

2271A-3

WATER PERMIT NO. 2271A-3

Phone: 948-2186

Name of Applicant: Gillis Hageman

Post Office Address: RR 1, Box 96, Hoven SD 57450

Amount of Water Claimed: no add'l (1.67 cfs) Total Acres: no add'l (246)

Source of Water Supply: groundwater

Water to be used for: irrigation County: Potter

About 3 miles south of Hoven

PRIORITY Date Received: 3-11-93 Fee: \$50.00 Remarks: changes

location of 2 diversion points on Permit No. 2271-3 and adds 2 diversion points

Corrected Application Received: 3-15-93 Period of Annual Use: April 1 - Oct 31

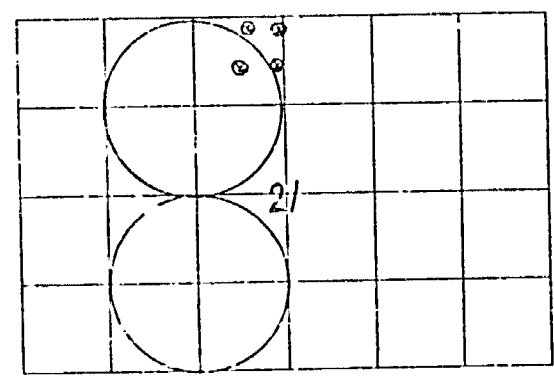
WATER QUALITY APPROVAL RECEIVED: 6-21-93 APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES NO REMARKS:

Diversion Point: NE 1/4 NW 1/4 Sec 21-T120N-R74W

Land to be Irrigated: NW 1/4 & SW 1/4

Sec 21-T120N-R74W



Well Log: Driller: Dakota Boring Licensed YES X NO

Depth of Well: 37' to 40' REMARKS:

Type of Map: aerial PREPARED BY: Lynn Beck Reviewed and the Number

Assigned on: 6-22-93 By: Karen Schlaak

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2271A-3 FOR IRRIGATION

(1) Gillis Hageman, of RR 1, Box 96, Hoven SD 57450 made Application No. 2271A-3, March 11, 1993 for a water permit for two additional wells, Potter County, South Dakota for irrigation purposes. Permit No. 2271A-3, with a priority date of May 1, 1975 was approved September 2, 1993 and issued to the applicant for diversion of water with construction of the described water supply system completed and the application to beneficial use of said water completed.

Water Permit No. 2271A-3 authorizes two additional wells to irrigate acreage authorized by Water Permit No. 2271-3 and corrects the location of two existing wells. No. 2271A-3 did not allow for an increase in the developed diversion rate or number of acres being irrigated.

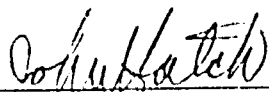
The applicable portions of Water Permit No. 2271-3 have been incorporated into this Water License No. 2271A-3. A priority date of May 1, 1975 (established under No. 2271-3) is retained.

(2) It is certified that the applicant has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.67 cubic feet of water per second for beneficial use. The location of the diversion points are as follows:
Well #1 - 14'W and 90'S; Well #2 - 500'W and 120'S; Well #3 - 90'W and 600'S; and Well #4 - 590'W and 660'S; all from the N 1/4 corner of Section 21-T120N-R74W (all in NE 1/4 NW 1/4).

(3) The applicant has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the following land:

T120N-R74W	Section 21	NW 1/4 NW 1/4	30 acres
		NE 1/4 NW 1/4	31 acres
		SW 1/4 NW 1/4	31 acres
		SE 1/4 NW 1/4	31 acres
		NW 1/4 SW 1/4	30 acres
		NE 1/4 SW 1/4	31 acres
		SW 1/4 SW 1/4	31 acres
		SE 1/4 SW 1/4	31 acres
		Total	246 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Gillis Hageman of RR 1, Box 96, Hoven SD 57450 the holder and/or owner of Incorporated Water Permit No. 2271A-3 is issued a license to appropriate water, the right to use 1.67 cubic feet of water per second from groundwater (four wells) with a priority date of May 1, 1975 from the location specified in (2) of this license. The water to be conducted to and upon lands specified in (3) of this license for the purpose of irrigation. This license is subject to any limitations or qualifications listed in Incorporated Water Permit No. 2271A-3 and subject to South Dakota State Law.



