

2744-3

1. Considered MAY 20, 1976
2. Name of Applicant LEWIS MENNENGA
3. Post Office Address CASTLEWOOD
4. Amount of water claimed 2.0
5. Source of water supply 39' WELL
6. Water to be used for IRRIGATION.
Acres to be irrigated 148
7. Water to be diverted and used in HAMLIN county
about 4S, 2W E miles of CASTLEWOOD
8. Proof of Publication Received 5-18-76
Not received _____
9. Application Approved _____
Subject to _____
Not Approved _____
Action deferred _____
10. Remarks:

No. 2744-3Map No. 2103-3 Water Division No. 3 Big Sioux River District
(Blanks to be filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

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

1. Name of Applicant Leona Menninger
 Postoffice address Pastorwood 57223, State South Dakota
 If a corporation show date and place of incorporation _____

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

3. Name of diversion work Leona Menninger Irrigation Project # 3

4. Amount of water claimed (cubic feet per second) 2.0

5. Source of water supply well

6. Location of point of diversion 2640' N 171° W of NE corner Sec 20-14-51

County Hamlin

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 148

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

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
NW 1/4 of NE 1/4 Sec 20-14-51	39		
NE 1/4 of NE 1/4 Sec 20-14-51	30		
SW 1/4	40		
SE 1/4	39		

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 1 year years. Additional time required to complete application of water to the proposed beneficial use 1 year years.

11. Choice of newspaper for Notice of Intent to Appropriate Water publication Hamlin County Enterprise

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 turbine

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

C. Works proposed to apply water to beneficial use center pivot irrigation machine

Estimated Total Cost \$ 45,000

13. 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 Brookings

I, Leona Menninger, 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 20 day of April, 1976

John L. Anderson
 Notary Public (or other qualified officer)

P. E. 11716

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 2744-3

LEWIS MENNENGA
(Applicant)

CASILEWOOD
(Post Office Address)

SOUTH DAKOTA 57223 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.

Date of first receipt of application APRIL 26 1976

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

Date of receipt of corrected application MAY 5 1976

Approved MAY 20 1976, Recorded in Book 15 Page 180

WATER RIGHT PERMIT NO. 2744-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 2744-3 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 APRIL 26 1976
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before NOVEMBER 20 1978
3. The whole of said work is to be completed on or before MAY 20 1981
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is MAY 20 1984
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 2.0 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 it 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 MAY 20 1984; said water to be used during the following described annual period: APRIL THRU OCTOBER

Witness my hand this 9TH day of JUNE 1976

WATER RIGHTS COMMISSION

By:

John Halseth
Chief Engineer, Executive Officer

Certificate of Construction Issued — 19 —

Water License Issued — 19 —

5114 1071 20 - 114 - 51

Form 2A Wells, Dugouts or Water Storage Dams (Supplement to form 2)

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

D Well Information or Estimates

- (1) Drill Hole, Diameter 30", Depth 39'
 (2) Casing Type Electric 1455, Diameter 18", Thickness 3/8"
 (wood, concrete, steel, etc.)
 (3) Perforated Screen.
 Type Slo-t, Diameter 18", Length 20'
 (4) Gravel Pack Thickness 6", 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 2' top soil; 2' to 6' mixed
Silt & clay; 6' to 39' water bearing gravel;
over 39' is clay

- Depth to top of water bearing material 6'
 Depth to bottom of water bearing material 39'
 Thickness of water bearing material 33'
 Depth to water (ground surface to water level) 6'

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

On same owner's property 100 rds. On property owned by others 200 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.

Seni M. Mungai
 Signature of Applicant

April 30, 1976

Mr. Lewin Mennenga
Castlewood, SD 57223

Dear Mr. Mennenga:

The water analysis for the two samples you submitted here about a week ago has been completed. I am enclosing the original copies of the reports for both these samples and a copy of AES publication #13. On the outside back cover of this pamphlet, there is a water quality chart. I have drawn in a red cross to signify the approximate location of these two samples in this quality diagram. They are so much alike that it is impossible to distinguish the two in the chart. They are in the very high total salt category, but rather low in sodium.

Accordingly, these waters are quite hazardous for use in any normal irrigation situation. Extremely good internal drainage with very judicious management of the water could be satisfactory and could result in no damage to the land over long periods of time if the management is carefully adhered to. The management which must be used is infrequent uses, not more than 3 times in any growing season and preferably 2 or less, and substantial application when you do use it. By substantial application, I mean enough water to completely refill the root zone to the entire depth that water has been used by the crop during the preceding period just before irrigation. This means that you should carefully assess the water situation in the soil every time you anticipate irrigating and irrigate with sufficient quantity to completely replenish this water.

I recommend that you defer completely any further consideration of irrigating in the south half of section 15 and start out with irrigating in the northeast quarter of 20, avoiding strictly the southwestern corner of this quarter where the poorly drained soils are.

If you do undertake this venture, you should be careful to have the soil sampled and checked for build-up of salts about every third year. If you find that a serious build-up is occurring, management techniques could be changed or a leaching operation could be conducted so as to reduce the salinity. You will need to keep in contact with someone in extension soils work or in water resources for help in this phase of it. A copy of this letter, plus the application materials, and copies of the water analyses are being sent to the State Conservation Commission for their action.

