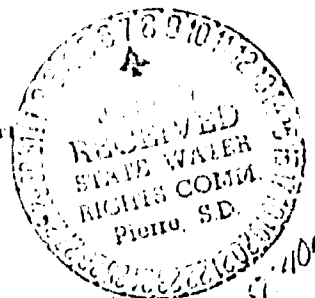


Water Right Number 1510-2

1. Considered 1-26, 19 77
2. Name of Applicant ELMER K. HORN
3. Post Office Address BURKE
4. Amount of water claimed 6.8
5. Source of water supply 3-78' DEEPWELLS & PUGOUT
6. Water to be used for IRRIGATION
- Acres to be irrigated 175
7. Water to be diverted and used in GREGORY County
about 2W Miles 1ST of BURKE
8. Proof of Publication Received 1ST 5-6-80
Not received _____
9. Application Approved _____
Subject to _____
Not approved _____
Action deferred _____

Remarks:

RECONSIDERED 5-25-74

No. 1510-2Map No. 1386-2 Water Division No. 2 PIONEER GREEN 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 Elmer K. Hove
Postoffice address Burke, State South DakotaIf a corporation show date and place of incorporation ----2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract3. Name of diversion work WOB #14. Amount of water claimed (cubic feet per second) 6.8 cfs.5. Source of water supply Irrigation well & dugout6. Location of point of diversion Well: NW $\frac{1}{4}$ of Sec 26, T97N, R72WWell: SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec 27, 97-72Well: SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of 27-97-72County Gregory7. Annual period or periods during which water is to be used Annually Jan. 1 to Dec. 31 APRIL THRU OCTOBER8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Irrigation9. For irrigation use, Total number of acres to be irrigated 475

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

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ 27-97-72	40	NW $\frac{1}{4}$ of SE $\frac{1}{4}$ 27-97-72	40
NE $\frac{1}{4}$ of NE $\frac{1}{4}$ 27-97-72	40	NE $\frac{1}{4}$ of SE $\frac{1}{4}$ 27-97-72	40
SE $\frac{1}{4}$ of NE $\frac{1}{4}$ 27-97-72	20	SE $\frac{1}{4}$ of SE $\frac{1}{4}$ 27-97-72	40
SW $\frac{1}{4}$ of NE $\frac{1}{4}$ 27-97-72	30	SW $\frac{1}{4}$ of SE $\frac{1}{4}$ 27-97-72	40

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 4 years. Additional time required to complete application of water to the proposed beneficial use 1 years.11. Choice of newspaper for Notice of Intent to Appropriate Water publications Burke Gazette

12. Principal Features of the Proposed Water Supply System

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

Irrigation wells & dugout

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

Pipeline

C. Works proposed to apply water to beneficial use.

Center Pivot & TowlineEstimated Total Cost \$ 190,000.00Attachments: 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 GregoryI, Elmer K. Hove, 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 constructionSigned Elmer K. HoveSubscribed and sworn to before me this 15 day of January 19 72Malvin Rudolph
Notary Public (or other qualified officer)

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 1510-2

ELMER L. HORN
(Applicant)

FURKE
(Post Office Address)

SOUTH DAKOTA 57525 With the following modifications:
(State)

This application is approved with the condition that such permit shall not be issued until the applicant has demonstrated to the satisfaction of the Board by a report of a qualified registered engineer or by other sufficient means that his proposed project is feasible and with the further condition attached: This permit will be located near domestic, municipal, 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 adequate domestic wells or in irrigation or municipal wells having prior water rights.

Date of first receipt of application JANUARY 7, 1977

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

Date of receipt of corrected application , 19

Approved AUGUST 13, 1979, Recorded in Book 21 Page 163

HEARD BEFORE THE BOARD MAY 25, 1979
WATER RIGHT PERMIT NO. 1510-2

The Water Rights Commission hereby grants and issues this Water Right Permit No. 1510-2 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 MAY 6, 1980
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before AUGUST 13, 1981
3. The whole of said work is to be completed on or before AUGUST 13, 1983
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is AUGUST 13, 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 6.8 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 AUGUST 13, 1984; said water to be used during the following described annual period: APRIL THRU OCTOBER

Witness my hand this 12th day of MAY, 1980

WATER RIGHTS COMMISSION

By:

John Hatch
Chief Engineer, Executive Officer

Certificate of Construction Issued , 19

Water License Issued , 19

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 53'
(2) Casing, Type Concrete Diameter 20" Thickness 3"
(wood, concrete, steel, etc)
(3) Perforated Screen.
Type Four Concrete Diameter 20" Length 20'
(4) Gravel Pack, Thickness 3", Length of gravel pack 46'

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 & mag layers

Depth to top of water bearing material 4'

Depth to bottom of water bearing material 53'

Thickness of water bearing material 49'

Depth to water (ground surface to water level) 12'

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

On same owner's property _____ rds. On property owned by others _____ 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.

Oliver K. Horn
Signature of Applicant

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 Concrete, Diameter 20", Thickness 2"
(wood, concrete, steel, etc)
(3) Perforated Screen.
Type Porta Concrete, Diameter 30", Length 10'
(4) Gravel Pack, Thickness 3", Length of gravel pack 34"

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 & clay

Depth to top of water bearing material 11'

Depth to bottom of water bearing material 2.5'

Thickness of water bearing material 34'

Depth to water (ground surface to water level) 1'

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

On same owner's property _____ ds. On property owned by others _____ 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.

Olmar K. Kohn
Signature of Applicant

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 3 1/2", Depth 78'
(2) Casing, Type Concrete Diameter 30" Thickness 3"
(wood, concrete, steel, etc)
(3) Perforated Screen.
Type Form concrete Diameter 30" Length 40'
(4) Gravel Pack. Thickness 6" Length of gravel pack 72'

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 this well log if available.)

Character of Water bearing materials coarse sand, med. pebbles
fine sand

Depth to top of water bearing material 6'
Depth to bottom of water bearing material 76'
Thickness of water bearing material 70'
Depth to water (ground surface to water level) 6'

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

On same owner's property _____ rds. On property owned by others _____ 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.

E. Bruce K. Hawn

Signature of Applicant

CONSERVATION
COMMISSION
FORM W1 #1

STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SDCL 46-5-3 AS AMENDED
(THIS FORM REQUIRED FOR PROPOSED GROUND WATER IRRIGATION)



NAME Elmer K. Horn
ADDRESS Bucke S. Dak 57533
COUNTY Gregory

LEGAL DESCRIPTION

1. WELL LOCATION NW 40A of NE 1/4 of 26-97N-72W
2. LOCATION OF AREA TO BE IRRIGATED NE 1/4 of 27-97N-72W

TYPE OF IRRIGATION

3. GRAVITY TOWLINE CENTER PIVOT ☒ GUS
4. CROPS TO BE IRRIGATED Alfalfa & Corn

WATER QUALITY

5. SAMPLE NUMBER 76-551
6. SALINITY (EC X 10⁶) 467 (medium)
7. SODIUM (SAR) 0.50 (low)
8. RESIDUAL SODIUM CARBONATE (meq/l.)



I do hereby certify that a chemical analysis of the ground water representative of that used to irrigate shall be acquired from South Dakota State University and; the soils information has been acquired from Gregory County Conservation District, County Extension office or Soil Conservation Service.
and:
that the legal description for the location of the well and land to be irrigated is true and correct.

Elmer K. Horn
APPLICANT'S SIGNATURE

SUBSCRIBED AND SWORN BEFORE ME THIS
21 DAY OF MAY 1976.

