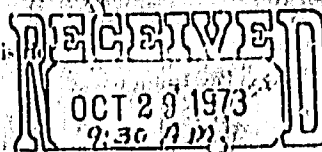


No. 2021-3
 Map No. 1436-3 Water Division No. 3 JAMES RIVER Dis.
 (Blanks to be Filled by the Engineer for the W. R. C.)


APPLICATION FOR PERMIT

STATE WATER RIGHTS COMM.
PIERRE, SOUTH DAKOTA

To Appropriate Water within the State of South Dakota

(NOTE--Draw a line through items not applicable)

1. Name of Applicant Duane A. Olson
 Postoffice address Meckling S. Dak. State SD
 If a corporation show date and place of incorporation _____
2. Method of accomplishing work (contract, employment of others, or by direct labor) _____
3. Name of diversion work Olsen #1
4. Amount of water claimed (cubic feet per second) 343
5. Source of water supply Well
6. Location of point of diversion 1200 N. Center Section 16 T253
- County Clay
7. Annual period or periods during which water is to be used April 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 240

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.	Land Description	No. Acres Irr.
<u>NE 1/4 NW 1/4 Sect 16 T253</u>	<u>40</u>	<u>NE 1/4 NW 1/4 Sect 16 T253</u>	<u>40</u>
<u>SE 1/4 " " " "</u>	<u>40</u>	<u>SE 1/4 " " " "</u>	<u>40</u>
<u>NW 1/4 " " " "</u>	<u>40</u>		
<u>SW 1/4 " " " "</u>	<u>40</u>		

attach sheet if more space is needed

10. Time required to complete construction of water supply system 5 X years. Additional time required to complete application of water to the proposed beneficial use 4 X years.
11. Choice of newspaper for Notice of Intent to Appropriate Water publication Vermillion Plain Talk
12. Principal Features of the Proposed Water Supply System. Well

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

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

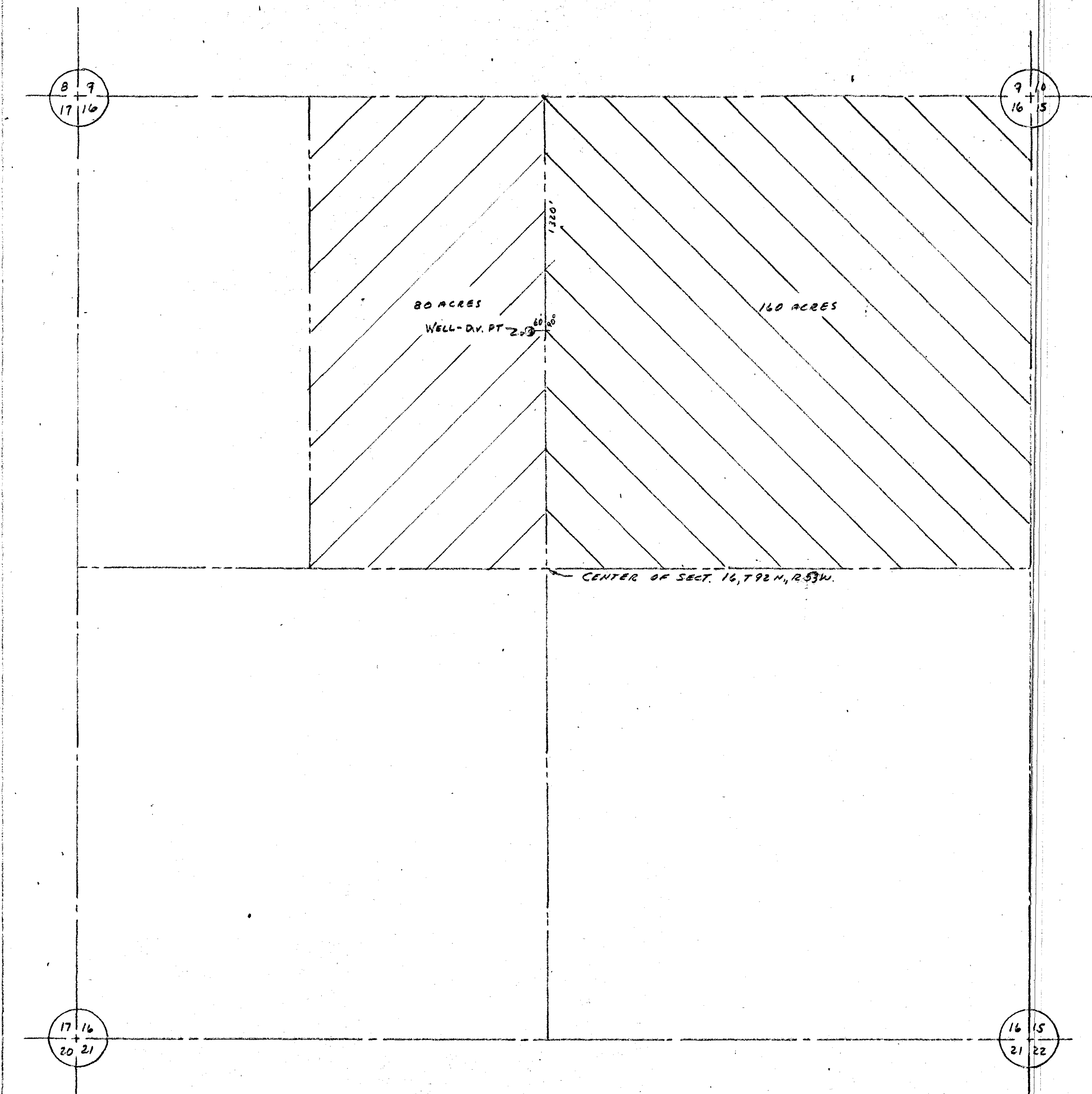
C. Works proposed to apply water to beneficial use.