JOHN HATCH, Chief Engineer
Water Rights Division
Department of Environment and Natural Resources

AUG 19 1994

date

FORM 2: Application for Irrigation in South Dakota
(type or print)

Mail to:
Water Rights Division
Joe Foss Building
523 E Capitol
Pierre SD 57501-3181
605 773-3352

No. 2271A-3 Hydrologic Unit 10130105
Basin Missouri River
Newspaper Hoven Review, Box 37 57450
(office use only)



Application For Soil/Water Compatibility Permit And Permit To Appropriate Water

Type of Application: New Vested Right x Amendment/Correction to Permit No. 2271-3
(check one) (Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. acreage change, change diversion point(s), add diversion point(s), etc.)
Change in location for two points of diversion from the NW1/4 NW1/4 and
the NW1/4 SW1/4 Sec. 21, T120N, R74W to the NE1/4 NW1/4 Sec. 21 and to add
two points of diversion in the NE1/4 NW1/4 Sec. 21, T120N, R74W.

- Name of Applicant Gillis Hageman Phone (605) 948-2186
Mailing Address RR 1, Box 96 Hoven State SD 57450
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed 1.6/no add'l or 750 **GPM ***AF Total Acreage 246 no add'l
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acres Feet -- storage capacity of dam/dugout if applicable)
- Source of water supply Hoven South Aquifer - 4 wells
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12 T104N-R53W) 4 wells in the NE1/4 NW1/4
Sec. 21, T120N, R74W.
- County Potter
- County or counties where water will be used Potter
- Annual period during which water is to be used April thru October 31
- List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

(Attach sheet if more space is needed)

Land Description	Acres
NW1/4 NW1/4 Sec. 21, T120N, R74W	30
NE1/4	31
SW1/4	31
SE1/4	31

Land Description	Acres
NW1/4 SW1/4 Sec. 21, T120N, R74W	30
NE1/4	31
SW1/4	31
SE1/4	31

Land Description	Acres
NW1/4 SW1/4 Sec. 21, T120N, R74W	30
NE1/4	31
SW1/4	31
SE1/4	31

Land Description	Acres
NW1/4 SW1/4 Sec. 21, T120N, R74W	30
NE1/4	31
SW1/4	31
SE1/4	31

- Type of Irrigation: Gravity: Towline: Center Pivot: X Gun: Other (Specify):
- Crops to be irrigated: Wheat & corn
- Give a description of the project. (Attach sheet if more space is needed)

This application is to change the location of two diversion points on Permit No. 2271-3 and to add two diversion points as provided by ARSD 74:02:01:14.01. No increase in the amount of water appropriated or acreage irrigated is authorized by this application.

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach maps, soils information and any other technical information. (see instructions)

STATE OF SOUTH DAKOTA)

County of Potter)⁵⁵

I, Gillis Hageman, the applicant, certify that I have read this application and examined the attached maps, that the water sample, if needed, has been taken by the required procedures and has not been adulterated or tampered with and is representative of the water to be used, and that the matters stated in this application are true and correct.

Signed Gillis Hageman

Subscribed and sworn to before me this 10 day of March 19 93

John R. Kint
Notary Public

(type or print in ink)



Well to 1

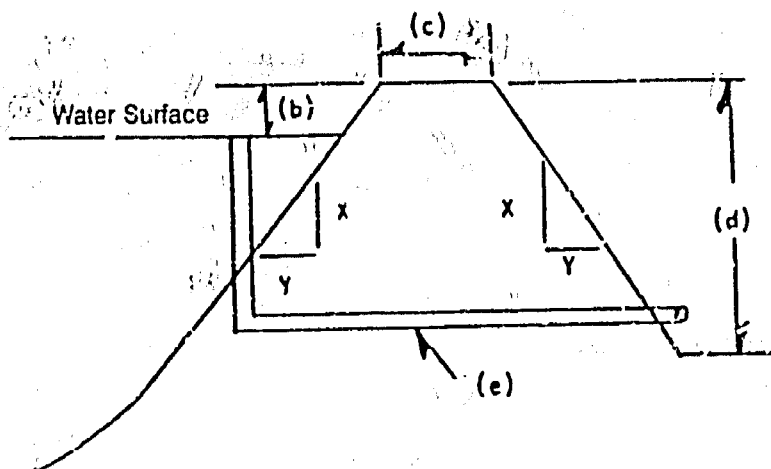
- a) Drill Hole Diameter 26" Depth 37 ft.
- b) Casing Type RPVC Diameter 16 in. Thickness 1/2"
- c) Screen Type Stainless Steel Diameter 16 Thickness 3/8"
- d) Gravel Pack Thickness 5" Length of Gravel Pack 10 ft.
- e) Depth to Top of Water Bearing Material 6 ft. 6 in. +/-
- f) Depth to Water (ground surface to water level) 15"
- g) Distance to nearest existing domestic well:
On applicants property about 3/4 mile On property owned by others about 3/4 mile