Melvin D. Steward

(TITLE OR SEAL)
Register of Deeds

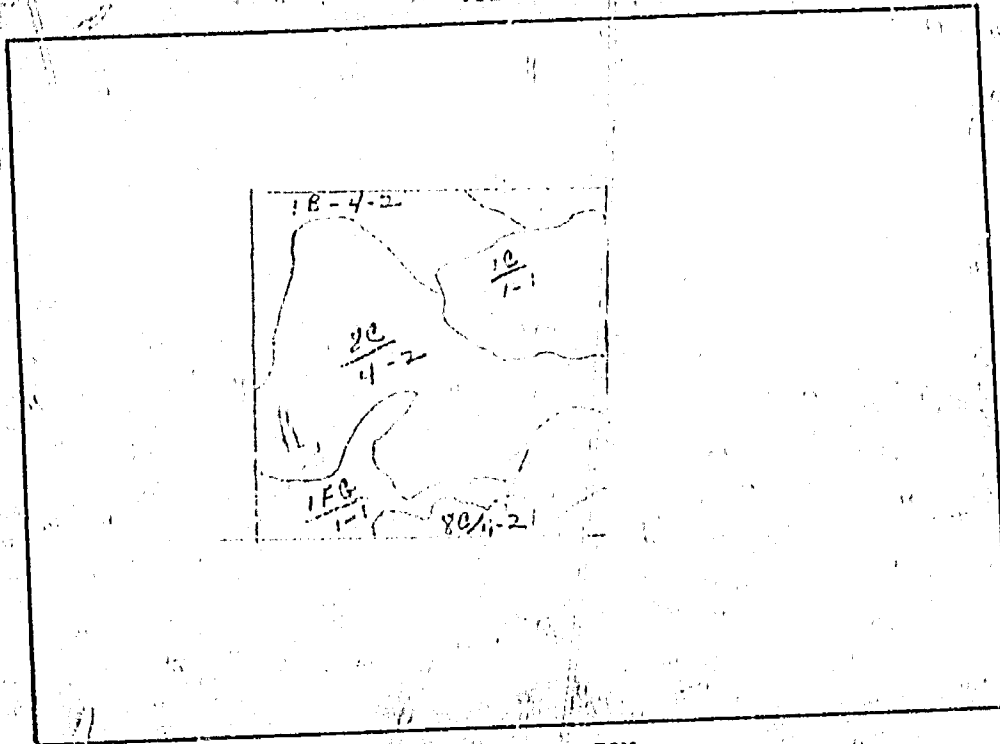
GREGORY COUNTY
BURKE, S. DAK

(SOILS INFORMATION ON REVERSE SIDE)

Alfred J. [Signature]
APPROVED BY APPROVER

Elmer Horn

MAP



NE 1/4 27 - 97N - 72W

NARRATIVE

1B
4-2

Tuthill loam

11e1-Deep and moderately deep, loamy soils on gently sloping (2 to 6%) uplands. They have moderate wind and water erosion hazard.

8C
4-2

Anselmo fine loamy sand

11le8-Deep and moderately deep, moderately sandy soils on gently undulating (2 to 6%) uplands and eroded phases of these soils on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

1C
1-1

Jansen

11ls2-Soils with 20 to 40 inches of loamy material over sand and gravel on nearly level (0 to 2%) uplands. The porous substrate limits water storage capacity and rooting depth. These soils have a moderate wind erosion hazard.

1FG
1-1

Holt silt

11lw5-Deep, moderately sandy, somewhat poorly drained soils on flood plains and in slight depressions. These soils have seasonal water tables. Tillage and choice of crops may be affected by wetness. These soils have moderate to severe wind erosion hazard.

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

Submitted by: Elmer K. Horn Date Rec'd: May 24 1976
 Address: Furke, SD 57253 Sample No. 76-551
 Identification: Well-78
NW 1, Sec. 26, T 92N, R 72W

WATER ANALYSIS

Calcium (Ca)	68	ppm*	3.40	me/l**
Magnesium (Mg)	7	ppm	0.57	me/l
Sodium (Na)	16	ppm	0.70	me/l
Potassium (K)	11	ppm	0.29	me/l
Sulfate (SO ₄)	31	ppm	0.64	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	14	ppm	0.30	me/l
Bicarbonate (HCO ₃)	215	ppm	3.52	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)	176	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	457	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.50			
Sodium	14.11	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	6.94			
Others:				

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

COMMENTS: Total cations 4.96 me/l
 Total anions 4.55 me/l

By: Shirley Kistner

Service Performed	Amount Due
Irrigation analysis	\$8.00 PAID

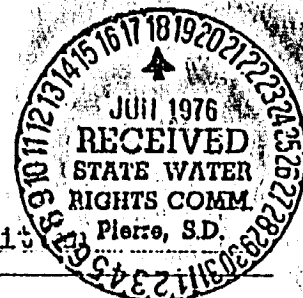
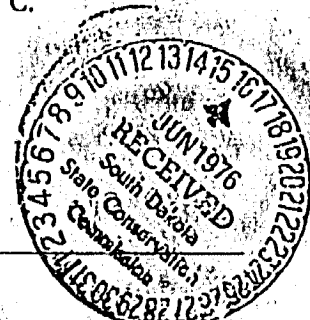
Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-551

Amount Enclosed \$

Signed



	Land Description	No. Acres Irr.
SE $\frac{1}{4}$ of NW $\frac{1}{4}$	27-97-72	40
SW $\frac{1}{4}$ of NW $\frac{1}{4}$	27-97-72	25
NW $\frac{1}{4}$ of SW $\frac{1}{4}$	27-97-72	40
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	27-97-72	40
SE $\frac{1}{4}$ of SW $\frac{1}{4}$	27-97-72	40

Form 6 - Notice of Intent to Appropriate Water

No. 1510-2

Publish first publication, on or before January 13, 1977

NOTICE
INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501

January 7, 1977

Notice is hereby given that Elmer K. Horn
whose post office address is Burke, 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
6.8 cubic feet of water per second of time from to ground water through the
Horn #1 the point of diversion of which is to be located in the

NW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 26; Center of the SE $\frac{1}{4}$ and SE $\frac{1}{4}$ SW $\frac{1}{4}$

of Section 27, Twp. 97N, Range 72W. Said water to be used for the purposes
of providing irrigation on the following described land:

E $\frac{1}{2}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$, Section 27, T97N, R72W

This application No. 1510-2 will be considered by the Water Rights Commission at their office at
Pierre upon the 26th day of January, 1977, at 10:00 A. M. All interested
persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

BURTON F. JONES
Water Rights Specialist

BFJ/bw
cc:

Elmer K. Horn, Burke, S.D. 57523

City of Burke

BURKE, SOUTH DAKOTA 57523

January 25, 1977

OFFICE OF THE MAYOR

South Dakota Water Rights Commission
Joe Foss Building
Pierre, South Dakota 57501

Gentlemen:

The purpose of this letter is to protest, on behalf of the people of the City of Burke, South Dakota, the water rights applications of Joe Kiwan (App.# 1486-2) and Elmer Horn (App.# 1510-2). We feel that if these applications are approved and implemented, the result would be a further lowering of our water table. This would adversely affect our ability to supply adequate water to our population.

At the present time we are pumping approximately 380 total gallon per minute from our five wells and this has resulted in a drop of 8 to 10 feet in the static water level over the past two years. Our City Supt. of Utilities has kept draw-down records to verify this and they are available for public inspection.

While we can understand the need for water that exists for local farmers and ranchers, we feel that it is in the best interests of the people of the City of Burke to ensure them an adequate water supply. Therefore, we strongly urge that the above-mentioned water rights applications be denied. Thanks for your consideration.

Respectfully,



Rod Hartog
Mayor
City of Burke
Burke, South Dakota

To: South Dakota Water Rights Commission
Joe Foster Building
Pierre, South Dakota

From: Gregory County Rural Land Owners

Re: Water Rights Applications # 1486-2
and 1510-2

We submit the following petitions for your review. These petitions urge that the water rights applications of Joe Kirwan (App.# 1486-2), Gregory, South Dakota and Elmer Horn (App.# 1510-2), Burke, South Dakota be denied because of the adverse effect these proposed water projects would have on the water table in our area.

Thank you for your consideration of these petitions.

We the undersigned landowners and affected persons residing in Gregory County, South Dakota, strongly oppose the application to appropriate water covered by application No. 1510-2 of Elmer K. Horn, whose post office address is Burke, South Dakota, and strongly recommend the South Dakota Water Rights Commission disallow the before said water permit to appropriate 6.8 cubic feet of water per second.

[illegible]

We the undersigned landowners and affected persons residing in Gregory County, South Dakota, strongly oppose the application to appropriate water covered by application No. 1510-2 of Elmer K. Horn, whose post office address is Burke, South Dakota, and strongly recommend the South Dakota Water Rights Commission disallow the before said water permit to appropriate 6.8 cubic feet of water per second.