Estimated Total Cost \$20,000
 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 ClayI, DUANE A. OLSON, 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 Duane A. OlsonSubscribed and sworn to before me this 4th day of October 19 73

Notary Public (or other qualified officer)



AREA BY LEGAL SUBDIVISION
 160 ACRES NE 1/4 SECT 16 } T.92N., R.53W. 5TH PM.
 80 ACRES E 1/2 OF NW 1/4 SECT. 16 }
 240 ACRES TOTAL

SURVEYOR'S CERTIFICATE
 STATE OF SOUTH DAKOTA) SS
 (COUNTY OF MINNEHAWA)
 I, HARLAN W. MEYER, A REGISTERED LAND SURVEYOR
 IN AND FOR THE STATE OF SOUTH DAKOTA, DO HEREBY
 CERTIFY THAT AT THE REQUEST OF DUANE OLSON,
 SOLE OWNER, I HAVE SHOWN THE LAND PROPOSED TO BE IRRIGATED
 WITHIN HIS OWNERSHIP BOUNDARIES ON OCT 7, 1973 FOR WHICH
 APPLICATION FOR APPROPRIATIVE WATER RIGHT IS MADE.
 THIS MAP IS A TRUE REPRESENTATION OF THE SAME.
 WITNESS MY HAND AND SEAL THIS 7TH DAY OF OCT. 1973

Harlan W. Meyer
 REG. L.S. # 495 S.D.A.C.

SCALE 1" = 400'

DUANE OLSON IRRIGATION PROJECT #1
 PORTRAYS AREA TO BE IRRIGATED & WELL DIVERSION POINT LOCATION.
 FOR PERMIT TO APPROPRIATE WATER

OWNER
 SURVEYOR

DUANE OLSON
 HARLAN W. MEYER

OCT 73

MAP NO. 1436-3 (APPL. NO. 2027-3)

WATER RIGHT APPLICATION APPROVAL

WATER RIGHTS COMMISSION

The Water Rights Commission hereby approves Water Right Application No. 2027-3

DUANE A. OLSON

(Applicant)

MECKLING

(Post Office Address)

SOUTH DAKOTA

(State)

With the following modifications:

The irrigation well approved under this Permit is located near domestic 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 existing domestic wells.

