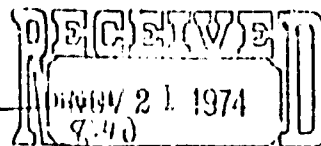


1. Considered JANUARY 22, 1975 2161.3
2. Name of Applicant E. L. LIEI PHAN
3. Post Office Address AURORA
4. Amount of water claimed 2.57
5. Source of water supply GROUND WATER (50')
6. Water to be used for IRRIGATION
- Acres to be irrigated 180
7. Water to be diverted and used in BROOKINGS county
about 15.14 miles of AURORA
8. Proof of Publication Received 12-31-74
Not Received _____
9. Application Approved _____
Subject to _____
Not Approved _____
Action deferred _____
10. Remarks:

Map No. 993-3 Water Division No. 3 BIG SIOUX RIVER
 (Blanks to be filled by the Engineer for the W. R. C.)


STATE WATER RIGHTS COM. PIERRE, SOUTH DAKOTA

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

(NOTE: Draw a line through items not applicable)

1. Name of Applicant E. L. Leiferman
 Postoffice address Aurora, State South Dakota
 If a corporation show date and place of incorporation _____ Contract
2. Method of accomplishing work (contract, employment of others, or by direct labor) _____
3. Name of diversion work Leiferman #1
4. Amount of water claimed (cubic feet per second) 2.57
5. Source of water supply Well
6. Location of point of diversion S1 Sect 3 T109N R49W. 710'S and 1700' E of E1 corner,
Sec. 3, T109N, R49W
- County Brookings
7. Annual period or periods during which water is to be used April to November
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 180 acres

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>S1/4 & E1/4 SW1/4 Sec. 3, T109N, R49W</u>	<u>180</u>		

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 3 years years. Additional time required to complete application of water to the proposed beneficial use 5 years years.
11. Choice of newspaper for Notice of Intent to Appropriate Water publication Brookings Register
12. Principal Features of the Proposed Water Supply System.

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

Well with center pivot overhead sprinkler system

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

closed conduit - Aluminum pipe

C. Works proposed to apply water to beneficial use.

center pivotEstimated Total Cost \$45,000.00
 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 _____