[illegible]

GREGORY COUNTY
WATER RIGHT APPLICATIONS
(T97N R72W)
May 4, 1979

INTRODUCTIONS:

The study area reviewed for this report is located in T97N, R72W and W3 T97N, R71W in an area from Gregory SD to Burke SD. Observation well data for wells GY77A, GY77B, and GY78A and three Geological Survey reports provided the basic data for preparation of this report.

The three Geological Survey reports are entitled; Special Report 18, Water Supply for the City of Burke, by Cleo Christensen dated 1962; Special Report 49, Ground-Water Investigation for the City of Gregory by Assad Barari, dated November 1969; and Ground-Water Study for the City of Gregory, by Carl Cripe and Assad Barari, dated September 1977.

The water right applications under consideration at this time are as follows:

No.	Applicant	Use	Priority Date
1486-2	Joe Kirvan	Irrigation	January 3, 1977
1510-2	Elmer Horn	Irrigation	January 7, 1977
1622-2	City of Gregory	Future Use	January 13, 1977
1660-2	City of Burke	Future Use	February 1, 1977
1661-2	City of Burke	Municipal	April 7, 1977 & August 11, 1977

DISCUSSION:

Logs are available for 159 auger test holes and 37 rotary test holes which were drilled for the special studies. The logs indicate the primary water bearing formation consists of a fine to medium sand containing varying amounts of clay under water table conditions. The thickness of saturated material and the clay within the sand varies very rapidly making it impractical to draw a potentiometric map (see graphs 1 & 2).

In areas where the sand is of medium grain sized, clean (less clay), and has a significant (more than 30 feet) saturated thickness, a high capacity well can be installed. The wells will probably produce a maximum of 100 to 125 gpm again depending on saturated thickness and characteristics of the formation.

The Division of Water Rights presently has three observation wells in the study area. Two (GY77A and GY77B) are in the vicinity of the irrigation applications and one (GY78A) is located south of Burke.

Well	Location	Depth	Water Level	
			Lowest	Highest
GY77A	SE 27 T97N R72W	57 ft	8.5 ft	5.0 ft
GY77B	SE 21 T97N R72W	53 ft	17.0 ft	15.6 ft
GY78A	NE 26 T56N R71W	125 ft	56.6 ft	56.0 ft

Hydrographs have not been developed for the wells because of the limited length of time data was available (approximately one and a half years). The fluctuations are seasonal in nature with high water measurements in spring and low measurements during the summer. The wells are located where they will provide a check on high production well output.

CONCLUSIONS:

Water is available for appropriation, but due to the rapidly varying formation and the lack of information concerning transmissivity and storage coefficient an accurate value for transient storage cannot presently be determined.

The observation wells do exist to provide information concerning water levels.

High capacity wells should not be expected to produce more than 125 gpm.

RECOMMENDATIONS:

1486-2, Joe Kirwan

Project proposes to irrigate 300 acres in the NW $\frac{1}{4}$ and NE $\frac{1}{4}$ Section 34, T97N, R72W from two wells located in the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ and SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 34, T97N, R72W with a withdrawal rate of 4.3 cubic feet per second. The staff recommends approval of 1486-2 with the following clause:

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 adequate domestic wells.

1510-2, Elmer K. Horn

Project proposes to irrigate 475 acres located in the NE $\frac{1}{4}$; SE $\frac{1}{4}$; S $\frac{1}{2}$ of NW $\frac{1}{4}$ and NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ of SW $\frac{1}{4}$, Section 27, T97N, R72W from three wells and a dugout located in the NW $\frac{1}{4}$ Section 26, T97N, R72W; SW $\frac{1}{4}$ of SE $\frac{1}{4}$ Section 27, T97N, R72W and SE $\frac{1}{4}$ of SW $\frac{1}{4}$, Section 27, T97N, R72W with a withdrawal rate of 6.8 cfs. The staff recommends approval of 1510-2 with the following clause:

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 adequate domestic wells or in irrigation wells having prior water rights.

1622-2, City of Gregory

Application is for 1.5 cfs in a future use area with the following descriptions: NW $\frac{1}{4}$ Section 8; S $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 5; C $\frac{1}{2}$ SE $\frac{1}{4}$ Section 6; NE $\frac{1}{4}$ Section 7; SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 16; SE $\frac{1}{4}$ Section 17; SE $\frac{1}{4}$ Section 21; SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 22; N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 27; N $\frac{1}{2}$ N $\frac{1}{2}$ Section 26; all in T97N R72W. Because part of this request is for lands covered under application 1510-2, the staff recommends approval of the application with the following land descriptions being deleted N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 27 and N $\frac{1}{2}$ N $\frac{1}{2}$ Section 26, T97N, R72W, also with the condition that before any construction can proceed, a water right permit must be obtained for each project.

1660-2, City of Burke

Application is for 2.14 cfs in a future use area with the following land description: Section 23, S $\frac{1}{2}$ N $\frac{1}{2}$ and S $\frac{1}{2}$ Section 26, Section 35, T97N, R72W. The staff recommends that the Commission approve this application but limit the land area to the S $\frac{1}{2}$ Section 26 and Section 35, T97N, R72W, also before any construction can commence a water right must be obtained for a specific project.