3. Water Storage Dams

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:



- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area above Dam _____ Acres

REDUCTION RATIO

POLI NUMBER

D. J. F. MICHON

CAPIENZA DI LITRI 1000000

Supplemental Information

(type or print in ink)



Well 42

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 26" Depth 40 ft.
- b) Casing Type PVC Diameter 16" Thickness 1/2"
- c) Screen Type 5/16" Steel Diameter 16" Thickness 3/8"
- d) Gravel Pack Thickness 5" Length of Gravel Pack 9 ft.
- e) Depth to Top of Water Bearing Material 7 ft. to 36 ft.
- f) Depth to Water (ground surface to water level) 14 ft.
- g) Distance to nearest existing domestic well:
On applicants property about 3/4 mile On property owned by others about 3/4 mile

2. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope

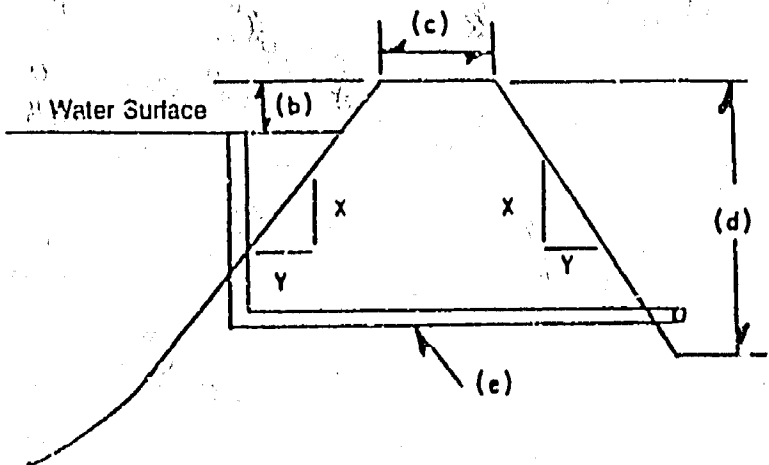
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area above Dam _____ Acres



**Report for Application No. 2271A-3
Gillis Hageman**

Application No. 2271A-3 amends Water Permit No. 2271-3 for two additional wells and corrects the location of two existing wells. Water Permit No. 2271-3 appropriates 4.3 cubic feet per second (cfs) to irrigate 302 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. An inspection of this permit found 4 wells 37 feet to 40 feet deep (Bowdle Aquifer; Hoven South Management Unit) capable of diverting 1.67 cfs to irrigate 246 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. The correct location of the four wells is the NE 1/4 NW 1/4 Section 21-T120N-R74W. No increase in the developed diversion rate or number of acres being irrigated is authorized by this application.

Aquifer: Bowdle - Hoven South Management Unit (B-HS)

The Bowdle Aquifer consists of glacial outwash deposits which are composed of sand and gravel at or near the land surface. Though many of the surface system aquifers are associated with or limited to present drainages, such as the Big Sioux River, this surface system aquifer is a "closed system" with no apparent relationship to surface drainages. The Bowdle Aquifer underlies approximately 79,800 acres and contains 204,000 acre-feet of recoverable water (Hedges, 1982). It's saturated thickness averages 15 feet and ranges from 1 foot to 31 feet (Kume, 1979). Four management units make up the Bowdle Aquifer, they are the Edmunds, Hoven North, Hoven South and Lebanon. These management units function separately but are hydraulically connected during periods of high ground water levels (Selken, 1977).

The Hoven South Management Unit of the Bowdle Aquifer underlies approximately 11,900 acres of Potter County and contains an estimated 23,000 acre-feet of recoverable water in storage (Hedges, 1982). B-HS has a natural hydraulic gradient from the southeast to the northwest. The saturated thickness varies from 11 feet to 25 feet, as evidenced by well logs within the area of this application. Thickness of the aquifer depends on seasonal fluctuations and whether or not drought or flood conditions exist.

The Water Rights Division monitors five observation wells within one mile of this application; PT-75A, PT-79A, PT-79B, PT-79D and PT-79E. Hydrographs for the observation wells are included in this report, see figures 1 thru 5. Low water levels occurred in 1982 and 1983 and highs in 1936 and 1987. The hydrologic cycles and irrigation pumping are reflected in the hydrographs.