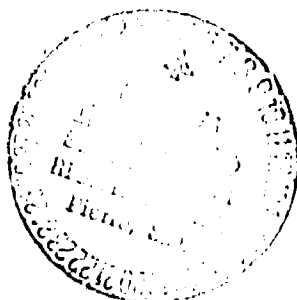
Sincerely yours,

L. O. Fine

L. O. Fine

Water Quality Lab

cc: State Conservation Commission, C. Pahl, Harold Campbell (Co. Ext. Agent)



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 ONLY

Irrigation System: _____

Water Quality: _____

Soils Capability: _____

Approved: ALB. S. J. [Signature]

Disapproved: _____

NAME: Lewis Menninger
ADDRESS: Castlewood S. Dakota 57223
COUNTY: Hamlin

LEGAL DESCRIPTION

1. WELL LOCATION: SE¹ of NE¹ Sec 20 - 114 - 51
2. AREA TO BE IRRIGATED: NE¹ Sec 20 - 114 - 51

TYPE OF IRRIGATION

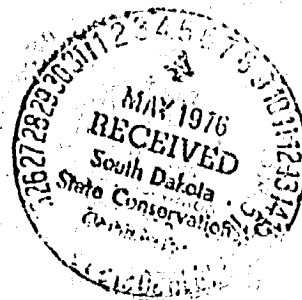
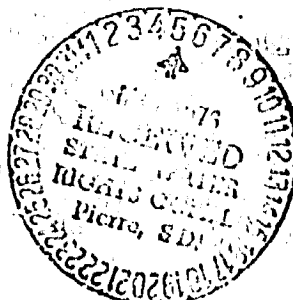
3. GRAVITY _____ SPRINKLER (Indicate Type): Center pivot
4. CROPS TO BE IRRIGATED: Corn & alfalfa

LAND CAPABILITY FOR IRRIGATION

5. PERCENTAGE OF SLOPE: See reverse side
6. PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: _____

WATER QUALITY (To Be Completed by Commission)

7. SAMPLE NO: 76-415
8. SALINITY: EC = 2506 (very high)
9. SODIUM: SAR = 0.55 (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

Hamlin County SCS

and:

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

Levie M. Mendenhall

Subscribed and sworn before me this

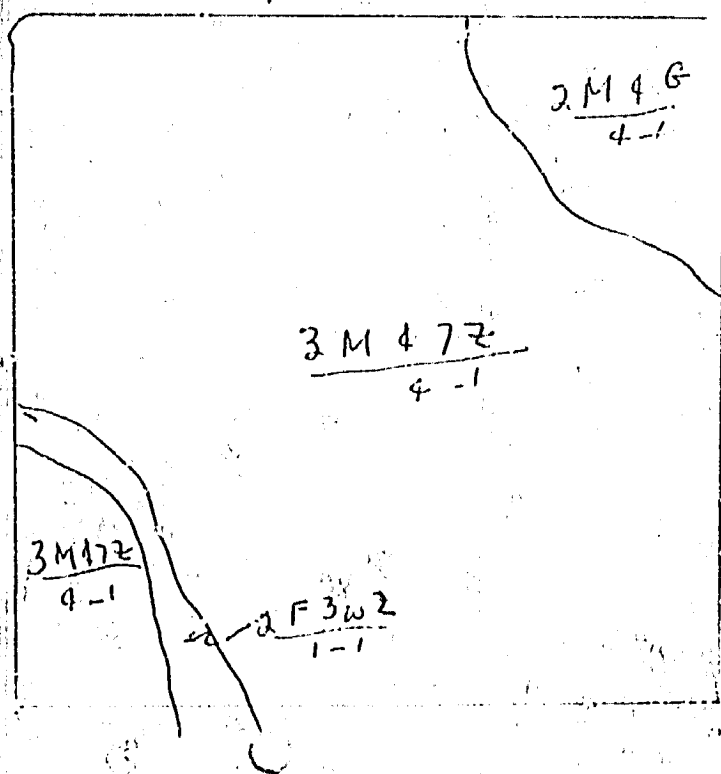
20 day of April 19 76.

John S. Williams

P. E. # 1916

(Title):

NE 1/4 Sec. 20 114-5-1



2M4G - deep loamy well
drained soil undulating

3M472 - moderately deep well
drained soil over sand
and gravel

2F3W2 - deep loamy clayey
poorly drained soil in
depression

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

Submitted by: Lewis Mennenga Date Rec'd April 21, 1976
 Address Castlewood, SD 57223 Sample No. 76-415
 Identification #3 Well-
NE 1/4, Sec. 20, T 114N, R 51W

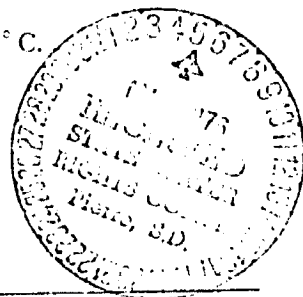
WATER ANALYSIS

Calcium (Ca)	310	ppm*	15.50	me/l**
Magnesium (Mg)	170	ppm	13.94	me/l
Sodium (Na)	75	ppm	3.26	me/l
Potassium (K)	8	ppm	0.22	me/l
Sulfate (SO ₄)	295	ppm	6.15	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	200	ppm	5.60	me/l
Bicarbonate (HCO ₃)	595	ppm	9.76	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)	488	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	2506	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.85			
Sodium	9.90	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.28			