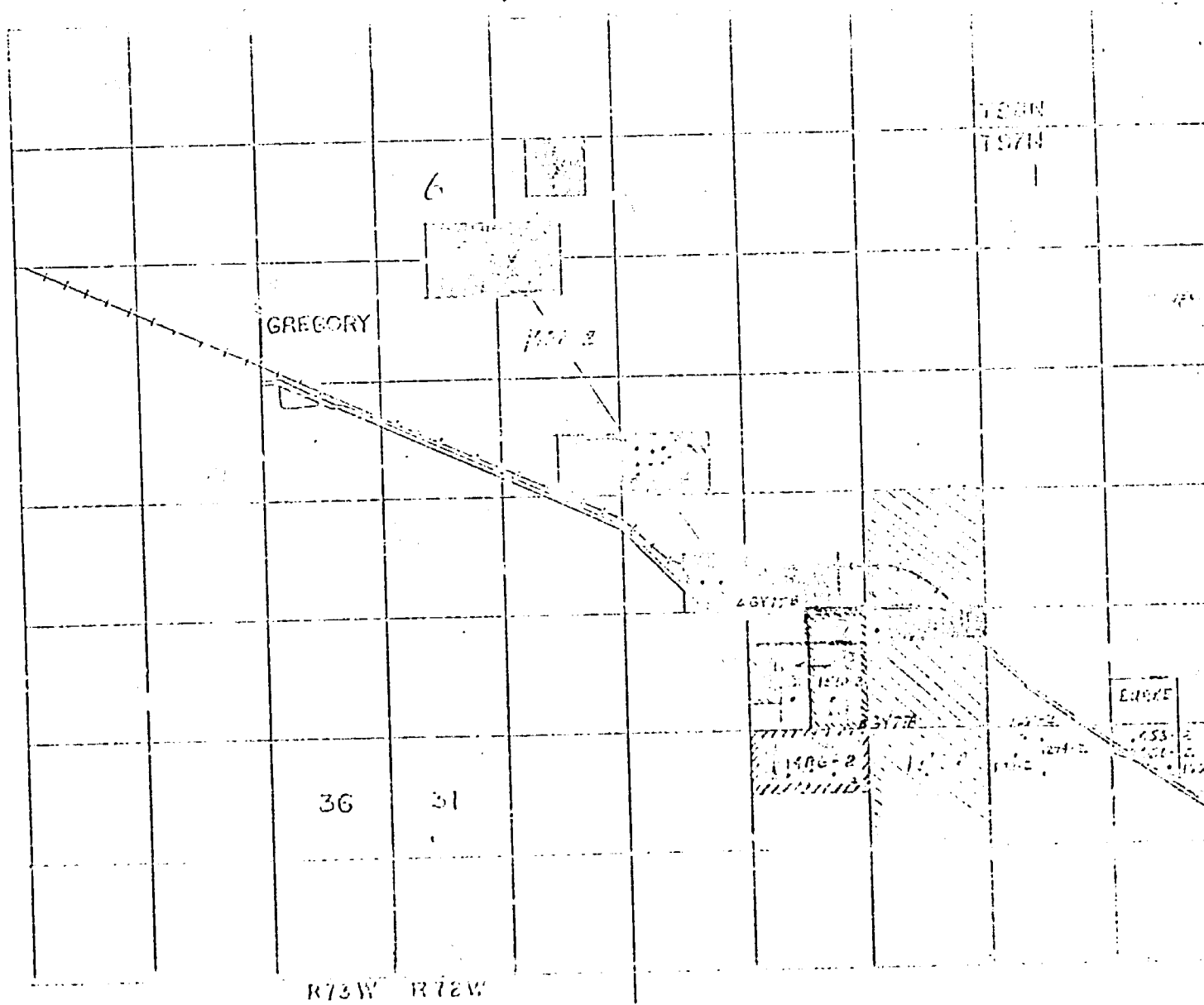
1661-2, City of Burke

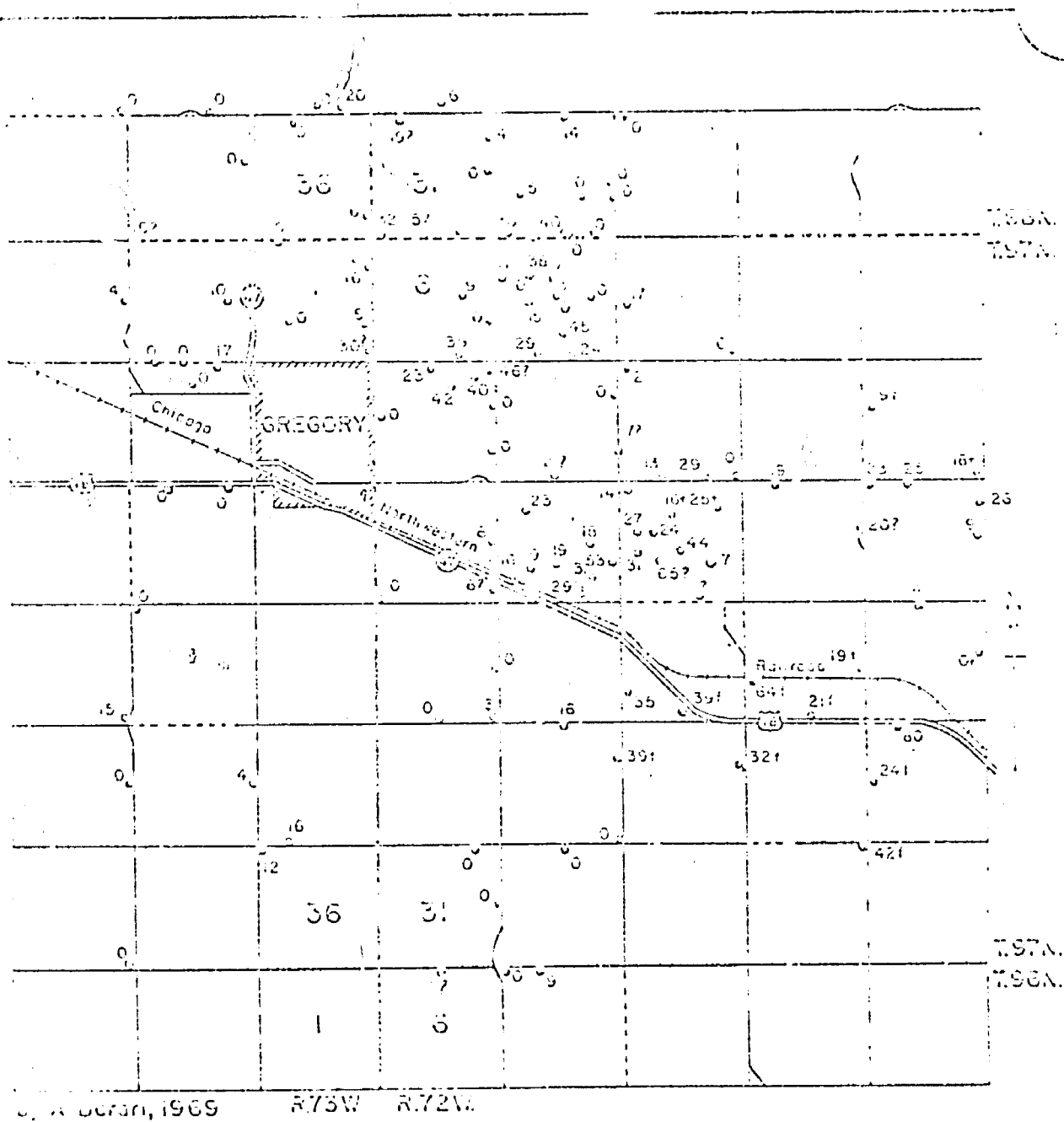
Application is for municipal use of groundwater from SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 31, T97N, R71W and NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36, T97N, R72W with a combined diversion rate of 0.56 cfs. The staff recommends approval of 1661-2 with the following conditions:

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

Respectfully submitted to the Water Rights Commission for consideration at the May 1979 meeting.

GALE N. SELKEN, Hydrologist
Water Rights Commission

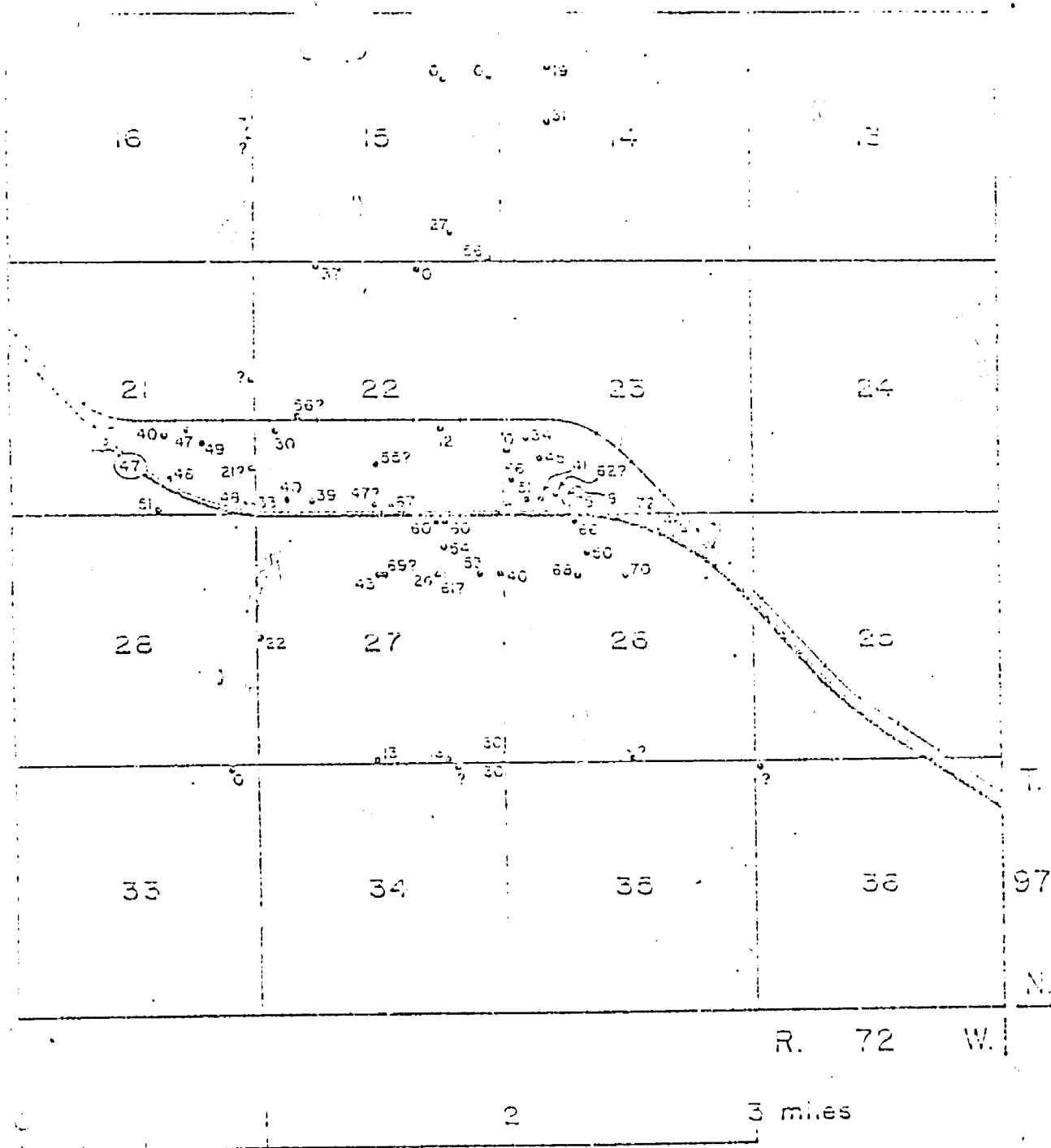




EXPLANATION

- 30 Test hole showing thickness of saturated sand.
- 2410 Saturated thickness of fine sand.

