

No. 2318-2Map No. 1700-3 Water Division No. 3 JAMES RIVER District
(Mark to be filled by the Engineer for the W. B. C.)

APPLICATION FOR PERMIT

832

To Appropriate Water within the State of South Dakota

(NOTE - Draw a line through items not applicable)

1. Name of Applicant Huxland Hauling Co.
 Post-office address Willow Lake State South Dakota 57238
 If a corporation show date and place of incorporation _____
2. Method of accomplishing work (contract, employment of others, or by direct labor) Direct labor
3. Name of diversion work Huxland Irrigation Project #1
4. Amount of water claimed (cubic feet per second) 30
5. Source of water supply well
6. Location of point of diversion 530' N 4° E of SW corner of Sec 22
113-57
- County Clark
7. Annual period or periods during which water is to be used April through 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 222

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 Int.	Land Description	No. Acres Int.
NW ¹ of SW ⁴ Sec 22-113-57	39	NW ¹ of NW ¹ Sec 27-113-57	38
NE ¹ of SW ⁴	40	NE ¹ of NW ⁴	39
SW ⁴ of SW ⁴	27		
SE ¹ of SW ⁴	39		

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 5 years. Additional time required to complete application of water to the proposed beneficial use 3 years. CLARK COURIER
11. Choice of newspaper for Notice of Intent to Appropriately Water publication Waterman-Public Opinion
CLARK, S.D.
12. Principal Features of the Proposed Water Supply System.

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

well with electrically driven deep well
tax line

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

closed conduit

C. Works proposed to apply water to beneficial use.

center pivot irrigation machineEstimated Total Cost \$ 75,000Attachments. 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 BrookingsI, Huxland Hauling Co., 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 Harold HaulingSubscribed and sworn to before me this 8 day of July 1916.John S. Jones
Notary Public for other qualified officers

P. E. 1916

WATER RIGHT APPLICATION APPROVAL

The Water Resources Commission hereby approves Water Right Application No. 2318-3

Harland Haug
(Applicant)

Willow Lake
(Post Office Address)

SOUTH DAKOTA 57278 With the following modifications:
(State)

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

CANCELLED
BY ACTION OF W.R.C.
DATE 11-15-78 BY BW

See Permit # 4324-3

Date of first receipt of application JULY 11 19 75

Date of return to applicant for correction, amendments or changes required JULY 11 19 75

Date of receipt of corrected application JULY 21 19 75

Approved SEPTEMBER 12 19 75 Recorded in Book 14 Page 33

WATER RIGHT PERMIT NO. 2318-3

The Water Resources Commission hereby grants and issues this Water Right Permit No. 2318-3 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 JULY 11 19 75
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before MARCH 10 19 78
3. The whole of said work is to be completed on or before SEPTEMBER 10 19 80
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is SEPTEMBER 10 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 3.17 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 SEPTEMBER 10 19 83 said water to be used during the following described annual period: APRIL THRU OCTOBER

Witness my hand this 15TH day of SEPTEMBER 19 75

WATER RESOURCES COMMISSION

By:

John H. Hark
Chief Engineer, Executive Officer

Certificate of Construction Issued _____ 19 ____

Water License Issued _____ 19 ____

NOTICE OF WELL CONSTRUCTION

(1) WELL CONSTRUCTION

Location of well: _____ 1/4 _____ 1/4 _____ 36 Section _____ 22 Township _____ 113 Range _____ 517
 Well owner: Harland Wang William Lake S.D.
 (Name) (Address)
 Date well drilling completed: 5/5/76 Purpose of well: Irrigation
 (Domestic, irrigation, stock, municipal, industrial, other)

WELL LOG

Legs, top to top in feet	Description of layer	Depth to top of water producing aquifer	
0-2	top soil	158	ft.
2-18	yellow clay	24	ft.
18-48	black till	Name of producing aquifer (if known): <u>CHALK</u>	
48-80	sand & gravel	Total depth of drill hole: <u>80</u>	ft.
80-	clay	Depth to bottom of casing: <u>80</u>	ft.

