature of Well Owner

Date 12-4-80

LAW 1-27-4. IT IS FURTHER CERTIFIED THAT THE PHOTOGRAPHIC PROCESS USED FOR MICROFILMING OF THE ABOVE RECORDS WAS IN A PERMANENT AND ON MICROFILM WHICH MEET THE RECOMMENDED REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR PERMANENT MICROPHOTOGRAPHIC REPRODUCTIONS. REDUCTION 11:1 ROLL NO. U-4

DATE MICROFILMED 3-26-81CAMERA OPERATOR James Watson

RECEIPT

Division of Water Rights

No 4 9796

South Dakota Department of Water and Natural Resources

Pierre, October 16, 1984

RECEIVED OF Nels J. Sorenson, RR#3, Box 23, Vermillion, SD 57069

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

Fee for Application for Permit No. 5041-3 to Appropriate Water, to construct works and to put water to beneficial use	250	00
Fee for Application for Permit No. to Appropriate Water for Future Use		
Fee to retain Future Use Permit No. after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No.		
Fee for Filing Transfer Form		
Fee for Filing Extension Request		
Fee for Certified Copy of		
Fee for Print Copy of Map		
Fee for Certifying		
Fee for		
(Any Other Work Provided by Law)	Total	250 00

By

Chief Engineer

John Hatch
JOHN HATCH (MS)

SOIL/WATER COMPATIBILITY PERMIT APPLICATION FORM

Division of Conservation

Office Use Only

4118

WR#

OWNERS NAME: Nels J. SorensenOWNERS ADDRESS: Vermillion, SD
R.R. 3COUNTY LAND LOCATED IN: ClayPHONE: 624-4535TENANT'S NAME AND ADDRESS: Same

LEGAL DESCRIPTION: (Show Legal Description to Nearest 10 Acres)

1. WELL LOCATION NE 1/4 NE 1/4 SW 1/4 36-92-52
Depth 100 ft

2. SURFACE WATER SOURCE AND DIVERSION LOCATION: _____

Diversion Location: _____

Legal Description	Acres	Legal Description
<u>SW 1/4 36-92-52</u>	<u>60</u>	
<u>SE 1/4 36-92-52</u>	<u>30</u>	
<u>NE 1/4 36-92-52</u>	<u>15</u>	
<u>NW 1/4 36-92-52</u>	<u>26</u>	

131 acres3. SHOW ANY PORTION OF LAND THAT PRESENTLY HOLDS AN IRRIGATION PERMIT: YEAR OBTAINED N/A

LEGAL DESCRIPTION: _____

IN WHAT NAME: _____

4. LOCATION OF AREA TO BE IRRIGATED NOTE: **SOILS INFORMATION FOR THIS AREA MUST ACCOMPANY THE APPLICATION. (See instruction sheet)**

OTHER:

5. TYPE OF IRRIGATION: GRAVITY: _____ TOWLINE: _____ CENTER PIVOT: X GUN: _____ (Specify) _____6. CROPS TO BE IRRIGATED: corn, alfalfa, soy beans

WATER QUALITY: (TO BE COMPLETED BY SDSU WATER QUALITY LABORATORY)

7. WATER SAMPLE NUMBER: 84-058010. ADJUSTED (SAR): 3.508. SALINITY (EC X 10⁶): 116611. PERCENT SODIUM 21.04%9. SODIUM (SAR): 1.29

I hereby certify that I personally obtained or that I personally observed that taking of a sample of the water to be used in irrigating the above-described land. I also hereby certify that the required procedures for the taking of the sample (see instruction sheet) were followed, and that the sample was taken at 3:00 a.m./p.m., on 12 10, 19 84, at the following location: NE 1/4 NE 1/4 SW 1/4 36-92-52 by (individual who took sample if other than applicant). I also hereby certify that the water sample taken has NOT been adulterated or tampered with in any manner, and is TRULY REPRESENTATIVE of the water which will be used in irrigating the above-described land.

Signature, of Water Sampler.

I understand that the Division of Conservation or agents thereof may obtain water samples from wells and surface bodies to be used for irrigation purposes to validate water samples taken at the time of application. The Department of Agriculture may also gather technical information necessary to protect the land. (46-5-6.4).