*Cancelled
7/1/80
Incorporated
into W/L 2158-3*

Date of first receipt of application OCTOBER 29 19 73

Date of return to applicant for correction, amendments or changes required OCTOBER 29 19 73

Date of receipt of corrected application NOVEMBER 6 19 73

Approved JANUARY 16 19 74 Recorded in Book 12 Page 308

WATER RIGHT PERMIT NO. 2027-3

WATER RIGHTS COMMISSION

hereby grants and issues this Water Right Permit No. 2027-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is OCTOBER 29 19 73
2. The equivalent of at least one-fifth of the work I have specified is to be completed on or before JULY 16 19 76
3. The whole of said work is to be completed on or before JANUARY 16 19 79
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is JANUARY 16 19 83
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 3.43 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 the irrigation purposes said appropriation must be limited to not more than 3 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 JANUARY 16 19 83; said water to be used during the following described annual period: APRIL THRU OCTOBER

Witness my hand this 8TH day of FEBRUARY 19 74

WATER RIGHTS COMMISSION

By:

Donald Driscoll

Chief Engineer, Executive Officer

Certificate of Construction Issued _____ 19 _____

Water License Issued _____ 19 _____

12. Principal Features of the Proposed Water Supply System (continued)

D. Well Information or Estimates

- (1) Drill Hole, Diameter 8 1/2", Depth 120'
(2) Casing, Type Concrete Diameter 15" Thickness
(wood, concrete, steel, etc)
(3) Perforated Screen.
Type Iron, Diameter 1 1/2", Length 20'
(4) Gravel Pack. Thickness 10", Length of gravel pack 40'

E. Dugout Information or Estimates.

- (1) Surface dimensions , Depth

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

- (1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials Gravel

Depth to top of water bearing material 40'

Depth to bottom of water bearing material 120'

Thickness of water bearing material 60'

Depth to water (ground surface to water level) 15'

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

On same owner's property 50 rds. On property owned by others 120 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, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

Diane D. Olson
Signature of Applicant

REPORT OF ANALYSIS
 Water Quality Laboratory
 Water Resources Research Institute
 South Dakota State University
 Brookings, South Dakota 57006

Submitted by: Dennis Olson
 Address: Brookings, South Dakota
57044

Date Rec'd October 10, 1973
 Sample No. 73-624
 Identification Well-120
NE 1/4, Sec. 16, T 92N, R 53W

WATER ANALYSIS

Calcium (Ca)	232	ppm*	11.60	me/l**
Magnesium (Mg)	41	ppm	3.35	me/l
Sodium (Na)	141	ppm	6.13	me/l
Potassium (K)	16	ppm	0.42	me/l
Sulfate (SO ₄)	44.0	ppm	9.15	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	27	ppm	0.76	me/l
Bicarbonate (HCO ₃)	647	ppm	10.60	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)	9.30	ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)	750	ppm	44	g.p.g.***
Alkalinity (Methyl Orange)	530	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	1680	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	2.24			
Sodium	28.51	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.54			
Others:				

*ppm=parts per million

***g.p.g.=grains per gallon

**me/l=milliequivalents per liter

COMMENTS: Total cations 21.50 me/l
 Total anions 20.51 me/l

By: Shirley Mittan

Service Performed	Amount Due
Irrigation analysis	\$6.00
Field analysis	1.00
Make checks payable to: Water Quality Laboratory	

Cut along dotted line and return the lower portion with payment

Sample No. 73-624

Amount Enclosed \$

Signed

STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SECL 46-6-3 AS AMENDED

FOR COMMISSION USE ONLY

Irrigation System: K

Water Quality: fair

Soils Capability: fair

Approved: 10/23/72

W.H.

WATER RIGHT APPLICATION NO. _____

NAME: Dwight H Olson

ADDRESS: Heckling S. Park

COUNTY: Chey

LEGAL DESCRIPTION

WELL LOCATION: 1300 N Center Section 16 42 53

SITE TO BE IRRIGATED: NE 1/4 Sect 16 42 53

WATER QUALITY E 1/2 NW 1/4 " " " "

TEST WELL SAMPLE: 73-624

SALINITY: $E_c = 1650$ micromhos/cm (high)

SODIUM: SAR = 2.24 (low)

LAND CAPABILITY FOR IRRIGATION

PERCENTAGE OF SLOPE: Average slope 0 - 1%

PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: Gayzie - deep, mostly light colored well
Surry - deep porous soils having loam and silty loam profiles
developed in stratified alluvium.
loamy sand textures underlain by sand and gravel
concrete - deep, somewhat poorly drained soils having slowly and very slowly
permeable upper horizons and moderately slow to very slowly permeable
TYPE OF IRRIGATION: silty clay loam or silty clay subsoils.