*ppm=parts per million
 **me/l=millequivalents per liter

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

COMMENTS: Total cations 32.92 me/l
 Total anions 21.51 me/l



By: Shirley Kitten

Service Performed	Amount Due
Irrigation analysis	\$8.00 PAID

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-415

Amount Enclosed \$

Signed

No. 2744-3

Publish first publication, on or before May 10, 1976

**NOTICE
INTENT TO APPROPRIATE WATER**

Pierre, South Dakota 57501

May 5, 1976

Notice is hereby given that Lewis Mennenga

whose post office address is Castlewood, 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

2.0 cubic feet of water per second of time from the XX ground water through the Mennenga #1, the point of diversion of which is to be located in the

SE 1/4 NE 1/4

of Section 20, Twp. 114N, Range 51W. Said water to be used for the purpose of providing irrigation on ^{portions of} the following described land:

NE 1/4, Section 20, T114N, R51W

This application No. 2744-3 will be considered by the Water Rights Commission at their office at Pierre upon the 20th day of May, 1976, at 1:00 P.M. All interested persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

BURTON I. JONES
Water Rights Specialist

400
BFJ/bw
cc:

Lewis Mennenga, Castlewood, S.D. 57223

No. 2744-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Codington) ss.

I, John R. Lowrie hereby

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

Water was taken from the Watertown Public Opinion

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 _____ Watertown

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

May 8, 1976

May 15, 1976

(Signature)

General Manager

(Title)

May 15th, 1976

(Date Signed)

PUBLIC NOTICE

NOTICE INTENT
TO APPROPRIATE WATER

Pierre, South Dakota 57501
May 5, 1976

Notice is hereby given that Lewis
Mennenga whose post office address
is Castlewood, 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 2.0
cubic feet of water per second of
time from ground water through the
Mennenga No. 3, the point of
diversion of which is to be located in
the SE 1/4 NE 1/4 of Section 20, Twp.
114N, Range 51W. Said water to be
used for the purpose of providing
irrigation on portions of the
following described land: NE 1/4,
Section 20, T114N, R51W.

This application No. 2744-3 will be
considered by the Water Rights
Commission at their office at Pierre
upon the 20th day of May, 1976, at
1:00 P.M. All interested persons
may appear and be heard.

WATER RIGHTS
COMMISSION
By: BURTON F. JONES
Water Rights Specialist
(May 8, 15, 1976)

3/4 @ 2.25 x 2 =

1,462



Water Rights Division (605) 773-3352

July 7, 1981

LaVerne Mennenga
Castlewood, SD 57223

Mr. Mennenga:

The inspection of your water use system and inspection of the extent of your application of water to beneficial use, as developed under Water Permit Nos. 4130-3 and 2744-3, has been completed. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 (each) fee for the inspection and issuance of the Water License. Upon receipt of the \$100.00 fee from you, your Water Licenses will be sent to you. You will also receive the Certificate of Construction for each water right, as required by Statute.

Permit No. 2744-3 listed under the name of Lewis Mennenga, now belonging to you, should be transferred to your name. Enclosed is a notice of transfer of water permit. Please check over, sign, date and have notarized before returning it to this office with a \$2.50 filing fee. The permit will then be transferred to your name.

On form of payment, please include the proper permit numbers. This will insure proper handling of the fee. The total amount due is \$102.50.

Sincerely,

GENNY YOUNG
Staff Assistant

gy

encl

RECEIPT

WATER RIGHTS COMMISSION
State of South Dakota

No 4 8453

PIERRE, September 4, 1931

RECEIVED OF Lewis Hennings, Castlewood, SD 57223
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. 2744-3	50.	00
Fee for inspecting Beneficial Use, and issuing Water License No. 2744-3		
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	50.	00

WATER RIGHTS COMMISSION

By (John Hatch)
Chief Engineer, Executive Officer
JOHN HATCH / (b)

See not p. 2. Kelli May p. 10 CP. May need permit
to lower side in 55'.

2744-3 Lewis 4/10/2000

V-11-73 System in NE to SW 20-

Meter 2 415 Dk. 35 HP-1175 KOP

TS # 6325-01-824 - R. 2076770

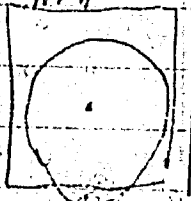
Pump - 2 units to 11000

Age 12 March 7.5 7000, Age 3

Je. # N 3A 280713 X. Age 8.75

T114N R31W

NET 20 T4L CP Hydraulic.



1200 ft
120 ft

11.1 3.1 17 ft to water

Pumping 800 gpm, Capacity 5

well is now 1200 ft to 120 ft

Permit No. 2744-3Water Division 3 Big Sioux River Water DistrictREPORT OF EXAMINATION OF WORKS
AND/OR APPLICATION OF WATER TO BENEFICIAL USE

TO: WATER RIGHTS, WATER MANAGEMENT BOARD / FOSS BLDG., PIERRE, SOUTH DAKOTA 57501

I have this day made a thorough examination of the water use system constructed by LEWIS
MIENNENGA of CASTLEWOOD holder
of Permit No. 2744-3, bearing date of priority of APRIL 26, 1976
authorizing the diversion of 2.0 cu. ft. per second of the waters of GROUNDWATER
for IRRIGATION purposes, in HAMLIN 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:

38' DEEP WELL WITH 18" FIBREGLAS CASING 20' FIBREGLAS SCREEN
FAIRBANKS MORSE 8" PUMP #3 12M - SERIAL # N3A2807618
POWERED BY 75HP US ELECTRIC MOTOR

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

20' 10" ALUMINIUM LINE TO CENTER OF PILOT

C. Works used to apply water to beneficial use.

T & L CENTER PILOT SYSTEM WITH NELSON #150
END GUN

The system is in the following condition: GOOD

The point of diversion is located 300' S OF THE CENTER, NE CORNER,
SECTION 20, T114N, R51W

The works are capable of diverting and conveying to the place of use 1.88 (850 GPM)
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:

FOR IRRIGATING A 132 ACRE CIRCLE IN THE
NE⁴, SECTION 20, T114N, R51W

comprising a total of 122 *
acres of land.