Figure 5. Map showing thickness of saturated sand in the Gregory area.



56. Test hole - number indicates thickness of saturated sand, in feet.

Figure 3 Map showing approximate thickness of saturated sand in the Gregory area.

10.2

10.2



Department of Natural Resource Development

WATER RIGHTS COMMISSION
Joe Foss Building, Pierre, South Dakota 57501
Phone 605/773-3151

May 9, 1979

TO: Persons Concerned with Deferred Applications in Gregory County
FROM: John Hatch, Chief Engineer, Water Rights Commission
SUBJECT: Reconsideration of Deferred Applications

The Water Rights Commission will reconsider deferred water right applications in Gregory County at 9:30 a.m., May 25, 1979, at the Lincoln Room, Howard Johnson Motel, 2211 Lacrosse, Rapid City SD.

This reconsideration hearing will be conducted in accordance with the provisions of SDCL 46-1-1 thru 46-1-9; 46-1-14; 46-2-9 thru 46-2-11; 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22; 46-5-41; 46-6-3; 46-6-5; 46-6-6.1; 46-6-10; 46-6-3.1; 46-6-14 and Commission Rules ARSD 52:01:01:01 thru 52:01:01:13.

These applications were previously deferred by the Water Rights Commission, pending staff investigation.

After reconsideration of the deferred applications the Commission can approve, conditionally approve, defer, or deny all or part of the Application.

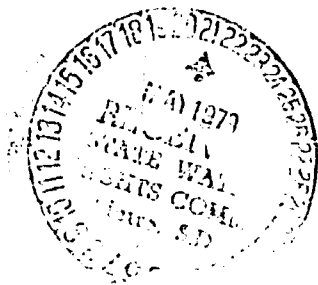
This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Commission may be appealed to the Courts as provided by law.

Very truly yours,

A handwritten signature in dark ink, appearing to read "John Hatch". The signature is written in a cursive, flowing style.

JOHN HATCH, Chief Engineer
Water Rights Commission

JH:kjw

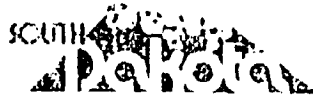


There was a petition circulated
sometime ago concerning this
irrigation permit to stop it. The
attitude of those people signing the
petition has not changed one bit.

I definitely am against it, because
knowing Elmer Horn, he will never
in no way abide by the above
clause, unless there is a state man
standing over

Why don't you check this out before
issuing this permit? Horn could care
less if the aquifer dropped, as long as
he had water.

Thank You,
Viola E. Bohart
Box 132
Burke, S. D. - 57523



Department of Natural Resource Development

WATER RIGHTS COMMISSION
Joe Foss Building, Pierre, South Dakota 57501
Phone 605/773-8151 3352

June 13, 1979

Joe Kirwin
Gregory, SD 57533
1486-2

City of Gregory
Gregory, SD 57533
1622-2

Elmer K. Horn
Burke, SD 57523
1510-2

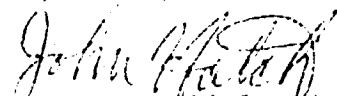
City of Burke
Burke, SD 57523
1660-2 & 1661-2

Gentlemen:

The Water Rights Commission requested that proposed Findings of Fact, Conclusions of Law and a proposed Decision concerning approval of Permits No. 1486-2, 1510-2, 1622-2, 1660-2, and 1661-2 be prepared. At this time, we do not know when the next meeting will be scheduled since the Governor's Reorganization abolished the Water Rights Commission with a new Water Management Board to be appointed effective July 1, 1979. Following the appointment of the new Board, a meeting date will be set and Findings, Conclusions and a Decision will be considered at that time.

Assistant Attorneys General will prepare the requested documents; however, each of you may prepare or have your attorney prepare proposed Findings, Conclusions, and Decision if you wish. We will notify you when the next meeting is scheduled.

Very truly yours,


JOHN HATCH, Chief Engineer
Water Rights Commission

JH/gy

cc: John Smith, Assistant Attorney General
Clark Horn
Tom Fischer
Larry Hanson
Richard Bailey
Dave Leibel
Henry Sattler
Ivan Vosila
Jack Gunvordahl, Attorney

1510-



Department of Water & Natural Resources

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

July 23, 1979

TO: Persons concerned with groundwater permits in Gregory County

FROM: John Hatch, Chief Engineer, Water Rights

SUBJECT: Consideration and Adoption of Final Decision to include Findings of Fact & Conclusions of Law on Approval of Permits listed below.

The Water Rights Commission requested that proposed Findings of Fact, Conclusions of Law and a Proposed Decision regarding action taken on the following permits be prepared:

1476-2 Joe Kirwin	1660-2 City of Burke
1510-2 Elmer Horn	1601-2 City of Burke
1622-2 City of Gregory	

The Board of Water Management will meet in Pierre SD, August 3, 1979, at the Civil Defense Room, Capitol Building. We have placed consideration of the proposed Findings of Fact, Conclusions of Law and Decision on the agenda for 1:00 p.m., August 3, 1979.

This hearing will be conducted in accordance with the provisions of § 46-1-1 thru 46-1-9; 46-1-14; 46-2-9 thru 46-2-11; 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22; 46-5-41; 46-6-3; 46-6-5; 46-6-6.1; 46-6-10; 46-6-13.1; 46-6-14 and Board Rules ARSD 52:01:01:01 thru 52:01:01:13.

All parties may submit or mail proposed Decisions, Findings and Conclusions to the Board members (mailing addresses enclosed) prior to consideration by the Board, if they wish.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights, WMB

Equal Opportunity Employer

JH:kw

Enclosure

Burke, South Dakota
July 31st.

This is in response to our Water Rights Application 1510-2

Because of the situation here at home with the harvest and the haying operation it may not be possible for any of us to attend this meeting in Pierre. However, we do not want it to go unnoticed nor are we ignoring it.

If you will look at the past history of this application you will find that there has been protest upon protest. You will also find that the City of Gregory has applied for water rights on this land--in fact within two miles of the City of Burke. We are situated six and one-half miles east of Gregory and two and one-half miles west of Burke--between the two towns and highway #18 runs right by our home.

Gregory has been in the business of selling water to the outlying farms and individuals east of Gregory for some time. They also have five private pools in the town as well as the public pools and yet continue to grab for more water. We had applied just prior to Gregory for our permit, but they also applied and according to the action in Rapid City denied the portion that was our land.

Now at the meeting in Rapid in the spring there were four neighbors of ours who were loud and very verbal in protesting our permit. These same individuals have again stirred up the entire area and will no doubt be there in force again. According to one engineer the first petition they sent in had signers on it that should not have signed. The same thing was the case last spring and I'm sure that will be the case again. It seems that the findings of the geologists should be conclusive that there is water here and plenty of it. It would seem to us that the allegations of these protestors should be proven instead of just making a lot of noise for the sake of protesting. One of these fellows told Elmer last week that he thought his well as going dry already. We have heard that for years and yet these big dairy operations seem to survive. If these wells are going dry that certainly proves we have nothing to do with it as we haven't had a chance to irrigate yet.

Since you are a new board and may not have had the opportunity to acquaint yourselves with this application we hope you look closely at the findings of the engineers and the work that has been done. This protest takes on the nature of "if I can't do it you don't need to either".

Thanking you for your consideration, we are

Elmer & Evelyn Horn

P.S. Carbone were sent to each member, but maybe for some reason they weren't delivered on time. Would you please make them deliverable to the Board members in case they didn't receive theirs.