 I, E. L. Leiferman, 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

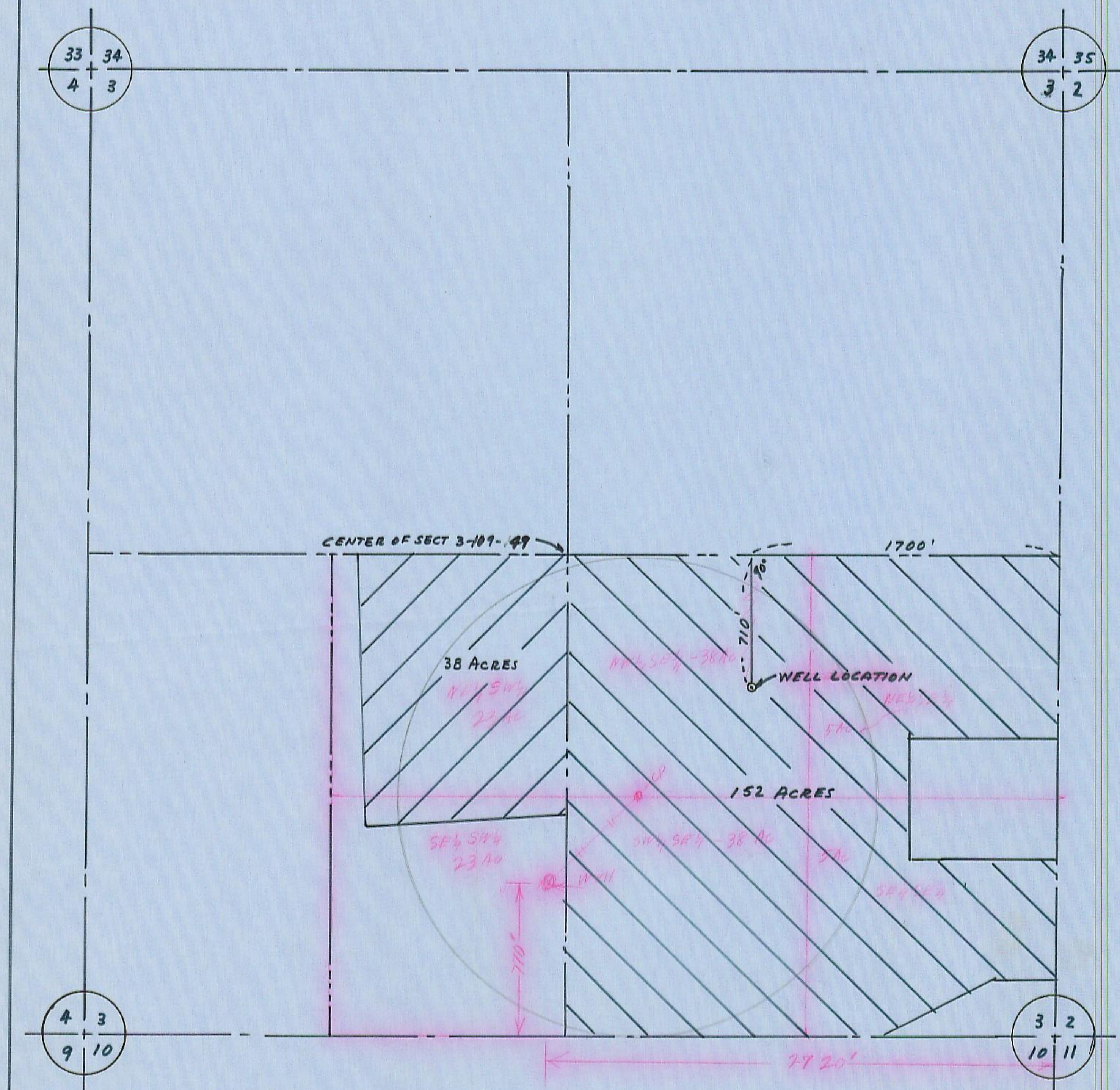
Subscribed and sworn to before me this

Signed

18thday of November1974

Notary Public (or other qualified officer)

My Commission expires 4/8/77



LOCATION OF AREAS BY LEGAL SUBDIVISION
 38 ACRES: E 1/2, S.W. 1/4 SECT. 3, T109N., R. 49 W.
 152 ACRES: SE 1/4 SECT. 3, T109N., R. 49 W.
 180 ACRES TOTAL

SURVEYOR'S CERTIFICATE

STATE OF SOUTH DAKOTA) SS
 COUNTY OF BEADLE)
 I, HARLAN W. MEYER, A REGISTERED LAND SURVEYOR
 IN AND FOR THE STATE OF SOUTH DAKOTA, DO HEREBY
 CERTIFY THAT AT THE REQUEST OF E. L. LEIFERMAN,
 SOLE OWNER, I HAVE SHOWN THE LANDS PRONED TO BE IRRIGATED
 WITHIN HIS OWNERSHIP BOUNDARIES ON MAR. 21, 1967 FOR WHICH APPLICATION
 FOR APPROPRIATIVE WATER RIGHT IS MADE AND THAT THIS MAP
 IS A TRUE REPRESENTATION THERE OF.
 WITNESS MY HAND AND SEAL THIS 21ST DAY OF MAR. 1967

Harlan W. Meyer
 REG. LAND SURVEYOR

STATE OF SOUTH DAKOTA) SS
 COUNTY OF BEADLE)
 SUBSCRIBED AND SWORN TO BEFORE ME THIS 21ST DAY
 OF MAR. 1967.
Corinne Johnson
 NOTARY PUBLIC

E. L. LEIFERMAN IRRIGATION PROJECT NO 1
 SHOWING AREA & WELL LOCATION WHERE WATER
 WILL BE DIVERTED FOR PERMIT TO APPROPRIATE WATER

OWNER

E. L. LEIFERMAN

SURVEYOR &
 MAP 993-3 (App'l #1383-3)
 2161-3

HARLAN W. MEYER
 MAR 1967

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 2161-3
B. L. Luskerson (Applicant) AURORA (Post Office Address)
SOUTH DAKOTA 57002 (State) With the following modifications:

The irrigation well approved under this Permit will be located near domestic wells and other ~~domestic wells~~ 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 or in ~~domestic wells~~ wells having prior water rights.

Date of first receipt of application NOVEMBER 21 19 74
 Date of return to applicant for correction, amendments or changes required NOVEMBER 21 19 74
 Date of receipt of corrected application DECEMBER 9 19 74
 Approved JANUARY 23 19 75, Recorded in Book 13 Page 161

WATER RIGHT PERMIT NO. 2161-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 2161-3 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 NOVEMBER 21 19 74
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before JULY 23 19 76
3. The whole of said work is to be completed on or before JANUARY 23 19 78
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is JANUARY 23 19 80
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 2.57 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 23 19 80; said water to be used during the following described annual period: APRIL TO NOVEMBER