* PILOT CENTER IS LOCATED 300' S OF CENTER OF THE
QUARTER, SO PILOT EXTENDS 300' INTO THE SE⁴
OF SECTION 20. THE SE⁴ IS COVERED UNDER PERMIT
NO 1475-3 ALSO OWNED BY MIENNENGA SO THERE IS
AN OVERLAP BETWEEN THE TWO PERMITS.

122 ac = 1.74

LEWIS MIENNENGA
CASTLEWOOD, SD

WATER RIGHTS DIVISION
SOUTH DAKOTA DEPARTMENT OF AGRICULTURE

Date JUNE 10, 1981
Fulton Jones
(Signature)

December 10, 1981

Lewis Hennenga
Castlewood
South Dakota 57223

Re: Water Permit No. 2744-3
Well: 300' S of Center, NE Corner,
Section 20-T114N-R51W.
IRR: 132 acre circle in NE 1/4,
Section 20, T114N-R51W

Dear Mr. Hennenga:

When writing up the Water License for your Permit No. 2744-3, it was discovered that you do not have soil/water compatibility approval for the 10 acres in the NE 1/2 SE 1/4, Section 20, which is irrigated from the well in the NE 1/4 of Section 20. To bring your permit into compliance with State Laws, soil/water compatibility approval must be received from the State Conservation Commission.

A new water right application will not be necessary since the land in question is already covered by a previous application, No. 1475-3. We have contacted the State Conservation Commission and they will be forwarding the information and forms to you to bring your permit into conformance with the State Laws.

Upon receipt of the soil/water compatibility approval your Water License and Completion of Works will be forwarded to you.

Yours very truly,

John Hatch, Chief Engineer
Water Rights Division
Telephone (605) 775-3352

cc: Martin Gertsonsen, S.C.C.

AD1001JH.vr

SOUTH DAKOTA
Department of Agriculture

DIVISION OF CONSERVATION

Anderson Building, Room 222 O Pierre, South Dakota 57501
Phone 805/773-3258

December 14, 1981

Lewis Mennenga
Castlewood
South Dakota 57223



Dear Mr. Mennenga:

We have been notified by the Water Rights Division that you are irrigating 10 acres in the N $\frac{1}{2}$ SE $\frac{1}{4}$ Sec 20-114-51 without soil and water compatibility approval.

Enclosed please find a WI-1 form for you to complete and forward along with the proper soils information and a water sample from the source you are using for irrigation to the Water Quality Laboratory at Brookings, South Dakota.

If you have any questions please feel free to contact this office.

Sincerely,

Martin Gertsonson
Martin Gertsonson
Program Director (Acting)

cf

cc: Water Rights Division

Enclosures: WI-1 form
Instruction Sheet

2744-2

April 21, 1982

Lewis Hennenga
Estelline, SD 57234

Dear Mr. Hennenga:

Enclosed is your copy of the laboratory report of analysis for water sample No. 76-0415.

As I indicated in a phone conversation I had with you in the latter part of March, this water sample (76-0415) is somewhat out-dated and a new water sample should be submitted.

I have plotted the approximate quality of your water by means of a red cross in the chart located on the back cover of the accompanying AES pamphlet #11.

Sample No. 76-0415 is classified as a very high saline, low sodic water. It is marginally suitable as a source for irrigation due to the presence of substantial amounts of calcium-bicarbonate, calcium-chloride, calcium-sulfate, and associated magnesium salts.

This is very salty water! Irrigation application rates should exceed crop requirements. This will allow some of the heavy salt load carried by your water to pass through the soil rooting zone (top two feet).

The soils coded as 3M47Z/2-1 found in the SE 1/4 of Section 20-114-51 are marginally compatible with the quality of your water. Care should be exercised in order to prevent these naturally productive soils from developing a salt build-up due to poor quality irrigation water.

If a salt problem or a rising water table should occur, please contact your county extension agent or this office for assistance.

The WI-1, Soils information, and a copy of the water analysis are being forwarded to the Division of Conservation for their action.

Sincerely yours,

Michael H. Sanders
Water Quality Lab
Division of Conservation
MHS:ckb
Encl. 2
cc: Division of Conservation
D. Pahl, Extension Service
Division of Water Rights

April 28, 1982

Lewis Mennenga
Estelline, SD 57234

Dear Mr. Mennenga:

Enclosed is your copy of the laboratory report of analysis for water sample No. 82-0654.

I have plotted the approximate quality of your water by means of a red cross in the chart located on the back cover of the accompanying AES pamphlet #13.

Sample No. 82-0654 is classified as a medium saline, low sodic water. It is suitable as a source for irrigation.