Recharge:

Recharge to the B-HS aquifer is by direct precipitation and surface runoff. Calculated recharge rates using observation well data show recharge to be approximately 2.5 inches per year (Hedges, 1983). The calculated volume of recharge to the B-HS aquifer, using the above rate, would be 2479 acre-feet per year.

Withdrawal:

Irrigation use, as reported on the Irrigation Questionnaires, from 1982 thru 1992 is reflected in Table No. 1 (see page 5). In 1988 692 acre-feet of water used for irrigation was reported on the questionnaires (Water Rights, 1988). This is the greatest volume of water used in the years 1982 thru 1992. In 1988 the estimated water use for irrigation and the City of Hoven was 897 acre-feet. The wells in this application were in production during the above mentioned years.

Review of Existing Water Rights:

There are 9 water permits/rights appropriating water from the Bowdle Aquifer Hoven South Management Unit in Potter County. Appropriative rights from the management unit represent a total diversion rate of 19.06 cfs. Included are 8 permits/rights authorizing irrigation of 1274 acres and one permit/right appropriates 1.11 cfs for municipal use by the City of Hoven. Up to 3 acre-feet per acre for permits with priority dates before July 1, 1978, may be applied each irrigation season. All permits and licenses in the Hoven South Management Unit have priority dates prior to July 1, 1978.

As a result of inspections conducted in 1992, it was found that 815 acres of the permitted 1274 acres have been developed. Maximum reported irrigation use for time frame 1982 to 1992 was 692 acre-feet.

Effects on Existing Water Rights:

Hydrographs of the observation wells completed into the B-HS aquifer show that the water level of the aquifer responds to recharge and pumping. Observation wells within the cone of influence of this application show 1 to 2 foot fluctuations during irrigation seasons (Water Rights, 1992). Other wells outside the cone of influence may experience depressed water levels during the irrigation season. Lowering of water levels has occurred during times of drought. These droughts have been followed by extended periods of rising water levels in the aquifer.

Applications proposing appropriation from the B-HS were deferred by the Water Rights Commission in the late 1970's and early 1980's due to a complaint concerning reduced well production. It was believed by Willard Zweber that wells with later priority dates were interfering with his wells during the irrigation season. The complaint was later dropped and the Water Rights Commission eventually approved deferred permits in the area.

One other complaint in the Hoven South Management Unit was registered since Mr. Zweber's complaint. On August 6, 1980, a complaint was registered by Clifford and Robert Simon concerning the lowering of the water levels in their wells. They believed that Clarence Frost's irrigation well pumping was the cause of the

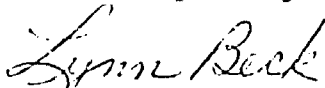
problem. After an investigation and drilling an observation well, it was determined that the Simon wells were inadequate.

Other than Mr. Hageman's wells, the nearest high capacity well is one mile away under Permit Nos. 1622-3 and 4062-3 owned by Willard Zweber. Permits in the vicinity also include 1623-3, 1704-3, 2598-3, 2855-3, 2855-3A and 4063-3.

The wells considered in this application are existing wells, two of the wells have been in production since 1976, one since 1991 and the other since 1992. The wells drilled in 1991 and 1992 are replacements for wells drilled prior to 1976. He now uses the four wells discussed in this application. This application will merely validate their existence.

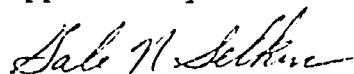
Conclusions:

1. The wells have been completed and are in use. This application is a direct result of an inspection of Permit No. 2271-3. It was found that two wells needed location correction and two replacement wells had been developed.
2. Water levels in the aquifer reflect normal drawdown and recharge patterns associated with pumping, drought and precipitation.
3. The well interference qualification should be included as a permit qualification.
4. Approval of this application is subject to completion of the annual irrigation questionnaires.
5. No increase in the developed diversion rate or number of acres being irrigated is authorized by this application.



Lynn Beck
Natural Resources Engineer III

Approved by:



Gale N. Selken, P.E.
Natural Resources Engineer IV

REFERENCES:

Hedges, L.S., S. Burch, D. Iles, R. Farari, R. Schoon, 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, U.S. Army Corps

of Engineers Contract DACW 45-80-C-0185, SD Department of Water and Natural Resources, Office of Geological Survey, Vermillion, SD 57069.

Hedges, L.S., S. Burch, D. Iles, 1983, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground-Water Recharge, U.S. Army Corp of Engineers Contract DACW 45-80-C-0185, SD Department of Water and Natural Resources, Office of Geological Survey, Vermillion, SD 57069.