GRAVITY: _____

SPRINKLER TYPE: Center Pivot

CROPS TO BE IRRIGATED

Corn Alfalfa

I do hereby certify that a chemical analysis of the ground water to be
acquired for irrigation from South Dakota State University and;
the land capability for irrigation information has been acquired from

and:

that the legal description for the location of the well and land to be
irrigated is true and correct.

Donna F. Olson

Subscribed and sworn before me this

4th day of Oct 1973.

[Signature]
Notary Public

(Title)

Publish first publication, on or before January 3, 19 74NOTICE
INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501

December 2, 19 73Notice is hereby given that Duane A. Olsonwhose post office address is Leckling, South Dakota, has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use3.43 cubic feet of water per second of time from the ground water through theOlson #2, the point of diversion of which is to be located in theNE 1/4 NW 1/4
NE 1/4 NW 1/4of Section 16, Twp. 92N, Range 53W. Said water to be used for the purpose of providing irrigation on the following described land:NE 1/4 and E 1/2 NW 1/4, Section 16, T92N, R53WThis application No. 2027-3 will be considered by the Water ~~Resources~~ ^{Rights} Commission at their office at Pierre upon the 16th day of January, 19 74, at 2:30 P. M. All interested persons may appear and be heard.~~WATER RESOURCES COMMISSION~~
WATER RIGHTS COMMISSION

By:

BURTON F. JONES, Water Rights Specialist

BFJ/lw

cc: Duane A. Olson, Leckling, S.D. 57044

Affidavit of Publication

State of South Dakota, County of Clay, ss.

Arline Lottgerson
Being first duly sworn, deposes and says: That he is a resident of the County of Clay and State of South Dakota; that

THE VERMILION PLAIN TALK

is a legal newspaper of general circulation, printed and published in Vermillion, in said County and State, by Plain Talk Publishers, Inc., MaryEtta Brose, president, and is now and has been such newspaper continuously during all the times hereinafter mentioned; that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit; and that the notice and advertisement

headed

Notice - Intent
to appropriate water

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least

once in each week for 2 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said county of Clay for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of Vermillion, the said place of publication; that the first publication of said notice in said newspaper

as aforesaid was on Thursday, the 13 day of Dec

1973 and that the succeeding publications were severally

on Thursday, the 20 day of Dec, 1973

on Thursday, the _____ day of _____, 19____

on Thursday, the _____ day of _____, 19____

on Thursday, the _____ day of _____, 19____

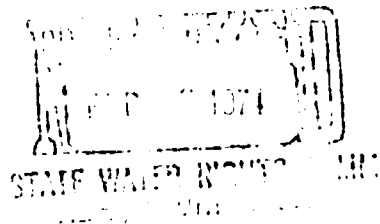
on Thursday, the _____ day of _____, 19____

on Thursday, the _____ day of _____, 19____

that the fees charged for the printing and publication of the said notice and advertisement in said newspaper as aforesaid were

Eight dollars and 37 cents and that said fees for the printing and publishing of said notice and advertisement have been fully paid; that the full amount of the fee charged for the publishing of the said attached and annexed notice and advertisement inures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Arline Lottgerson
Subscribed and sworn to before me this 20 day
of December, 1973
MaryEtta Brose
Notary Public



NOTICE INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501
December 3, 1973

Notice is hereby given that Duane A. Olson whose post office address is Meckling, South Dakota, has made an application in accordance with the provision of the water laws of South Dakota for a permit to appropriate for beneficial use 3.43 cubic feet of water per second of time from ground water through the Olson #2, the point of diversion of which is to be located in the NE1/4 NW1/4 of Section 16, Twp. 92N, Range 53W. Said water to be used for the purpose of providing irrigation on the following described land: NE1/4 and E1/2 NW1/4, Section 16, T92N, R53W.

This application No. 207-3 will be considered by the Water Rights Commission at their office at Pierre upon the 16th day of January, 1974, at 2:30 P.M. All interested persons may appear and be heard.