STATE OF SOUTH DAKOTA
WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICATION OF ELMER HORN FOR PERMIT TO APPROPRIATE NO. 1510-2	)))	FINAL DECISION
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This matter was brought on for hearing before the Water Rights Commission on May 25, 1979, on the application of Elmer Horn for Permit to appropriate No. 1510-2. The applicant, Elmer Horn, appeared in person, opponents to the application appeared in person and through their attorney, Jack Gunvordahl, and the Department of Natural Resource Development appeared through the Chief Engineer of the Water Rights Commission, John Hatch, and its attorneys, John J. Smith and John P. Guhin, assistant attorneys general. Having served the proposed decision upon the parties and having provided an opportunity to each party to file Findings of Fact and Conclusions of Law, to file exceptions, and to file briefs and to present oral argument to the Board, and the Board having fully considered all such submissions, the Board hereby makes its final decision consisting of the following:

FINDINGS OF FACT

1. Application No. 1510-2 was received by the Water Rights Commission on January 7, 1977. The application proposes the diversion of 6.8 c.f.s. of water from a dugout and three wells of varying depths to be located in the NW $\frac{1}{4}$ of Section 26 and the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ and the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 27, all in Township 97 North, Range 72 West, Gregory County, South Dakota, for irrigation of 475 acres.
2. Application No. 1510-2 was originally advertised for hearing at the January 26, 1977 commission meeting. At that time the commission deferred consideration of the application pending further staff investigation. A petition in opposition to the application signed by thirty-four persons residing in the general vicinity of the proposed wells and dugout was received

by the commission prior to the meeting. On May 9, 1979, notice of the reconsideration hearing to be held on May 25, 1979, was sent to all persons whose names appeared on the petition in opposition to the application and to all persons who appeared in opposition to the application at the January 26, 1979 hearing.

3. The formation from which the applicant proposes to divert water is a water table aquifer consisting of a fine to medium sand containing varying amounts of clay. The thickness of the saturated material of the aquifer and the clay within the water bearing sand varies very rapidly throughout the area. In areas where the sand is of medium grain size, is clean, and has a saturated thickness of 30 feet or more, high capacity wells could be operated which would probably produce a maximum of 100-125 gallons per minute. Because of these limitations on the aquifer's potential, the applicant's proposed wells and dugout should not be expected to produce water at the rate requested in the application.

4. The cities of Gregory and Burke and the farmers in the area obtain their water supplies from the same formation as would the applicant's proposed wells and dugout. Because of the low transmissivity of the water bearing material in the area, the cone of depression of the applicant's proposed wells and dugout should not be extensive and should not interfere with existing domestic and municipal uses.

5. The Division of Water Rights presently has two observation wells, GY77A and GY77B, in the vicinity of the applicant's proposed wells and dugout. Over the 1½ years since the observation wells were installed, the wells have shown seasonal fluctuations of no more than three feet. The water levels in the two observation wells will provide a means of monitoring any decline or fluctuation in aquifer water levels that may result from the applicant's proposed diversion.

6. Unappropriated water is available for appropriation by the applicant.

7. The applicant's proposed project is in the public interest.
8. The applicant has not adequately demonstrated at this time that his project is feasible given the indicated low yield of the formation in the area.

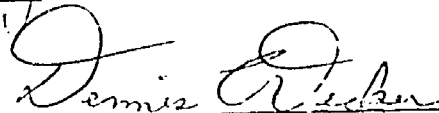
Wherefore the Board makes the following:

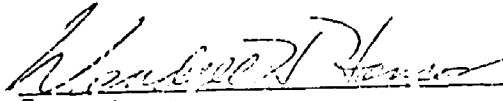
CONCLUSIONS OF LAW

1. All notices required by law have been duly given.
2. The Board has jurisdiction over the subject matter of this proceeding. The parties to this contested case are the applicant, Elmer Horn, the City of Gregory, the City of Burke, those persons whose names appear on the petition in opposition, and those persons who appeared before the commission in opposition to Application No. 1510-2.
3. Unappropriated water is available for appropriation by the applicant as requested in the application.
4. Application No. 1510-2 was submitted prior in time to the applications of the cities of Gregory and Burke, and it is therefore entitled to be approved prior to the consideration of the cities' applications and to hold a priority date superior to any permits issued the cities.
5. The applicant's proposed diversion should not interfere with existing uses.
6. The applicant's proposed project is in the public interest.
7. The applicant has failed to adequately demonstrate that the project as set forth in Application No. 1510-2 is feasible given the aquifer characteristics that the evidence showed prevail in the area.

8. The Board therefore ORDERS that Application No. 1510-2 be approved as Water Rights Permit No. 1510-2 with the condition that such permit shall not be issued until the applicant has demonstrated to the satisfaction of the Board by report of a qualified registered engineer or by other sufficient means that his proposed project is feasible and with the further condition attached: This permit will be located near domestic, municipal, 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 adequate domestic wells or in irrigation or municipal wells having prior water rights.

Dated this 13th day of August, 1979.


Chairman


Secretary

1510-7

SOUTH DAKOTA Department of
Water & Natural Resources
Joe Foss Building Water Rights, Water Management Division
Pierre, South Dakota 57501 (605) 773-3352

August 17, 1979

Elmer Horn
Burke SD 57523

Joe Kirwin
Gregory SD 57533

City of Gregory
Gregory SD 57533

Jack Gunvordahl
P.O. Box 352
Burke SD 57513

Gentlemen:

The Water Management Board at it's meeting August 3, 1979 made a final decision including Findings of Fact and Conclusions of Law on Permits in Gregory County as adopted at the May 25, 1979 meeting. Enclosed are such findings.

South Dakota Statute provides that these decisions by the Commission may be appealed to the Courts.

Very truly yours,

John Hatch

JOHN HATCH, Chief Engineer
Water Rights, WMD

JH:kw

enclosure

Equal Opportunity Employer

September 6, 1979

Jack Gunvordahl
Gunvordahl & Gunvordahl
Attorneys At Law
Box 352
Burke, SD 57523

Dear Mr. Gunvordahl:

This will acknowledge your letter concerning water right permits No. 1486-2, Joe Kirwan, and 1510-2, Elmer Horn. You will be notified when feasibility reports will be considered by the Water Management Board. You should make prior arrangements with an engineer so that when such feasibility studies are provided, you can immediately review the study. We will provide you with notice about two weeks prior to any hearing on feasibility studies.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights, WMD

JH/gy

Water Rights Division
605 773-3352

November 10, 1982

1510-2

Clark C Horn
RR 2, Box 2
Burke SD 57523

Dear Mr. Horn:

This letter is in regard to the 1982 Irrigation Questionnaire you submitted for Water Permit No. 1510-2 listed in the name of Elmer K Horn. You indicated on the questionnaire that you were now the owner of the land.

Enclosed please find our Form 20, "Notice of Transfer". Please check over, date, sign, and have notarized and return to this office with a \$2.50 filing fee. The permit can then be transferred to your name. If your intent was only to have the questionnaire sent to you and have the Permit remain in Elmer's name, please advise.

If you have any questions, please contact this office.

Sincerely,

GENNY YOUNG
Water Rights Specialist

GY:ks

enclosure

Water Rights Division
605 773-3352

January 26, 1983

SECOND NOTICE
1510-2

Clark C Horn
RR 2, Box 2
Burke SD 57523

Dear Mr. Horn:

On November 10, 1982 notice was sent to you concerning the transfer of Water Permit No. 1510-2 in the name of Elmer K Horn which covers Irrigation of 475 acres in E1/2 Section 27, T97N, R72W. To date, we have not heard from you on this matter.

A transfer form was previously sent to you, enclosed please find an additional form. Please sign, have notarized and return the form to this office with the required filing fee of \$2.50. The permit can then be transferred to your name. As stated on our previous letter to you, if you want the Permit to remain in Elmer Horn's name and only want the Irrigation questionnaire sent to you, please advise.

Sincerely,

GENNY YOUNG
Water Right Specialist

GY:ks

enclosure

NO. 1510-2

NOTICE OF TRANSFER OF WATER PERMIT

TO: Water Rights
Foss Building
Pierre, SD 57501

Date: Oct 3, 1983

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

~~Section 27-97-72~~ E 1/2 Section 27-97-72

formerly owned by Elmer K Horn

has been transferred to Clark C Horn RR 2, Box 2 Burke, SD 57523

(please include complete mailing address)

together with any rights to the beneficial use of water thereon as evidenced by

Water Right Permit No. 1510-2 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 Office 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.