This sample shows a remarkable improvement in water quality compared to sample No. 76-0415.

The WI-1, soils information, and a copy of the water analysis are being forwarded to the Division of Conservation for their action.

Sincerely yours,

Michael H. Sanders
Water Quality Lab
Division of Conservation

WHS:ckb
Enclosures
cc: Division of Conservation
D. Pahl, Extension Service
Division of Water Rights



REPORT ON ANALYSIS
Water Quality Laboratory
Water Resources Research Institute
South Dakota State University
Brookings, South Dakota 57007

Name: WHEELER, L. H.
Address: 5057331
BILL TO: DIV OF CON
PIERRE SD 57501

Date Rec'd: Apr 21, 1982
Sample No.: 82-0854
Identification: Well
1141513 20 A

WATER ANALYSIS

Calcium (Ca)	95	ppm*	4.79	me/l**
Magnesium (Mg)	20	ppm	1.64	me/l
Sodium (Na)	10	ppm	0.43	me/l
Potassium (K)	1	ppm	0.03	me/l
Sulfate (SO4)	31	ppm	1.69	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	1	ppm	0.03	me/l
Bicarbonate (HCO3)	307	ppm	5.04	me/l
Carbonate (CO3)	0	ppm	0.00	me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		
Manganese (Mn)		ppm		
Boron (B)	0.06	ppm		
Hardness (EDTA as CaCO3)		ppm		g.p.g.***
Total Solids		ppm	6.90	me/l
Total Cations			6.75	me/l
Total Anions				
Alkalinity (Methyl Orange)	252	ppm (as CaCO3)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO3)		
Electrical Conductivity	530	micromhos per cm at 25 C		
Sodium Adsorption Ratio	0.24	Adjusted SAR	0.57	
Sodium	6.31	% of Cations		
Residual sodium carbonate	0.00	me/l		
pH	7.45			
Others:				

*ppm=parts per million
**me/l=millequivalents per liter
***g.p.g.=grains per gallon

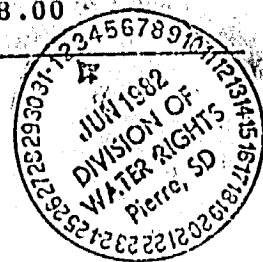
COMMENTS VALIDATED BY MIKE SANDERS, BILLED TO DIV OF CONSERVATION

By: Shirley Mittan

Service Performed:
Irrigation Analysis

Total Cost: \$ 28.00
Amount Received: 0.00
Balance Due: 28.00

Make checks payable to: "SDSU Water Quality Lab"
Please write lab number on your check!
Lab No. 82-0854



SOIL/WATER COMPATIBILITY PERMIT APPLICATION FORM

STATE CONSERVATION COMMISSION

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE

Office Use Only

30610

OWNERS NAME: Lewis Menninger OWNERS ADDRESS: Castlewood

COUNTY LAND LOCATED IN: Harlin PHONE: 9

TENANT'S NAME AND ADDRESS: _____

In accordance with State Law SDCL 46-5-6.5, if a water permit is granted with a condition: Soil/Water Compatibility permit, A COPY OF SUCH CONDITIONAL SOIL/WATER COMPATIBILITY PERMIT MUST BE FILED WITH THE COUNTY REGISTER OF DEEDS. THIS ACTION MUST BE TAKEN BY THE HOLDER OF A WATER PERMIT WITHIN 6 MONTHS OF RECEIPT OF SUCH WATER PERMIT.

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

1. WELL LOCATION 300' S of Center of NE Corner Sec 20 - 114 - 51

2. SURFACE WATER SOURCE AND DIVERSION LOCATION: _____

Legal Description	Acres	Legal Description	Acres
N $\frac{1}{2}$ SE $\frac{1}{2}$ 20-114-51	10		

3. SHOW ANY PORTION OF LAND THAT PRESENTLY HOLDS AN IRRIGATION PERMIT: YEAR OBTAINED 1968

LEGAL DESCRIPTION: SE $\frac{1}{4}$ of Sec 20 - 114 - 51

IN WHAT NAME: Lewis Menninger

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

5. TYPE OF IRRIGATION: GRAVITY: _____ TOWLINE: _____ CENTER PIVOT: X GUN: _____ OTHER: _____ (Specify)

6. CROPS TO BE IRRIGATED: _____

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

7. WATER SAMPLE NUMBER: 82-0854

8. SALINITY (EC X 10⁶): 2506 580

9. SODIUM (SAR): 0.85 0.24

10. ADJUSTED (SAR): 3.39 0.57



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 _____ a.m./p.m., on _____ 1982, at the following location: _____ 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.

I understand that the Division of Conservation or agents thereof may obtain another water sample for the purpose of validating the water sample analysis taken at the time of application (SDCL 46-5-6.4).

SUBSCRIBED AND SWORN BEFORE ME THIS

7 DAY OF July, 1982

(NOTARY PUBLIC)

APPLICANT'S SIGNATURE

Director, Division of Conservation

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.

APPROVED

DISAPPROVED

CONDITIONALLY APPROVED

REC. MGMT/FORM

CONDITIONAL

#3086

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
DIVISION OF CONSERVATION

NAME OF APPLICANT: Lewis Hennenga

LEGAL DESCRIPTION: N $\frac{1}{2}$ SEC 20-114-51 = 10 acres

SOIL RESTRICTIONS:

THE SOIL(S) LISTED BELOW CANNOT BE IRRIGATED:

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

SE 1/4 SEC 20-114-51

100% Alluvial

RECOMMENDED MANAGEMENT:



Tom M. Felt
SIGNATURE

DATE

123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100
JUN 1962
DIVISION OF
WATER RESOURCES
PITTSBURGH, PA.