Casing information: In the space below show kind, size, weight, length per diameter, etc., for production casing and surface casing, if used.
0-60 8" Schedule 80 Plastic

Screen information: In the space below show length of screen, length of casing, diameter and kind of screen or casing perforations.
60-80 8" Schedule 80 Perforated Plastic

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

Attach sheet if more space is needed

Empire Irrigation Drilling Co., Inc.
 Name of Drilling Contractor

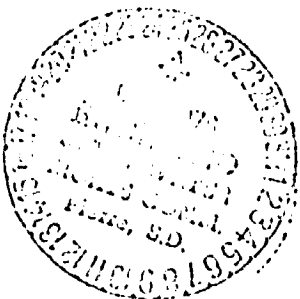
(2) PUMP INSTALLATION

Company name and size of pump: Not done yet HP _____
 Type of pump: _____ Capacity of installed pump: _____ G.P.M.
 Depth of pump placement: _____ ft., Date of pump installation: _____

(3) WATER SURFACE MEASURING TUBE

On some wells an air-tight water surface measuring tube is required. See Section 46.400 of Chapter 40.6, MINIMUM WELL CONSTRUCTION STANDARDS.

Show exact vertical length of water surface measuring tube, when installed: _____ ft., tube diameter: _____, tube material: _____.



 Name of Pump Installation Contractor

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

D. Well Information or Estimates

- (1) Drill Hole, Diameter 36", Depth 55'
- (2) Casing, Type Steel Diameter 16" Thickness 3/16"
(iron, concrete, steel, etc.)
- (3) Perforated Screen
Type Buttonholes Slot, Diameter 16", Length 15'
- (4) Gravel Pack, Thickness 10", Length of gravel pack 20'

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 0' to 7' - 1/2" sand, 7' to 10' mixed
sand and gravel, 10' to 55' coarse sand,
gravel and rocks, 55' - clay.

Depth to top of water bearing material 7'

Depth to bottom of water bearing material 55'

Thickness of water bearing material 48'

Depth to water (ground surface to water level) 3'

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

On same owner's property 5 yds. Or property owned by others 80 yds.

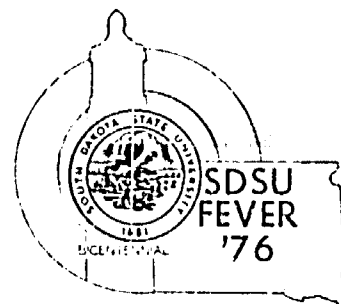
G. Water Storage Dams.

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.

Harland Haug
Signature of Applicant

SOUTH DAKOTA STATE UNIVERSITY
BROOKINGS, SOUTH DAKOTA 57006

WATER RESOURCES RESEARCH INSTITUTE



"Feter"—From Experience—
Vision in Education and Research

July 10, 1975

RECEIVED

JUL 21 1975

Mr. Harland Haug
Willow Lake, SD 57278

RECEIVED
JUL 21 1975
SOUTH DAKOTA
STATE CONSERVATION
COMMISSION

Dear Mr. Haug:

We have received your W1 form. A copy of the water analysis and a copy of this letter along with the W1 form are being forwarded to the State Conservation Commission.

The original copy of the water analysis is enclosed for your use in keeping. The water is fairly good in quality although it is moderately high in total salinity. The sodium absorption ratio is 0.23 which makes it low with very little chance that the sodium will cause any dispersion of the soil reduction in infiltration. Therefore, the only hazard is in accumulation of salts due to continued use of this water. In other words, it should not cause any dispersion or tendency to form slick spots or gumbo. However, the total salt level in the water is high enough so that you should be very careful not to over-irrigate and bring the water table up near the surface. This is particularly true with the type of soil that you intend to irrigate. The Forman loam is a light clay loam to heavy loam with a tendency to have an internal drainage which might be quite low. After a few years of irrigation it could happen that salts could begin to accumulate in the upper portion of the root zone. If this occurs, you should undertake a leaching program; very heavy fall irrigation or early spring irrigation using natural rainfall which normally occurs in the spring or late summer to force the salts onward. This may never happen, but if it does, I suggest that you contact an irrigation specialist or your county extension agent for detailed instruction. With these factors known to you, you should be able to proceed with a successful irrigation operation on your land.