STATE OF SOUTH DAKOTA)
County of Gregory) ss.

I, Clark C. Horn 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.

Clark C. Horn
(Signed)

Subscribed and sworn to before me this 3rd Day of October, 1983.

Warner Glaner
(Notary Public)



RECEIPT

WATER RIGHTS COMMISSION

State of South Dakota

No 4 9303

PIERRE, July 29, 1983

RECEIVED OF Clark Horn, Route #2, Box 2, Burke, SD 57523

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.		
Fee for inspecting Beneficial Use, and Issuing Water License No.		
Fee for issuing Location Certificate-Dry Draw, No.		
Fee for filing TRANSFER Water Permit #1510-2	2	50
Fee for certified copy of		
Fee for Print copy of map		
Fee for Certifying		
Fee for (any other work as provided by law)		
TOTAL	2	50

WATER RIGHTS COMMISSION

By John H. Hatcher
Chief Engineer, Executive Officer
JOHN H. HATCHER (ms)

No. 1510-2

 **Department of
Water & Natural Resources**
Joe Foss Building Water Rights Division
Pierre, South Dakota 57501 Phone (605) 773-3352

October 12, 1983

Clark Horn
Route #2, Box 2
Burke, South Dakota 57523

Dear Mr. Horn:

Enclosed is receipt No. 4 9303 in the amount of \$ 2.50 which you
paid for transfer of Water Right No. 1510-2.

Our records now show you as the owner of this Water Right.

Sincerely,

Genny McMath
Water Rights Specialist

GH:ms
Enc.

Form 18.

ref

No. 1510-2

APPLICATION FOR EXTENSION OF TIME

TO: Water Rights
Foss Building
Pierre, South Dakota 57501

Date 9-13-83

Dear Sirs:

In Water Right Permit No. 1510-2 it is specified that the water diversion system is to be completed by August 13, 1983 and that the water is to be put to the limit of beneficial use by August 13, 1984.

I hereby request that the date for completing the diversion system be extended to August 13, 1984 and that the date for putting the water to the limit of beneficial use be extended to August 13, 1988.

The extension of time for the completion of these works is requested for the following reasons: To bring it up to the 5 year limit.

Enclosed herewith is a fee of Two Dollars and Fifty Cents (\$2.50) to pay the cost of filing this request for extension of time.

Clark C. Horn
(Signed)

1510-2
Permit Number

APPROVED: November 30, 1983

Board of Water Management

BY:



RECEIPT

WATER RIGHTS COMMISSION

No 4 9304

State of South Dakota

July 29

83

PIERRE,

19

Clark Horn, Route #2, Box 2, Burke, SD 57523

RECEIVED OF 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.		
Fee for Inspecting Beneficial Use, and Issuing Water License No.		
Fee for Issuing Location Certificate-Dry Draw, No.	2	50
Fee for filing Extension of Time on Permit #1510-2		
Fee for certified copy of		
Fee for Print copy of map		
Fee for Certifying		
Fee for (any other work as provided by law)		
TOTAL	2	50

WATER RIGHTS COMMISSION

By *John Hatch*
Chief Engineer, Executive Officer
JOHN HATCH (ms)

SOUTH DAKOTA Department of
Water & Natural Resources

Joe Foss Building

Pierre, South Dakota 57501

Water Rights Division

Phone (605) 773-3352

December 5, 1983

Clark Horn
Route #2, Box #2
Burke, South Dakota 57523

Dear Mr. Horn:

This is to inform you that your request for extension of time dated
September 12, 1983 for Water Right No. 1510-2 has been
approved by the Water Management Board as follows:

The date for completing construction of the water system has
been extended to August 13, 1984, and the date for
putting the water to the limit of beneficial use has been
extended to August 13, 1988.

Enclosed herewith is Receipt No. 4 9304 for \$2.50 fee for filing
of this Extension of Time.

Sincerely,

Genny McMath
Water Rights Specialist

GM:ms
BNC.

WNR-819-7/79
Approval of Extension of Time

Water Rights Division - DWR
Conversation or File Documentation

File No. 1510-2
1857-2

NAME OF PERSON OR FILE: Clark Horn

ADDRESS: Rt. 2 Box #2 Burke SD 57523 COUNTY Gregory

DATE: August 28, 1989 TELEPHONE _____

RE: _____

COMMENTS:

On August 28, 1989, I talked to Clark Horn about a complaint we received from the City of Burke that he was applying fertilizer through his irrigation system and not reporting it on his I.R. He does not apply fertilizer through his system. He did have a new well drilled in June by Hutmacher Drilling for his household use because he was having nitrate problems with his old well. He thought this could have caused some rumors. I also talked to Rich Bailey from the City.

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: Rini Schaal

1510-2



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

AUG 7 1992

1857-2

Clark C. Horn
RR 2, Box 2
Burke, SD 57523

Dear Mr. Horn:

Enclosed is Water License No. 1857-2. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 412884 in the amount of \$50.00 which you paid for the inspection and issuance of the Water License.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 1857-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Very truly yours,

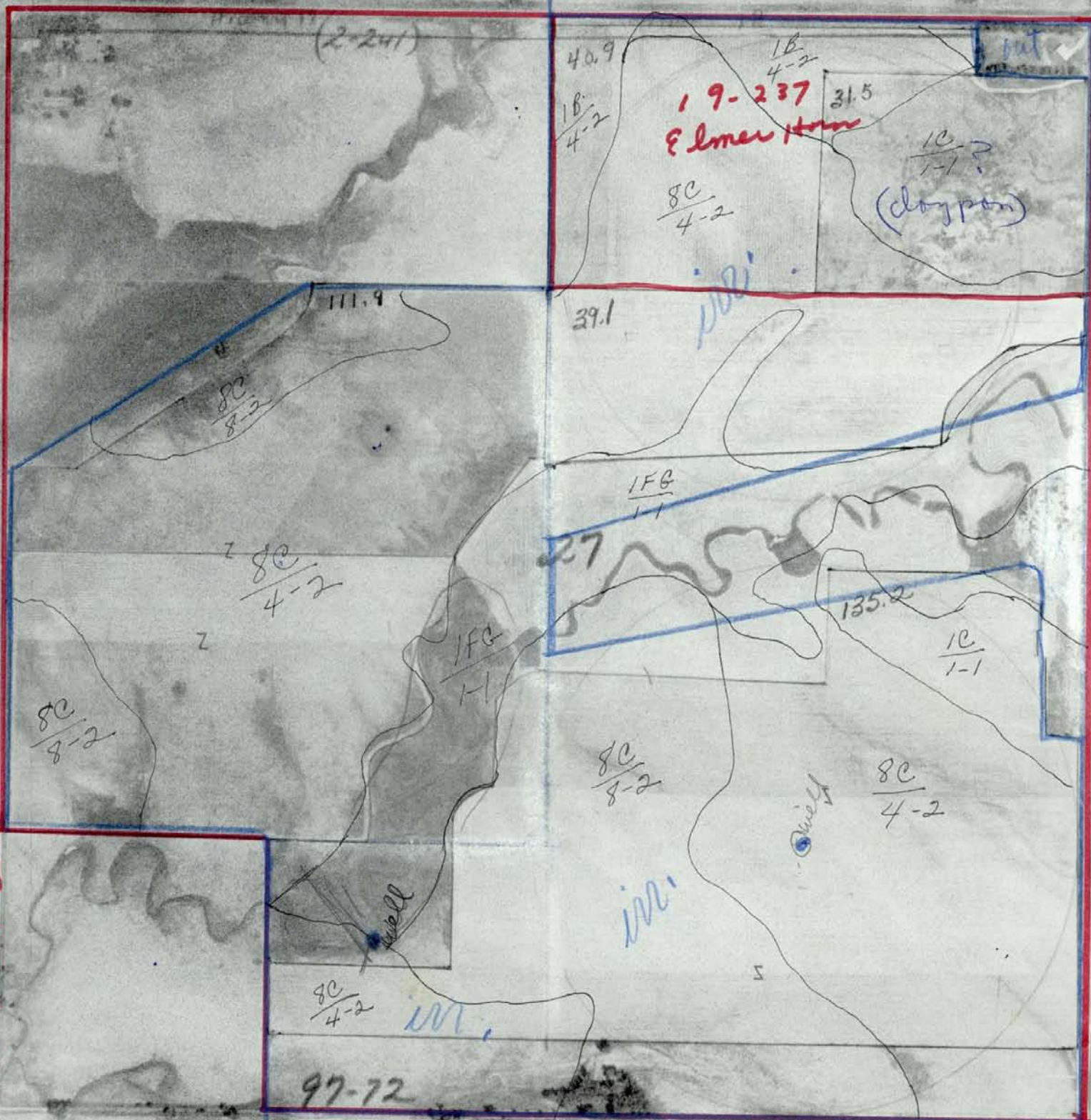

JOHN HATCH, Chief Engineer
Water Rights Division
(605) 773-3352

enclosures

NOTE: The applicable portions of Water Permit No. 1510-2 have been incorporated into this Water License No. 1857-2.