Witness my hand this 24TH day of JANUARY 19 75

WATER RIGHTS COMMISSION

By: Donald R. Rindell
 Chief Engineer, Executive Officer

Certificate of Construction Issued January 23, 1974
 Water License Issued January 23, 1974

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

D. Well Information or Estimates

- (1) Drill Hole, Diameter 2-2", Depth 50'
- (2) Casing, Type steel (wood, concrete, steel, etc.) Diameter 12" Thickness 1/4"
- (3) Perforated Screen, Type Schlosser Trengler, Diameter 12", Length 20'
- (4) Gravel Pack, Thickness 3", Length of gravel pack 30'

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 fine sand & gravel

Depth to top of water bearing material 20'

Depth to bottom of water bearing material 50'

Thickness of water bearing material 30'

Depth to water (ground surface to water level) 20'

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

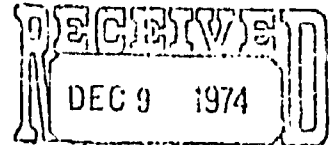
On same owner's property 80 rds. On property owned by others 820 rds.

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.

[Signature]
Signature of Applicant

December 2, 1974



Mr. E. L. Leiferman
Aurora, SD 57002

STATE WATER RIGHTS COMM.
PIERRE, SOUTH DAKOTA

Dear Mr. Leiferman:

We received your WI-1 form and the copy of the original analysis of the water had been sent to you earlier. A copy of this analysis, the WI-1 form and a copy of this letter are being sent to the State Conservation Commission.

There is no difficulty with the chemical qualities of this water and the soils you intend to irrigate. However, you should be advised that the Volga silty clay loam soils, somewhat poorly drained, and the Volga silty clay loam, poorly drained, are poor prospects for irrigation and many years will have water table problems close to the surface. Irrigation will aggravate this, especially on a system in which you cannot control the location of the applied water or the amount of the applied water. Thus, that is why I would recommend against a long time plan based on sustained irrigation of these two soils as marked on the Brookings County survey map.

Sincerely yours,

L. O. Fine
Water Quality Lab

LOF:lll

Enclosures

CC: \State Conservation Commission
Al Aho, Brookings County Agent
Darrel Pahl



Block 4-10, Sec 3-10-49

FOR COMMISSION USE ONLY

Irrigation System: _____

Water Quality: _____

Soils Capability: _____

Approved: *W. J. N.*

Disapproved: _____

STATE CONSERVATION COMMISSION

SUPPORTING INFORMATION

FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SDCL 46-6-3 AS AMENDED

(This Form Required for Proposed Well Irrigation Only)

NAME: *E. L. HELFERTZ*

ADDRESS: *417 10th St. S.D.K.*

COUNTY: *Brookings*

LEGAL DESCRIPTION

1. WELL LOCATION: *S 1/2 3-10-49*

2. AREA TO BE IRRIGATED: *SE 1/4 10 1/2 of SW 1/4 Sec 3-10-49*

TYPE OF IRRIGATION

3. GRAVITY _____ SPRINKLER (Indicate Type): *Sprinkler - Center Pivot*

4. CROPS TO BE IRRIGATED: *Corn - Alfalfa*

LAND CAPABILITY FOR IRRIGATION

5. PERCENTAGE OF SLOPE: *All soil 3% or less*

6. PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: *Fertile loam very good
Verga silt clay loam, somewhat poorly drained, 1 clay ridge, poorly dr - Poor*

WATER QUALITY (To Be Completed by Commission)

7. SAMPLE NO: *74-945*

8. SALINITY: *EC = 694 in meq/l (medium)*

9. SODIUM: *3.0 in meq/l (low)*

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

Brookings County Soil Survey, Forest Block

and:

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

E. L. Larson

Subscribed and sworn before me this

18th day of November 1974.

D. L. Olson

Notary Public

(Title) my Commission expires 4/3/77

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

*Test Result + letter
 11/15/74*

Submitted by: E. L. Leiferman
 Address: Aurora, SD 57002

Date Rec'd November 15, 1974
 Sample No. 74-948
 Identification Well-10-12'
S1, Sec. 3, T. 109N, R. 49E

WATER ANALYSIS

Calcium (Ca)	110	ppm*	5.50	me/l**
Magnesium (Mg)	32	ppm	2.62	me/l
Sodium (Na)	7	ppm	0.30	me/l
Potassium (K)	2	ppm	0.06	me/l
Sulfate (SO ₄)	51	ppm	1.06	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	7	ppm	0.20	me/l
Bicarbonate (HCO ₃)	290	ppm	4.76	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		g.p.g.***
Alkalinity (Methyl Orange)	238	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	694	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.15			
Sodium	3.53	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.57			
Others:				

*ppm=parts per million

**me/l=milliequivalents per liter

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

COMMENTS: Total cations 8.48 me/l
 Total anions 6.02 me/l

By: Shirley Litch

Service Performed

Amount Due

Irrigation analysis

\$6.00 PAID

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 74-948

Amount Due

Signed

WATER LICENSE NO. 2161-3.