Sincerely yours,

L. O. Fine
L. O. Fine
Water Quality Lab

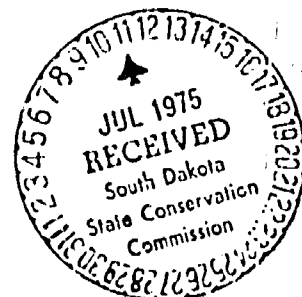
LOF:ckb

Enclosures

cc: State Conservation Commission

Darrel Pahl
George Schanck, County Extension Agent

A land-grant university serving South Dakotans through Teaching—Research—Extension



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

Submitted by: Harland Bang
 Address: Willow Lake, SD 57278

Date Rec'd June 26, 1975
 Sample No. 75-564
 Identification Well-48
334, Sec. 22, T R

WATER ANALYSIS

Calcium (Ca)	210	ppm*	10.50	me/l**
Magnesium (Mg)	92	ppm	7.54	me/l
Sodium (Na)	16	ppm	0.70	me/l
Potassium (K)	14	ppm	0.36	me/l
Sulfate (SO ₄)	490	ppm	10.19	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	70	ppm	1.97	me/l
Bicarbonate (HCO ₃)	329	ppm	5.40	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)	270	ppm (as CaCO ₃)		
Alkalinity (Penolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	1434	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.23			
Sodium	3.66	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.72			
Others:				

*ppm=parts per million

**me/l=milliequivalents per liter

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

COMMENTS: Total cations 19.10 me/l
 Total anions 17.56 me/l

By: Shirley Littan

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: 75-564

Amount Enclosed \$

Signed

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)

FOR COMMISSION USE ONLY

Irrigation System: _____

Water Quality: _____

Soils Capability: _____

Approved: [Signature]

Disapproved: _____

NAME: Harland Hawes

ADDRESS: Willow Lake, South Dakota 57278

COUNTY: Clark

LEGAL DESCRIPTION

1. WELL LOCATION: SW⁹ of Sec 22 - 113-57
2. AREA TO BE IRRIGATED: SW⁹ of Sec 22 and N² of NW⁸ of Sec 27
113-57

TYPE OF IRRIGATION

3. GRAVITY _____ SPRINKLER (Indicate Type): Center Pivot
4. CROPS TO BE IRRIGATED: Corn & Alfalfa

LAND CAPABILITY FOR IRRIGATION

5. PERCENTAGE OF SLOPE: 2 to 6%
6. PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: For many loam - deep well
drained moderately slow permeable clay under water

WATER QUALITY (To Be Completed by Commission)

7. SAMPLE NO: _____
8. SALINITY: _____
9. SODIUM: _____



Conservation
Commission
Form WI #1

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)

FOR COMMISSION USE

Irrigation System: _____

Water Quality: _____

Soils Capability: _____

Approved: [Signature]
3/3/75

Disapproved: _____

NAME: Paul Kingslren

ADDRESS: Rt. 3 Watertown, S.D. 57201

COUNTY: Codington

LEGAL DESCRIPTION

1. WELL LOCATION: E 1/2 Section 9 T116 N R 52 W

2. AREA TO BE IRRIGATED: E 1/2 Sec 9 T116 N R 52 W

TYPE OF IRRIGATION

3. GRAVITY SPRINKLER (Indicate Type): Center Pivot

4. CROPS TO BE IRRIGATED: Corn and Alfalfa

LAND CAPABILITY FOR IRRIGATION

Estelline s.l., 0-3%; Fordville s.l., 0-3%;

5. PERCENTAGE OF SLOPE: Lansdowne s.l., mostly 0.2%

6. PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: Estelline: I-1; Fordville: III-2;
Lansdowne: IVw-1 (about 50% of the 320 A in sq)

WATER QUALITY (TO BE COMPLETED BY COMMISSION)

7. SAMPLE NO.: 75-495

8. SALINITY: EC = 1096 μ mhos/cm (medium-high)

9. SODIUM: SAR = 0.28 (low)



Department of Natural Resource Development

WATER RIGHTS COMMISSION

Joe Foss Building, Pierre, South Dakota 57501
Phone 605/773-4212

November 12, 1978

Harland Haug
RR #1
Willow Lake SD 57278
Dear Mr. Haug:

Enclosed herewith is your Water Right Permit No. 4324-3 as approved by the Water Rights Commission, authorizing you to construct your water diversion system and apply the water to beneficial use, not exceeding the limits as specified in said Water Right Permit No. 4324-3.

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 Water Rights Commission when you have completed the system and/or have put the water to beneficial use. The Commission can then schedule an inspection so that your Certificate of Construction and/or your Water License may be issued to you, thus completing your acquisition of a Water Right.

Respectfully,
WATER RIGHTS COMMISSION

JOHN HATCH, Chief Engineer

EJW

P.S. Applicable portions of Permit No. 2318-3 have been incorporated into Permit No. 4324-3 and Permit No. 2318-3 has been placed in a cancelled status.