WATER LICENSE NO. 2744-3

(1) WHEREAS, On the 26th day of April A. D. 19 72
Lewis Hennenga

made Water Right Application No. 2744-3 for a permit to use 2.0 cubic feet per second of the water
of groundwater (on a well)

County of Hall State of South Dakota, for irrigation
purposes; and

(2) WHEREAS, On the 20th day of May A. D. 19 81

Permit No. 2744-3, with a date of priority of April 26, 1976

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 20th day of May A. D. 19 81 and for the
application to beneficial use of said water on or before the 20th day of May A. D. 19 84

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 1.74 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,

for irrigating a 132 acre circle in the NE 1/4 Section 20, T114N, R51W comprising
a total of 122 acres.*

* Pivot center is located 300' S of Center of the quarter, so pivot extends 300'
into the SE 1/4 of Section 20. The SE 1/4 is covered under Permit No. 1475-3 also owned
by Hennenga which results in a 10 acre overlap between the two permits.

(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 _____

Lewis Hen

of Castlewood, South Dakota

the holder _____ and owner _____ of said permit No. 2744-3 a water right, dating from April 26, 1976

_____ to use of 1.74 cubic feet per second of the waters of groundwater (one well)

in the County of Hamlin and State of South Dakota, or so much thereof as may be necessary for the purposes hereinbelow mentioned, to be diverted at a point 30015 of the Center NE1, Section 20, T114N, R51W.

and conducted to and upon a 132 acre circle in the NE1, Section 20, T114N, R51W

for the purpose of irrigation

Subject to any limitations listed in Water Right Permit No. 2744-3 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota

this 14th day of June A. D.

Nineteen Hundred and Eighty-Two

WATER MANAGEMENT BOARD

By:

John Hatch

Chief Engineer, Executive Officer

JOHN HATCH

Permit No. 2744-3

Water Diversion No. 3 Big Sioux River Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That Lewis Hennenga

the holder _____ of

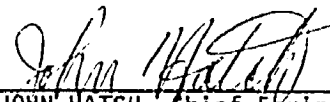
Permit No. 2744-3, issued upon Application No. 2744-3, bearing date of priority of April 26, 1976

authorizing the diversion of 2.0 cu. ft. per second of the waters of _____
groundwater (one well) County of Hamlin, State of South Dakota at _____
a point 300'S of the Center NE¼, Section 20, T114N, R51W

for irrigation

purposes, has S 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 1.88 cu. ft. per second of water.

Date June 14, 1982



JOHN HATCH, Chief Engineer
Water Rights Division



2744-3

WESTERN REAL ESTATE AGENCY

1311 9th Ave. S.W.
(West Hwy 212)
Watertown, SD 57201

Telephone
Bus. (605) 686-7504
Res. (605) 682-2268



Watertown, So. Dak.
March 7, 1988

Water Resources Commission
State Office Building
Pierre, South Dakota 57501

Gentlemen:

Please be advised the following legal description:

E 1/2 of Sec 20 R-114 No 51 W Dempster Township & NW 1/4
of Sec 21 R-114 No 51 W. All in Hamlin County, So. Dakota,
which was previously owned by Louis Mennenga, 107 7th St. N,
Estelline, So. Dak., 57234 - now owned by Randy Hanson,
3205 NE 1st 2nd Ave, Vancouver, Washington, 98682.

Please transfer these Permits accordingly.

Thanking you,

Sincerely,

Dean Urban
WESTERN REAL ESTATE



Department of Water & Natural Resources

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

March 8, 1988

1475-3
2028-3
2744-3

Randy Hanson
3205 NE 182nd Ave
Vancouver, WA 98682

Dear Mr. Hanson:

I am contacting you with regard to ownership of Water Right Nos. 1475-3, 2028-3 and 2744-3. Dean Urban with Western Real Estate Agency in Watertown, SD has notified our office that you purchased land in Hamlin County from Lewis Mennenga.

Since you now own the land authorized for irrigation under these water rights, they will need to be transferred to your name. Enclosed are partially completed "Notice of Transfer" forms for use in filing an ownership change on Water Right Nos. 1475-3, 2028-3 and 2744-3. Please check over the forms and sign them in the presence of a notary public. Upon completion of the forms, return them to our office with a required filing fee of \$2.50 each (total of \$7.50). The water rights will then be transferred to your name.

South Dakota Water Law 46-54-30.3 requires Notice of any sale, grant, lease, conveyance or other transfer of a Water Permit or Water Right to appropriate water to be filed with this office within ninety days.

If you have any questions, please contact us.

Sincerely,

Genny McMATH

GENNY MCMATH
Natural Resources Analyst
605 773-3352

encl

NOTICE OF TRANSFER OF DIVISION OF WATER RIGHTS PERMIT



TO: Water Rights
Foss Building
Pierre, SD 57501

Date: 4/22/88

This is to notify you that the title to the lands described as follows:

132 acres - NE 1/4 Section 20, T114N, R51W

formerly owned by Lewis Mennenga, 107 7th St N, Estelline, SD

has been transferred to Randy Hanson, 3205 NE 182nd Ave, Vancouver, WA 98682

(please include complete mailing address)
together with any rights to the beneficial use of water thereon as evidenced by

Water Right Permit No. 2744-3 as provided for in SDCL 46-5-32 and 46-5-33.