(1) WHEREAS, On the 21st day of November A. D. 19 74
E. L. Helfferan

made Water Right Application No. 2161-3 for a permit to use 1.73 cubic feet per second of the waters of groundwater (one well)

County of Brookings, State of South Dakota, for Irrigation purposes; and

(2) WHEREAS, On the 23rd day of January A. D. 19 75

Permit No. 2161-3, with a date of priority of November 23, 1975 was issued to said applicant _____ for the diversion of said water, and provided for the completion of construction of the water supply system therein described on or before the 23rd day of January A. D. 19 78 and for the application to beneficial use of said water on or before the 23rd day of January A. D. 19 80

and:

(3) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota relating to completion of the construction of the water supply system and is entitled to divert 1.73 cubic feet per second of water for beneficial use and

(4) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota relating to the application of water to beneficial use of the following extent:

to irrigate portions of the following lands all in Section 3-T109N-R49W;

Description	Acres
NE $\frac{1}{4}$ SW $\frac{1}{4}$	23
SE $\frac{1}{4}$ SW $\frac{1}{4}$	23
NW $\frac{1}{4}$ SE $\frac{1}{4}$	38
NE $\frac{1}{4}$ SE $\frac{1}{4}$	5
SW $\frac{1}{4}$ SE $\frac{1}{4}$	38
SE $\frac{1}{4}$ SE $\frac{1}{4}$	5
TOTAL	132

(5) NOW, THEREFORE, By the virtue of the authority vested in us by the laws of the State of South Dakota, We hereby grant and confirm to E. L. Lelferman

_____ of Aurora, South Dakota

the holder _____ and owner _____ of said permit No. 2161-3 a water right, dating from November 21, 1974

_____ to use of 1.78 cubic feet per second of the waters of groundwater (one well)

in the County of Brookings and State of South Dakota, or so much thereof as may be necessary for the purposes hereinbelow mentioned, to be diverted at 770 feet north and 2720 feet west of the SE corner Section 3-T109N-R49W

and conduct to and upon portions of land in Section 3-T109N-R49W, more fully described on the face of this License.

for the purpose of Irrigation

Subject to any limitations listed in Water Right Permit No. 2161-3 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota
this 23rd day of January A. D.

Nineteen Hundred and Seventy-nine

WATER RIGHTS COMMISSION

By:

John Hatch
Chief Engineer, Executive Officer, JOHN HATCH

2161-3

Permit No. _____

Water Diversion No. 3 Big Sioux River Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That E. L. Leiferman

_____ the holder _____ of
Permit No. 2161-3, issued upon Application No. 2161-3, bearing date of priority of November 21,
1974 authorizing the diversion of 2.57 cu. ft. per second of the waters of _____
groundwater (a well) County of Brookings, State of South Dakota at _____
770 feet north and 2720 feet west of the SE corner Section 3-T100N-R40W

_____ for Irrigation

purposes, has _____ complied with the provisions of the laws of the State of South Dakota relating to proof of
completion of the works of diversion set out and described in said Permit; that said works are found in satisfactory
condition for diverting and conveying to the place of intended use 1.78 cu. ft. per second of water.

Date January 23, 1979

JOHN HATCH, Chief Engineer
Water Rights Commission

No. 2161-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) ss.
County Brookings)

I, James M. McLellan Jr. hereby

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

Water was taken from the Brookings Daily Register

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 Brookings

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

Dec. 20, 1974

Dec. 27, 1974

James M. McEllen
(Signature)
General Manager
(Title)
Dec. 30, 1974
(Date Signed)

Legal No. 149 — Dec. 20 & 27

NOTICE

INTENT TO APPROPRIATE WATER

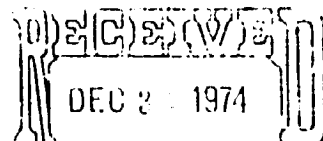
Notice is hereby given that E. L. Lieferman whose post office address is Aurora, South Dakota, has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use 2.57 cubic feet of water per second of time from ground water through the Lieferman No. 1, the point of diversion of which is to be located in the NW¼, NE¼ of Section 3, Twp. 109N, Range 49W. Said water to be used for the purpose of providing irrigation on the following described land:

SE $\frac{1}{4}$ and E $\frac{1}{4}$ SW $\frac{1}{4}$, Section 3, T109N,
R49W

This application No. 2161-3 will be considered by the Water Resources Commission at their office at Pierre upon the 22nd day of January, 1975, at 2:30 P.M. All interested persons may appear and be heard.