SUBSCRIBED AND SWORN BEFORE ME THIS

DAY OF October, 19 84

(NOTARY PUBLIC)

APPLICANT'S SIGNATURE

Director, Division of Conservation

Date

APPROVED

DISAPPROVED

X CONDITIONALLY APPROVED

IMPORTANT
Action by the Department of Agriculture or the State Conservation Commission is not the final action on any application. In all cases a WATER RIGHT must be obtained from the Board of Water Management, Foss Building, Pierre.

Conditional soil/water permits will be recorded by the Department of Agriculture, with the County Register of Deeds.

CONDITIONAL APPROVAL

#4118

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
DIVISION OF CONSERVATION



NAME OF APPLICANT: Nels Sorenson

LEGAL DESCRIPTION: Portions of Sec 36-92-52 - 131 acres

SOIL RESTRICTIONS:

THE SOIL(S) LISTED BELOW CANNOT BE IRRIGATED:

THE SOILS(S) LISTED BELOW CAN BE IRRIGATED
WITH THE FOLLOWING RESTRICTIONS:

Onawa Silty Clay (100) is subject to a fluctuating water table which may remain in a perched position under irrigation and inhibit the leaching of salt from the soil profile. For this reason adequate internal drainage is required, to achieve this necessary drainage may require the installation of an artificial drainage system ie tile drainage.

RECOMMENDED MANAGEMENT:

We recommend the use of a form of conservation tillage to control soil erosion and conserve soil moisture.

Please be advised that the fluctuation of the Missouri River along with irrigation waters may present trafficability problems in the river wash area.

Ted M. Jofus
SIGNATURE

1-11-85
DATE

REPORT ON WATER PERMIT APPLICATIONS NO. 5141-3 and 5042-3

NELS J SORENSEN

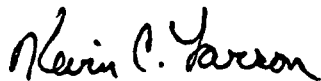
January 17, 1985

Water Permit Applications No. 5041-2 and 5042-3 each propose to divert 1.8 cfs from one well to irrigate 131 acres. Water will be withdrawn from the Missouri Aquifer in Clay County.

The Missouri Aquifer is a glacial sand and gravel deposit approximately 150 feet thick and extends from south east Yankton county along the Missouri River to its confluence with the Big Sioux River in South Dakota. It contains 1.1 million acre feet of recoverable water (Hedges et al, 1982) in Clay County. Presently 1.81% of the estimated recoverable water is appropriated in Clay County. The well logs submitted with the applications indicate approximately 90 feet of coarse sand and gravel with a total well depth of about 100 feet. The Division of Water Rights monitors one observation well (CL-80C) into the Missouri Aquifer and it is located about $\frac{1}{2}$ mile from these applications. Water level readings dating back to 1957 indicate seasonal fluctuations between 15.5 feet and 21.5 feet. The aquifer is under water table conditions. The nearest existing permit is $\frac{1}{2}$ mile north and is also owned by Nels Sorenson.

Conclusions

1. Water is available from the Missouri Aquifer for Applications No. 5041-3 and 5042-3.
2. Division of Water Rights monitors an observation well in the immediate vicinity of these applications.
3. Well interference should not be a problem in this area.



KEVIN C LARSON
Natural Resources Engineer

Bibliography

- Hedges, Burch, Iles, Barari, Schoon, Evaluation of Ground Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Final Report DWNR-SDGS, Vermillion SD, 1982.
- SDGS, Irrigation Report, Eastern South Dakota, DWNR, Office of Geological Survey, 1983.
- Division of Water Rights, Observation Well Records, DWNR, Div. of Water Rights, 1985.
- Division of Water Rights, Water Permit Files, DWNR, Div. of Water Rights, 1985.

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5041-3, Nels J Sorensen

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 5041-3, Nels J Sorensen, Rt 3, Box 23, Vermillion SD.

The Chief Engineer is recommending APPROVAL of Application No. 5041-3 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) in the public interest with the following qualifications:

The irrigation well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

This permit is approved subject to the irrigation water use questionnaire being submitted each year.

See the attached report for additional information.

A handwritten signature in black ink, appearing to read "John Hatch". The signature is fluid and cursive, with the first name "John" being more prominent than the last name "Hatch".