Kume, J., 1979 Aquifers in Walworth County, South Dakota, U.S. Geological Survey Information Pamphlet No. 18, SD Geological Survey, Vermillion, SD 57069.

Selken, G.N., 1977, Hoven Area Report, DWNr, Water Rights Division, Joe Foss Building, Pierre, SD 57501.

Water Rights Division, 1980, "Potter-Walworth Counties Water-Table-Aquifer Report", DWNr, Water Rights Division, Joe Foss Building, Pierre, SD 57501.

Water Rights Division, 1982-1992, 1982-1992 Irrigation Summary by Aquifer, DENR, Water Rights Division, Joe Foss Building, Pierre, SD 57501.

Water Rights Division, 1993, "Observation Well Files", DENR, Water Rights Division, Joe Foss Building, Pierre, SD 57501.

Water Rights Division, 1993, "Water Permit Files", DENR, Water Rights Division, Joe Foss Building, Pierre, SD 57501.

Table No. 1

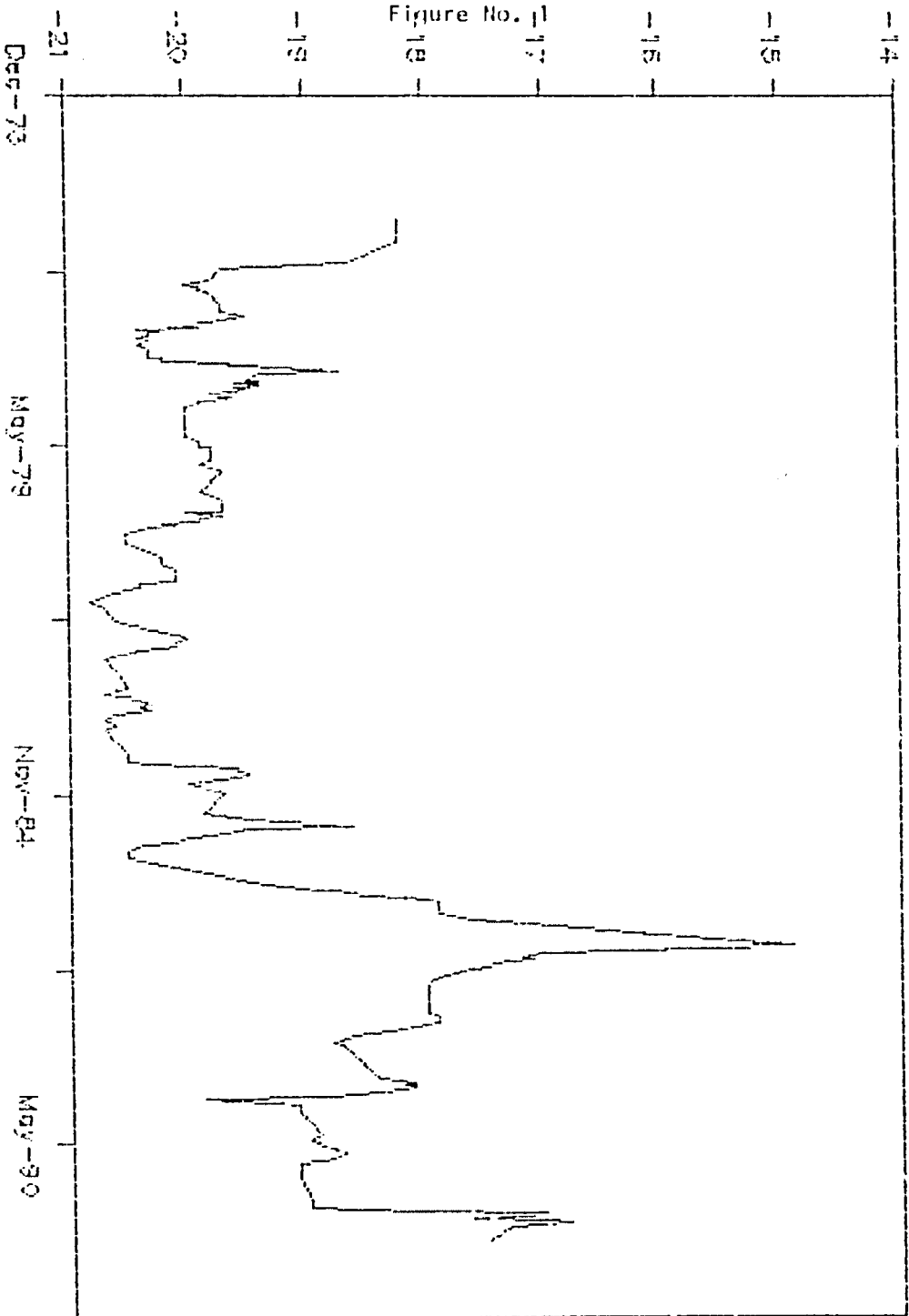
VOLUME OF WATER REPORTED FOR IRRIGATION Hoven South Management Unit (acre-feet)						
YEAR	1622-3 &4062-3	1623-3 &4063-3	1704-3	2271-3	2598-3	TOTAL
1982	116.93	0	56.31	103.4	119.01	395.65
1983	165.92	0	29.16	66.82	93.97	355.87
1984	0	0	31	130	104	265
1985	0	71	78	132	148	429
1986	0	16	8	28	48	100
1987	120	120	6	111	101	458
1988	229.6	71.9	37.8	153	199.6	691.9
1989	108	144	60	134	147	593
1990	212	0	0	69	102	383
1991	0	229	12	68	132	441
1992	58	100	0	42	98	298