WATER RIGHTS COMMISSION

by Burton F. Jones
Water Rights Specialist

Published Dec. 13, 20, 1973



Department of Water & Natural Resources

Joe Foss Building Water Rights, Water Management Division
Pierre, South Dakota 57501 (605) 773-3352

July 9, 1980

Duane Olson
Hickling
South Dakota 57044

Dear Mr. Olson:

Enclosed herewith are, Water License No. 2158-3 and Certificate of Construction.

Water License No. 2158-3 is the final water right document completing your process of obtaining a water right.

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.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights, WMD

JH: kw

enclosures

NOTE: This Water License combines Permit No. 2027-3 and 2158-3. The applicable portions of Permit No. 2027-3 are incorporated into this Water License No. 2158-3 and Permit No. 2027-3 has been placed in a cancelled status.

2027-3

CL/M1

November 1980

DUANE OLSON

MECKLING

SD 57044

This is the Water Management Board data sheet for recording 1980 GROUNDWATER source irrigation estimates.

For Dept. use only

Please fill out and return at once.

No. Acres irrigated with Groundwater

175

If you did not irrigate during 1980-check this box ☐ No system ☐

G

Type of Power	No. acres irrigated	Total Energy used-1980
1. Electric	<u>175</u>	<u>5300 kWh</u>
2. Gravity		
3. Gasoline		gal
4. Nat. Gas pipeline		cf
5. Diesel		gal
6. Propane		gal
7. Other		

Type of System:
1. Hand Moved Sprinklers
2. Portable booms
3. Center pivots (# of)
4. Gated pipes
5. Sidewheel
6. Towlines
7. Gun type
8. Hydromatic
9. Siphons
10. Flood
11. Other

Month	# days pumped	Average # hours per day	Average pump rate (gpm)	Acres of Crop Irrigated and Estimated Water Use			
April				Crop	Acres	Water Used	Acres
May	<u>3</u>	<u>24</u>	<u>1275</u>	<u>CRN</u>	<u>175</u>	<u>4</u>	
June	<u>1</u>						
July	<u>16</u>	<u>24</u>	<u>1225</u>	<u>CRN</u>	<u>175</u>	<u>4</u>	
August	<u>15</u>	<u>24</u>	<u>1275</u>	<u>CRN</u>	<u>175</u>	<u>4</u>	
Sept.							
Oct.							
Other Month							

Season Static Water Level: beginning 17' end 17'

Comments:

Complete and return to: WATER MANAGEMENT BOARD

Water Rights Division
Joe Foss Building
Pierre, SD 57501



Please complete front and back.

Owner or address change, if any:

The South Dakota Office of Energy has requested your cooperation in completing the following:

1979

Type of Power	No. Acres Irrigated	Total Energy Used
1. Electric	<u>130</u>	<u>43320</u> kwh <i>csx</i>
2. Gravity	_____	_____
3. Gasoline	_____	_____ gal
4. Nat. Gas pipeline	_____	_____ cf
5. Diesel	_____	_____ gal
6. Propane	_____	_____ gal
7. Other	_____	_____

1978

Type of Power	No. Acres Irrigated	Total Energy Used
1. Electric	<u>130</u>	<u>53300</u> kwh <i>csx</i>
2. Gravity	_____	_____
3. Gasoline	_____	_____ gal
4. Nat. Gas pipeline	_____	_____ cf
5. Diesel	_____	_____ gal
6. Propane	_____	_____ gal
7. Other	_____	_____ gal

- What is your on-farm storage capacity for gasoline 550 gallons
diesel 1150 gallons
- What are your present plans for acres under irrigation for 1981?
☒ an increase in acres
☐ irrigate same acres
☐ a decrease in acres
- A. Has your regular fuel supplier been able to meet your fuel needs for irrigation this past year? *elec*
☐ yes
☐ no
 B. If no, were you able to buy from other sources?
☐ yes
☐ no
- Would you continue irrigating the same number of acres in 1981 if the price of fuel increased-

10% yes ☐	20% yes ☐
no ☐	no ☐
15% yes ☐	over 20% yes ☐
no ☐	no ☐
- At what price for fuel would you cut back on irrigation activities? _____
- What is your best estimate of your fuel needs for irrigation in 1981, if we experience a
 Dry summer: _____ gallons.
 Wet summer: _____ gallons.

2027-3