JOHN HATCH, Chief Engineer
Water Rights Division
January 18, 1985



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Water Rights Division
605 773-3352

~~404-S~~
5041-3

January 18, 1985

Nels J Sorensen
Rt 3, Box 23
Vermillion SD 57069

Mr. Sorensen:

After reviewing your applications to appropriate water I have made some changes in the legal descriptions. These changes were made because your area is actually covered by the land survey in Nebraska. It is very confusing in areas that were originally surveyed in Nebraska and subsequently have become South Dakota. I am enclosing a copy of the maps and a breakdown of the acreage on your permit. The only thing all of this changes is a more accurate legal description of your project. I have made the changes on the applications and to prevent any unnecessary delay, we are proceeding with your application. If you have any questions concerning this please contact me.

Thank you,

KEVIN C LARSON
Natural Resources Engineer

KCL:ks

enclosures

Land to be Irrigated

all in Section 36, T92N, R52W

✓SE $\frac{1}{4}$ NW $\frac{1}{4}$	2.5 acres
✓SW $\frac{1}{4}$ NE $\frac{1}{4}$	20.0
SE $\frac{1}{4}$ NE $\frac{1}{4}$	2.5
✓NE $\frac{1}{4}$ SW $\frac{1}{4}$	20.0
✓SE $\frac{1}{4}$ SW $\frac{1}{4}$	2.5
✓NW $\frac{1}{4}$ SE $\frac{1}{4}$	40.0
NE $\frac{1}{4}$ SE $\frac{1}{4}$	20.0
SW $\frac{1}{4}$ SE $\frac{1}{4}$	21.0
SE $\frac{1}{4}$ SE $\frac{1}{4}$	<u>2.5</u>
TOTAL	131.0 acres

No. 5041-3

Instruction to Newspaper - Publish first publication of the following Notice on or before January 23, 1985 with 2nd publication 1 week later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 5041-3 to Appropriate Water
~~and/or to Amend Water Permit or Water Rights No. _____~~

Notice is hereby given that Nels J. Sorensen whose mailing address is
Route #3, Box 23, Vermillion, South Dakota has made an application for a permit

to appropriate 1.8 cubic feet per second from one well 100 feet deep located in
the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 36-T92N-R52W to irrigate 131 acres. The land to be irrigated is
located in E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36-T92N-R52W.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends
APPROVAL of Application No. 5041-3 because 1) unappropriated water is available,
2) will be no unlawful impairment of existing rights, 3) is beneficial use of water and
4) is in the public interest.

This application will be considered by the Water Management Board at 523 E. Capitol,
Joe Foss Building, Room 216, Pierre, South Dakota, March 6 19 85 at 10:00 am.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to make a determination on this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the Applicant and the Chief Engineer by February 22, 1985. The petition may be informal, but it must include a statement describing the petitioner's interest in the application, the reason for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17, 46-5-1 thru 46-5-16, 46-5-24, 46-5-25, 46-5-30.2, 46-5-31; 46-2A-1 thru 46-2A-10, 46-2A-12; (ground) 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; (future use) 46-5-38 thru 46-5-40; (transfer lands) 46-5-30.4, 46-5-33 thru 46-5-35; (10,000 AFA) 46-5-20.1, 46-5-8.1; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; (future use) 74:02:01:24 thru 74:02:01:25; (10,000 AFA) 74:02:01:15:02 thru 74:02:01:15:05.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, 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.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWNR, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by February 22, 1985.

No. 5041-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Clay) ss.

I, Allen M. Hamilton hereby

certify that the annexed printed copy of Notice of Intent to Appropriate

Water was taken from the Blain Lake

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

City of Vermillion

County of Clay and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

1-23-85

1-30-85

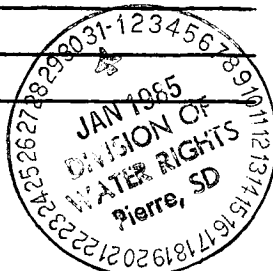
Allen M. Hamilton
(Signature)

Hamilton
(Title)

1-30-85

(Date Signed)

Cost of Printing: \$38.70



NOTICE OF HEARING

NOTICE OF HEARING on Application
No. 5041-3 to Appropriate Water.