WATER RIGHTS OBSERVATION WELL

PT-75A

WATER LEVEL (FEET)

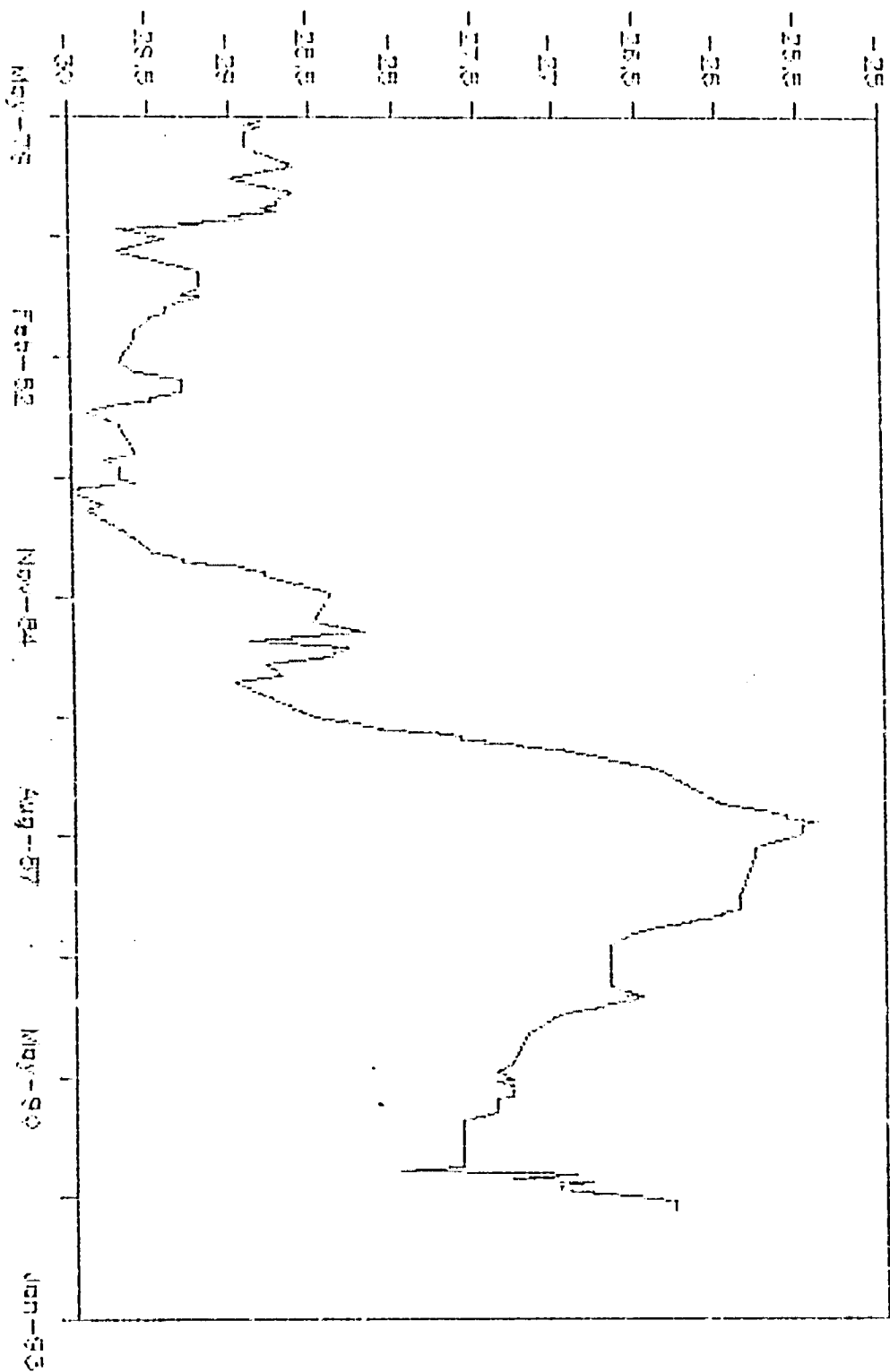
Figure No. 11



WATER RIGHTS OBSERVATION WELL