Form 6. - Notice of Intent to Appropriate Water

No. 2313-3

Publish first publication, on or before

August 23, 1975

NOTICE OF INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501

August 3, 1975

Notice is hereby given that Harlan Maug

whose post office address is Willow Lake, 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 3.17 cubic feet of water per

second of time from the ground water through the

Harlan Maug Irrigation Project, the point of diversion of which is to

be located in the _____

S&W, NW

of Section 22, Twp. 113N, Range 57W. Said water to be used for the purpose of providing irrigation on the following described land: S&W, Section 22, and N, NW, Section 27, T113N, R57W

This application No. 2313-3 will be considered by the Water Rights

Commission at the Burgundy Room at the Skyline Hotel, Yankton, South Dakota

upon the 16th day of September, 1975 at 2:30 P. M. All interested persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

BURTON F. JONES, Water Rights Specialist

BFJ/bw

cc: Harlan Maug, Willow Lake, S.D. 57976

No. 2318-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Clark) ss.

I, Bert Moritz hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Clark Co. Courier

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 Clark

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

August 14, 1975

August 21, 1975

Bert Moritz
(Signature)

Publicist
(Title)

8/23/75
(Date Signed)

NOTICE OF INTENT TO
APPROPRIATE WATER

August 6, 1975
Pierre, South Dakota 57501

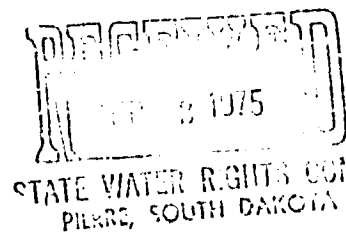
Notice is hereby given that
Harland Haug whose post office
address is Willow Lake, South
Dakota, has made an application
in accordance with the provisions
of the water laws of South Dakota
for a permit to appropriate for
beneficial use 3.17 cubic feet of
water per second of time from
ground water through the Har-
land Haug Irrigation Project, the
point of diversion of which is to be
located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of
Section 22, Twp. 113N, Range
57W. Said water to be used for the
purpose of providing irrigation on
the following described land:
SW $\frac{1}{4}$, Section 22, and N $\frac{1}{2}$ NW $\frac{1}{4}$,
Section 27, T113N, R57W.

This application No. 2318-3 will
be considered by the Water
Rights Commission at the Bur-
gundy Room at the Skyline Motel,
Yankton, South Dakota upon the
10th day of September, 1975 at
2:30 P.M. All interested persons
may appear and be heard.

WATER RIGHTS COMMISSION

By: Burton E. Jones,
Water Rights Specialist

8-14-21



Conversation of File DocumentationNAME OF PERSON OR FILE: Harlan Hall 4324-3AADDRESS: Willow Lake COUNTY _____DATE: 4-5-83 ^(1-23-83 date on cover letter is actual date) TELEPHONE _____RE: Licensing of 4324-3A & incorporation of 4324-3A

COMMENTS:

4324-3A should be licensed for 1200 gpm (2.66 cfs) from 3 wells, #187, #197 & #327 deep for irrigation of 2220 acres and a priority date of July 11, 1975.