Notice is hereby given that Nels J. Sorensen whose mailing address is Route #3, Box 23, Vermillion, S.D. has made an application for a permit to appropriate 1.8 cubic feet per second from one well 100 feet deep located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 36-T92N-R52W to irrigate 131 acres. The land to be irrigated is located in E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36-T92N-R52W.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 5041-3 because 1) unappropriated water is available, 2) will be no unlawful impairment of existing rights, 3) is beneficial use of water and 4) is in the public interest.

This application will be considered by the Water Management Board at 523 E. Capitol, Joe Foss Building, Room 216, Pierre, S.D., March 6, 1985 at 10:00 a.m.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to make a determination on this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the Applicant and the Chief Engineer by February 22, 1985. The petition may be informal, but it must include a statement describing the petitioner's interest in the application, the reason for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

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

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, 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.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWRN, Joe Foss Bldg., Pierre S.D. (605/773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by February 22, 1985.
Publish: January 23, 30, 1985



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

APR 23 1985

Nels J Sorenson
Rt 3, Box 23
Vermillion SD 57069

Dear Mr. Sorenson:

Enclosed herewith is your Water Permit No. 5041-3 as approved by the Water Management Board authorizing you to construct your water diversion system and the water to beneficial use, not exceeding the limits as specified in said Water Permit No. 5041-3.

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

Very truly yours,

A handwritten signature in black ink that reads "John Hatch". The signature is written in a cursive, flowing style.

JOHN HATCH, Chief Engineer
Water Rights Division

JH: ks

enclosure

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period-i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.

WNR-809-5/83



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

November 29, 1990

James Wetmore
Wetmore Drilling
P.O. Box 577
Elk Point, SD 57025

Dear Mr. Wetmore:

The Division of Water Rights is in the process of issueing a Water License for irrigation permits (5041-3 & 5042-3) held by Nels Sorensen in Clay County. In order to complete our file and before a Water License can be issued to Mr. Sorensen, an "as constructed" well log is needed for the following wells:

NE1/4 NE1/4 NW1/4 Section 1, T91N R52W
NE1/4 NE1/4 SW1/4 Section 36, T92N R52W

I have enclosed the test hole information for these two wells for your reference.

If you still have a copy of the "as constructed" well log for the above wells, please forward a copy of the logs to our office. The Water License cannot be issued until this information is obtained.

Your prompt attention in this matter will be appreciated. If you have any questions, please contact me.

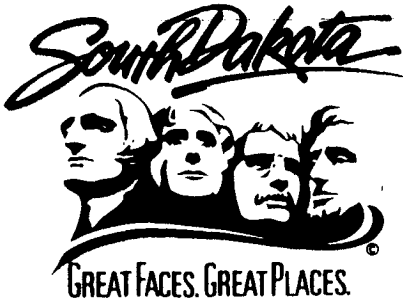
Sincerely,

A handwritten signature in cursive script that reads "David S. Brown".

David S. Brown
Natural Resources Engineer II
DWNR, Water Rights Division
(605) 773-3352

enclosures

cc: Nels Sorensen, RR 3, Box 23, Vermillion, SD 57069



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

NOV 30 1992

5538-3
5539-3
5540-3
5541-3

Nels Sorensen
RR 3, Box 23
Vermillion, SD 57069

Dear Mr. Sorensen:

Enclosed are Water License Nos. 5538-3, 5539-3, 5540-3 and 5541-3. They are the final water right documents completing your process of obtaining Water Rights. Enclosed are Receipt Nos. 413333, 413334, 413335 and 413336 in the amount of \$50.00 each which you paid for the inspection and issuance of the Water Licenses.

For your information SDCL 46-6-27 requires that if the owner of existing wells, such as the wells authorized by Water Right Nos. 5538-3, 5539-3, 5540-3 and 5541-3, constructs replacement wells and does not plan to use the old wells, the old wells are 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 Licenses, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
(605) 773-3352

enclosures

NOTE: The applicable portions of Water Permit No. 4983-3 have been incorporated into Water License No. 5538-3; the applicable portions of Water Permit No. 5041-3 have been incorporated into Water License No. 5539-3; the applicable portions of Water Permit No. 5042-3 have been incorporated into Water License No. 5540-3; and the applicable portions of Water Permit No. 5199-3 have been incorporated into Water License No. 5541-3.