W-794

WATER LEVEL (FEET)
Figure No. 2

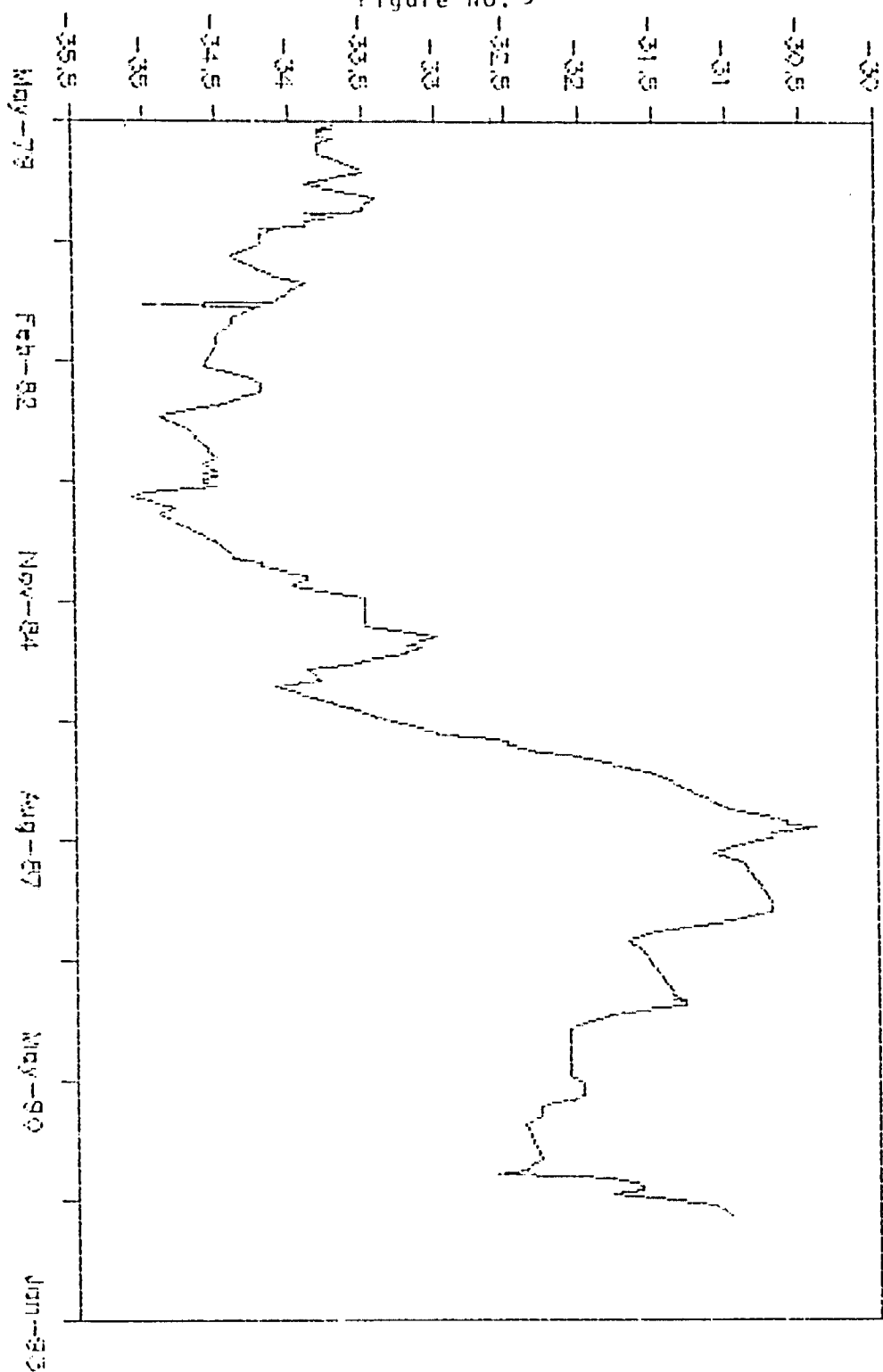


WATER RIGHTS OBSERVATION WELL

PT-79B

WATER LEVEL (FEET)