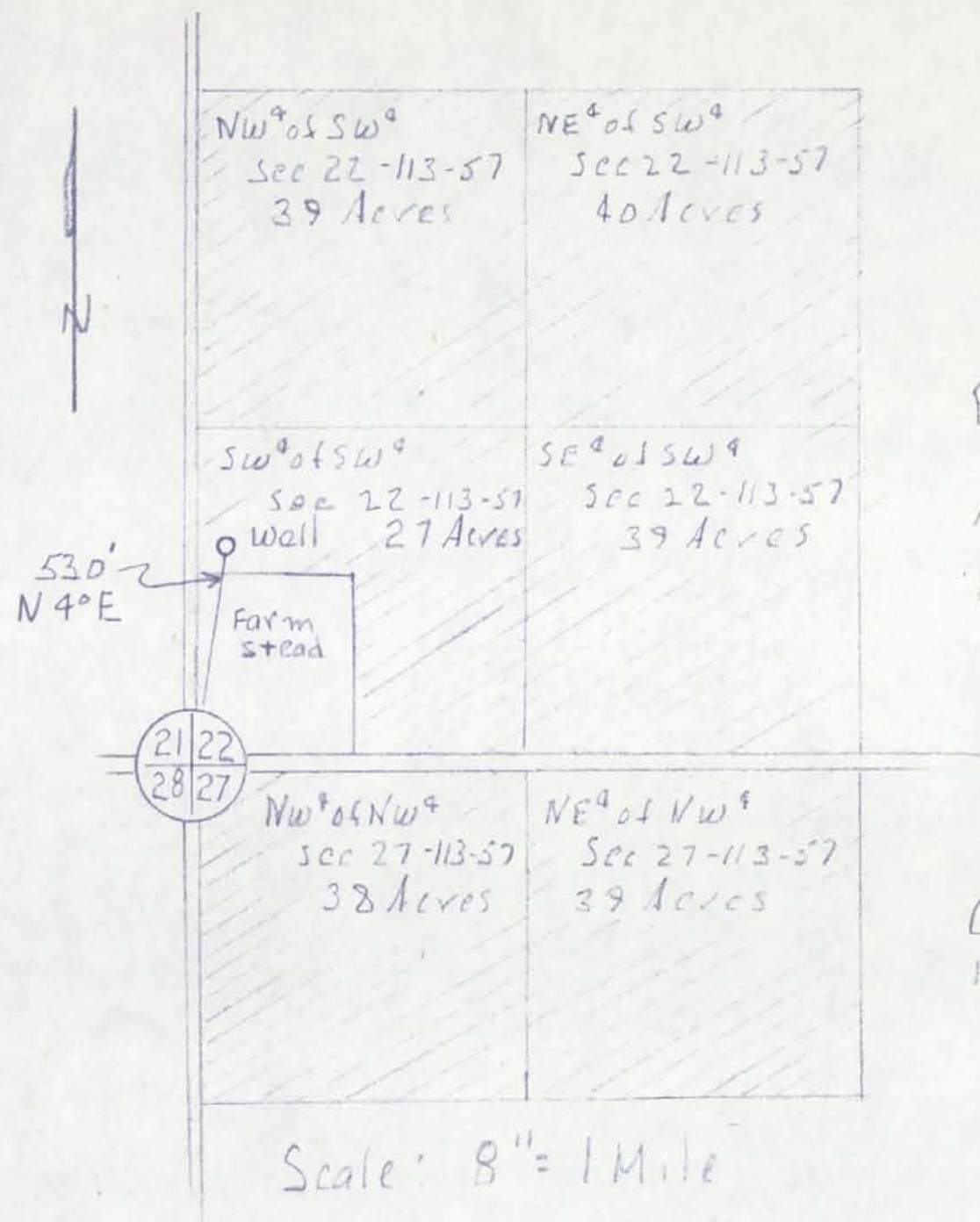
Permit 2318-3 for 3.17 cfs from one 55' deep well to irrigate 222 acres, with completion date of Sept. 10, 1980 was incorporated into Permit 4324-3 for no additional cfs on land & to add 3 wells 1-30' & 2-80' deep. 2318-3 was placed in cancelled status with no loss of rights pursuant to administrative policy followed in 1978. For some reason priority date of July 11, 1975 for .55 cfs and Oct. 4, 1978 for 2.62 cfs was assigned. Priority for 4324-3 should have been only July 11, 1975. Project completion date should have remained Sept. 10, 1980 rather than Nov. 15, 1981.

Permit 4324-3 should have been numbered 2318-3A Permit 4324-3A, received 11-20-80 (after original 5 yr permit) for one 91' well in NE⁴ SW⁴ sec. 22, no add'l. cfs or acres. was approved Jan 28, 1981 w/ July 15, 1975 priority for .55 cfs & 2.62 cfs, Oct 4, 1978 w/ construction to be completed Jan 28, 1986. This well was never constructed. Wells constructed were as approved under 4324-3.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

4/82

NAME: John Hall



HARLAND HAUG

IRRIGATION PROJECT #1

Willow Lake 57278 S. Dakota
Clark County

Point of Diversion: 53° N 4° E at SW corner
of Sec 22-113-57

Acres Irrigated: 222

Water Claimed: 3.17 cfs

Surveyor's Certificate

I, John L. Weisma, do hereby certify that
this map represents a reasonably accurate
record of the land of:

Harland Haug
Willow Lake S. Dakota Clark County
Drawn by J.L.W. 7-8-75
John L. Weisma P.E. # 1916
Brookings S.D. 57002