You are therefore hereby requested to file this "Notice of Transfer of Water Permit" in its appropriate file at the Div. of Water Rights, Water Management Board as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents (\$2.50) is hereto attached to cover filing fees as required under SDCL 46-2-13.

WASH.
STATE OF ~~SOUTH~~ DAKOTA)
County of Clark) ss.

I, RANDY H. HANSON being first duly sworn on my oath depose and say:
That my relation to the above described undertaking is that of Owner, that I have read the above foregoing statement, and I know of my own personal knowledge that the information herein stated is true.

Randy H. Hanson
(Signed)

Subscribed and sworn to before me this 22nd Day of April, 1988.

Karen DePue
(Notary Public)

RECEIPT

Division of Water Rights
South Dakota Department of Water and Natural Resources

411232

Pierre, May 2, 19 88

RECEIVED OF Randy Hanson, 3205 NE 182nd Ave., Vancouver, WA 98682

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct works and to put water to beneficial use _____		
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. _____	2	50
Fee for Filing Transfer Form <u>2744-3</u>		
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	2	50

By John Hatch
Chief Engineer JOHN HATCH (MS)



Department of Water & Natural Resources

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

WATER RIGHTS DIVISION
(605) 773-3352

May 2, 1988

Randy Hanson
3205 NE 182nd Avenue
Vancouver, Washington 98682

Dear Mr. Hanson:

Enclosed are receipt Nos. 411232, 411233 and 411234 in the amount of \$2.50 each which you paid for transfer of Water Right Nos. 2744-3, 1475-3 and 2028-3.

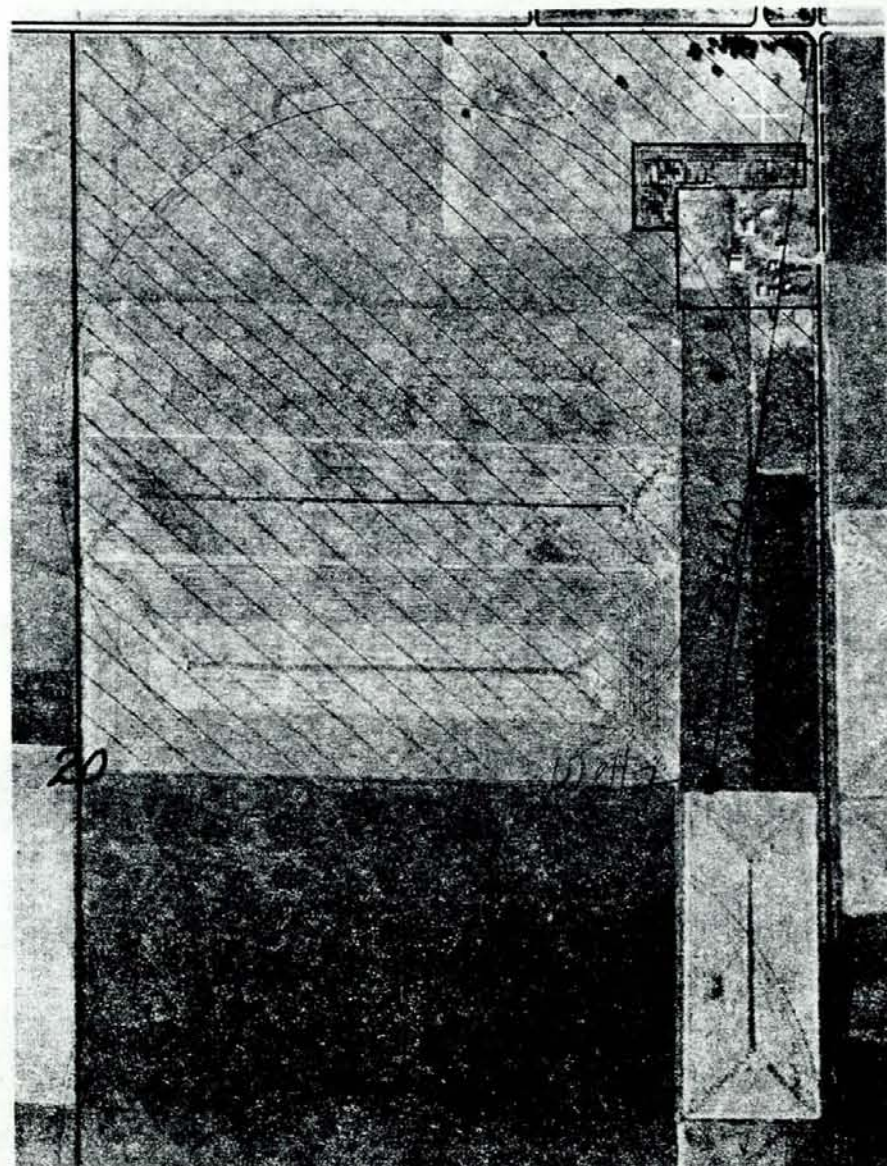
Our records now show you as the owner of these Water Rights.