Elmer & Henry Horn 19-238

NOT TO SCALE



SCS-CONS-15
OCTOBER 1974

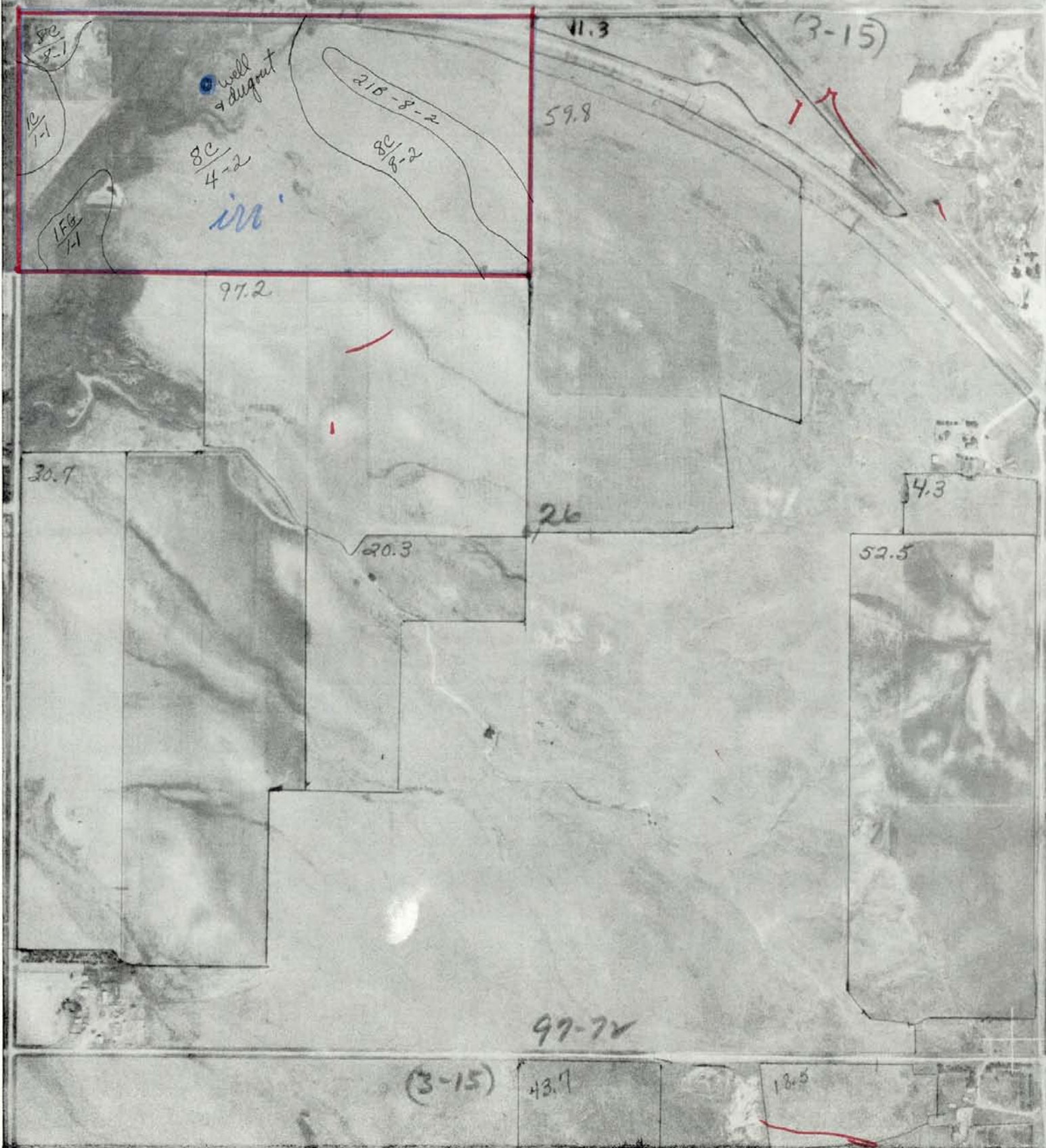
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL MAP

Owner Elmer Horn Operator same
County Gregory State South Dakota
Soil survey sheet (s) or code nos. _____ Approximate scale 8" = 1 mile
Prepared by U. S. Department of Agriculture, Soil Conservation Service cooperating
with Gregory County Conservation District
Raymond Stensland

NOT TO SCALE

Elmer Hays
19-2-37



INTERPRETIVE
GROUPING

LAND USES AND SOILS INFORMATION ON YOUR OPERATING UNIT

Elmer Horn

$\frac{1B}{4-2}$

Tuthill Loam

IIe1-Deep and moderately deep, loamy soils on gently sloping (2 to 6%) uplands. They have moderate wind and water erosion hazards.

$\frac{8C}{4-2}$, $\frac{8C}{8-2}$ &

Anselmo FSL

IIIe8-Deep and moderately deep, moderately sandy soils on gently undulating (2 to 6%) uplands and eroded phases of these soils on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

$\frac{8C}{8-1}$

$\frac{1C}{1-1}$

Jansen SC ?

IIIs2-Soils with 20 to 40 inches of loamy material over sand and gravel on nearly level (0 to 2%) uplands. The porous substrata limits water storage capacity and rooting depth. These soils have a moderate wind erosion hazard.

(clayman)

$\frac{21B}{8-2}$

Holt Anselmo
Complex

IVe8-Deep and moderately deep, moderately sandy soils on undulating or sloping (6 to 9%) uplands, and eroded soils on gently undulating or gently sloping (2 to 6%) uplands. These soils have severe wind and moderate water erosion hazards.

$\frac{1FG}{1-1}$

IVw1-Depressional & bottomland soils. An intermittent water table, occasional flooding, or salinity severely limits use.

SYMBOLS ON CONSERVATION PLAN MAP FOR INTERPRETING FEATURES ON YOUR LAND

SPECIAL SYMBOLS

Farm, ranch, or other operations boundary - - - - -		Public road - - - - -	
Ownership boundary - - - - -		Private road - - - - -	
Field or land use boundary - - - - -		Field number - - - - -	
Land capability, range, or woodland site boundary - - - - -		Field acreage - - - - -	320 A.
Range condition boundary - - - - -		Inclusion tie - - - - -	
Range condition - - - - - EC, GC, FC, PC (Excellent, Good, Fair, Poor)		Special purpose plantings (label)	

CONSERVATION PRACTICE SYMBOLS

	PLANNED	APPLIED		PLANNED	APPLIED
Fence - - - - -			Diversion or spreader dam - - - - -		
Shelterbelt - - - - -			Check dam or gully plug - - - - -		
Stream bank protection - - - - -			Drop structure - - - - -		
Dike or levee - - - - -			Dam and reservoir - - - - -		
Pipeline - - - - -			Dugout - - - - -		
Flume or syphon - - - - -			Stock pond - - - - -		
Canal (label) - - - - -			Spring development - - - - -		
Irrigation ditch - - - - -			Spring and trough - - - - -		
Diversion - - - - -			Trough - - - - -		
Drainage or open drain - - - - -			Well (label) - - - - -		
Closed or tile drain - - - - -			Windmill - - - - -		
Terrace - - - - -			Windmill and trough - - - - -		
Vegetative waterway - - - - -			Water tank (label) - - - - -		
Division box or turnout - - - - -			Pump - - - - -		