WATER RESOURCES
COMMISSION

By: JURTON F. JONES
Water Rights Specialist



STATE WATER RIGHTS COMMISSION
SOUTH DAKOTA

Publish first publication, on or before January 8, 19 75NOTICE
INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501

December 10, 19 74

Notice is hereby given that E. L. Lieferman
whose post office address is Aurora, 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 use
2.57 cubic feet of water per second of time from the ground water through the
Lieferman #1, the point of diversion of which is to be located in the _____

NW 1/4 NE 1/4

of Section 3, Twp. 109N, Range 49W. Said water to be used for the purpose
of providing irrigation on the following described land:

SE 1/4 and E 1/4 SW 1/4, Section 3, T109N, R49W

This application No. 2161-3 will be considered by the Water Resources Commission at their office at
Pierre upon the 22nd day of January, 19 75, at 2:30 P. M. All interested
persons may appear and be heard.

WATER RESOURCES COMMISSION

By:

BURTON F. JONES
Water Rights Specialist

BFJ/bw

cc: E. L. Lieferman, Aurora, S.D. 57002

2161-3 CL Leiferman by J. H. H. H. H.
5-11-78 U.S. Elec. 75 HP.

ID# RMA718-00-628-R2090798

ETSW 4 VSE 1/2 1760 RPM

Sec. 3. Pump Jaws & Holes

Log 11 M. 71900 7000

Sec# N3X2805342

Center Point Chicago

7000 M. 71900

Chamber 1/2 L. just north of S

Permit No. 2161-3Water Division 3 Big Sioux River Water DistrictREPORT OF EXAMINATION OF WORKS
AND/OR APPLICATION OF WATER TO BENEFICIAL USE

TO: Water Resources Commission, State Office Building No. 2, Pierre, South Dakota 57501

I have this day made a thorough examination of the water use system constructed by E.L. Leiterman
 of Aurora, South Dakota 57002 holder
 of Permit No. 2161-3, bearing date of priority of November 21, 1974
 authorizing the diversion of 2.57 cu. ft. per second of the waters of One Well
 for Irrigation purposes, in Brookings County.

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

The Water Use System consists of,

A. Works used to divert the water:

Motor 1/2 H.P. Elec. ID# RXA 718-00-628 R2090728
75 HP, 1760 RPM

Pump - Fairbanks Morse, Size 11M, Ser# N2X2806342
Pumping 3500 gpm.

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

700 ft 8" dia P.V.C. Pipe

C. Works used to apply water to beneficial use.

Electroqator Center Pivot

The system is in the following condition: Good

The point of diversion is located 770 ft N and 2720 ft W of the SE
Cor. of Section 3, T109N R49W.

The works are capable of diverting and conveying to the place of use 1.78
 cu. ft. per second of water which is to be used for Irrigation

Water has been put to beneficial use to the maximum extent as follows: All in Section 3, T109N R49W
NE 1/4 SW 1/4 - 23 Ac, SE 1/4 SW 1/4 - 23 Ac, NW 1/4 SE 1/4 - 35 Ac, NE 1/4 SE 1/4 - 5 Ac.
SW 1/4 SE 1/4 - 35 Ac, SE 1/4 SE 1/4 - 5 Ac.

comprising a total of 132 acres of land

Well depth 675 ft.
 to water 10 ft
 pumping 800 gpm.

Date December 22, 1978
LeRoy J. Williamson
 (Signature)

RECEIPT

WATER RIGHTS COMMISSION
State of South Dakota

No 4 6709

PIERRE, January 17, 1978

RECEIVED OF E. L. Lelferman, Aurora, SD 57002

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

Fee for Application for Permit to Appropriate Water No. _____ (examination, processing, recording and filing) _____		
Fee for Inspecting Construction, and issuing Cert. of Construction No. 2161-3	12	00
Fee for Inspecting Beneficial Use, and issuing Water License No. 2161-3		
Fee for issuing Location Certificate-Dry Draw, No. _____		
Fee for filing _____		
Fee for certified copy of _____		
Fee for Print copy of map _____		
Fee for Certifying _____		
Fee for _____ (any other work as provided by law)		
TOTAL	12	00

WATER RIGHTS COMMISSION

By *W. L. Hatch*
Chief Engineer, Executive Officer
JOHN HATCH

NOT TO SCALE

Permit # 2161

1970