Sincerely,

Maxine Stirling
Secretary

ms/
Enc. 3

CONSERVATION PLAN MAP
 PREPARED BY U. S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE
 COOPERATING WITH Hamlin CONSERVATION DISTRICT
 COUNTY _____ DATE 10/20/66
 OWNER/OPER. 5-2-38 — Oper. Lewis Mennenga
 PLAN NO. 320 APP. SCALE 8"/MI. PHOTO NO. 3-4140



LEWIS MENNENGA

Irrigation Project # 3

Castlewood 57223 S Dakota

Hamlin County

Water claimed - 2.0 cfs

Acres Irrigated 148

Point of Diversion - 2640' N 171° W

of NE Corner Sec 20-114-51

Scale - 8" = 1 Mile

SURVEYOR'S CERTIFICATE

I, John L. Wiersma, do hereby certify that this map identifies a reasonably accurate record of the project.

Lewis Mennenga

Castlewood

South Dakota

Drawn by John

PF # 128

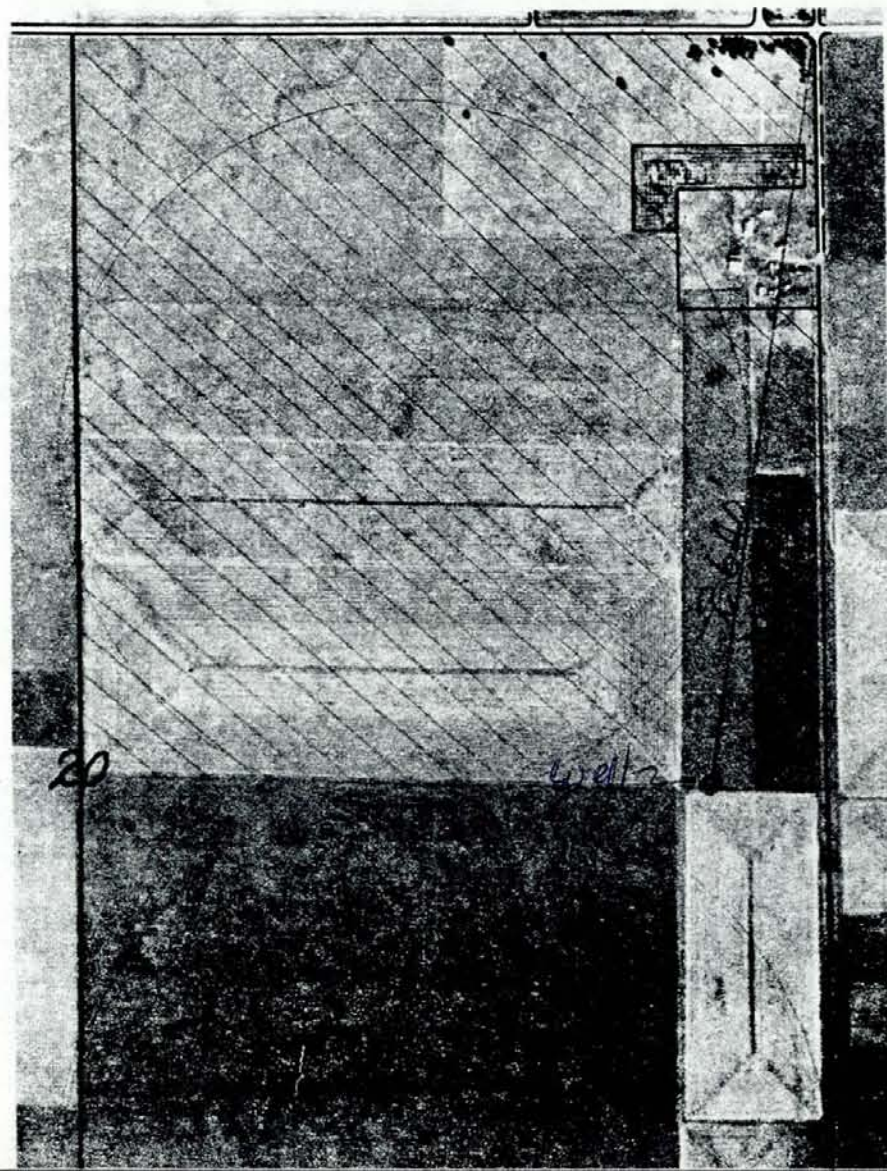
4-20-76

John L. Wiersma

Brookings

~~MAP NO. 210-3~~ APP. NO. 2744-3

CONSERVATION PLAN MAP
 PREPARED BY U. S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE
 COOPERATING WITH Hamlin CONSERVATION DISTRICT
 COUNTY _____ DATE 10/20/66
 OWNER/OPER. 5-2-38 — Oper. Lewis Mannaga
 PLAN NO. 320 AC. 320 APP. SCALE 8"/MI. PHOTO NO. 3-4140



LEWIS MENNENGA

Irrigation Project # 3

Castlewood 57223 S Dakota

Hamlin County

Water claimed - 2.0 cfs

Acres Irrigated 148

Point of Diversion - 2640' N 171° W

at NE Corner Sec 20-114-51

Scale - 8" = 1 Mile

SURVEYED BY _____

I John L. Wiessma, hereby certify that this map is a true and accurate record of the survey.

Lewis Mannaga

Castlewood 57223 S Dakota

Drawn by J.L.W. 4-20-76

John L. Wiessma

MAP NO. 21033 APP. 2744.3