Figure No. 3

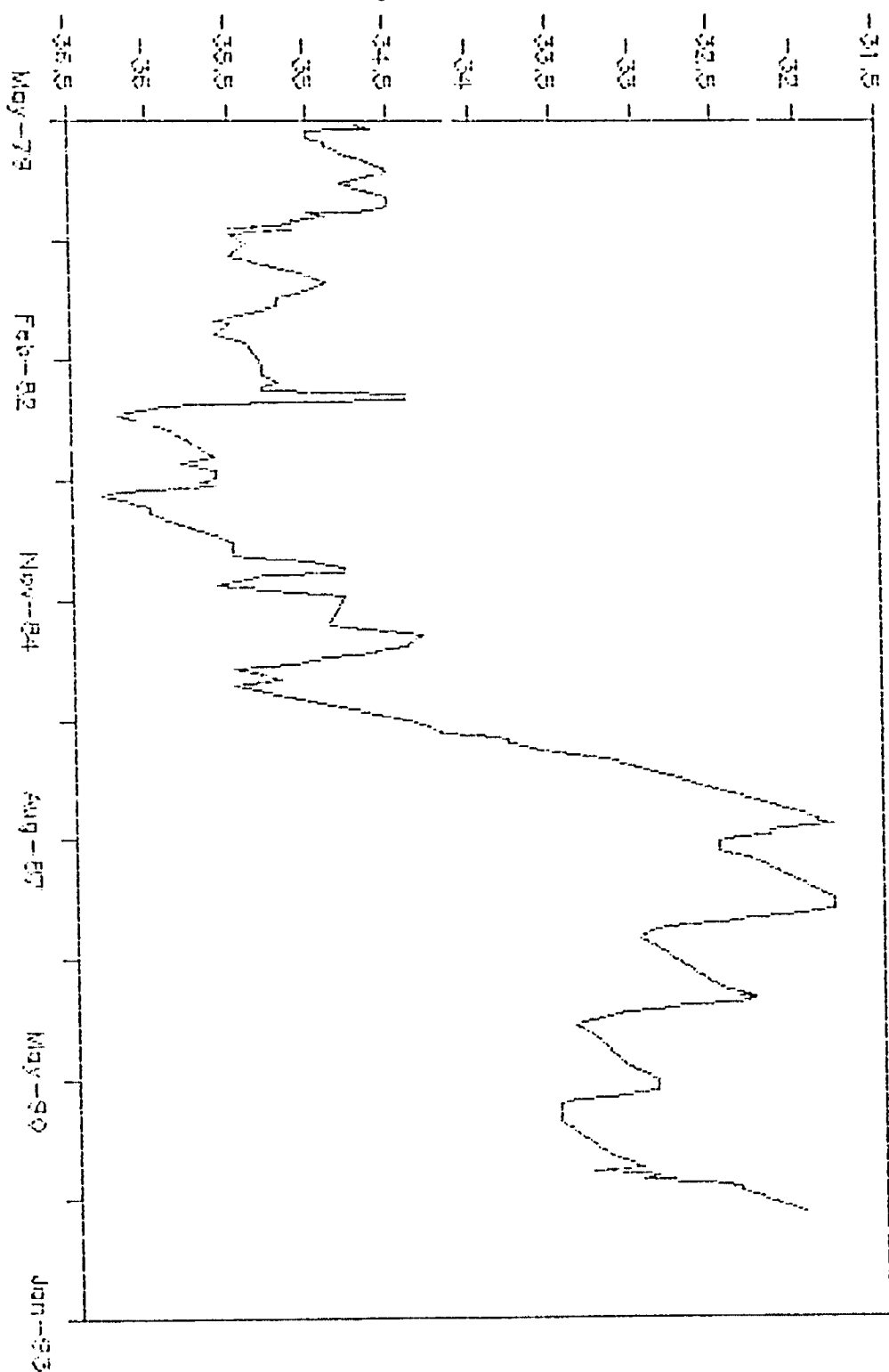


WATER RIGHTS OBSERVATION WELL

PT-79D

WATER LEVEL (FEET)

Figure No. 4

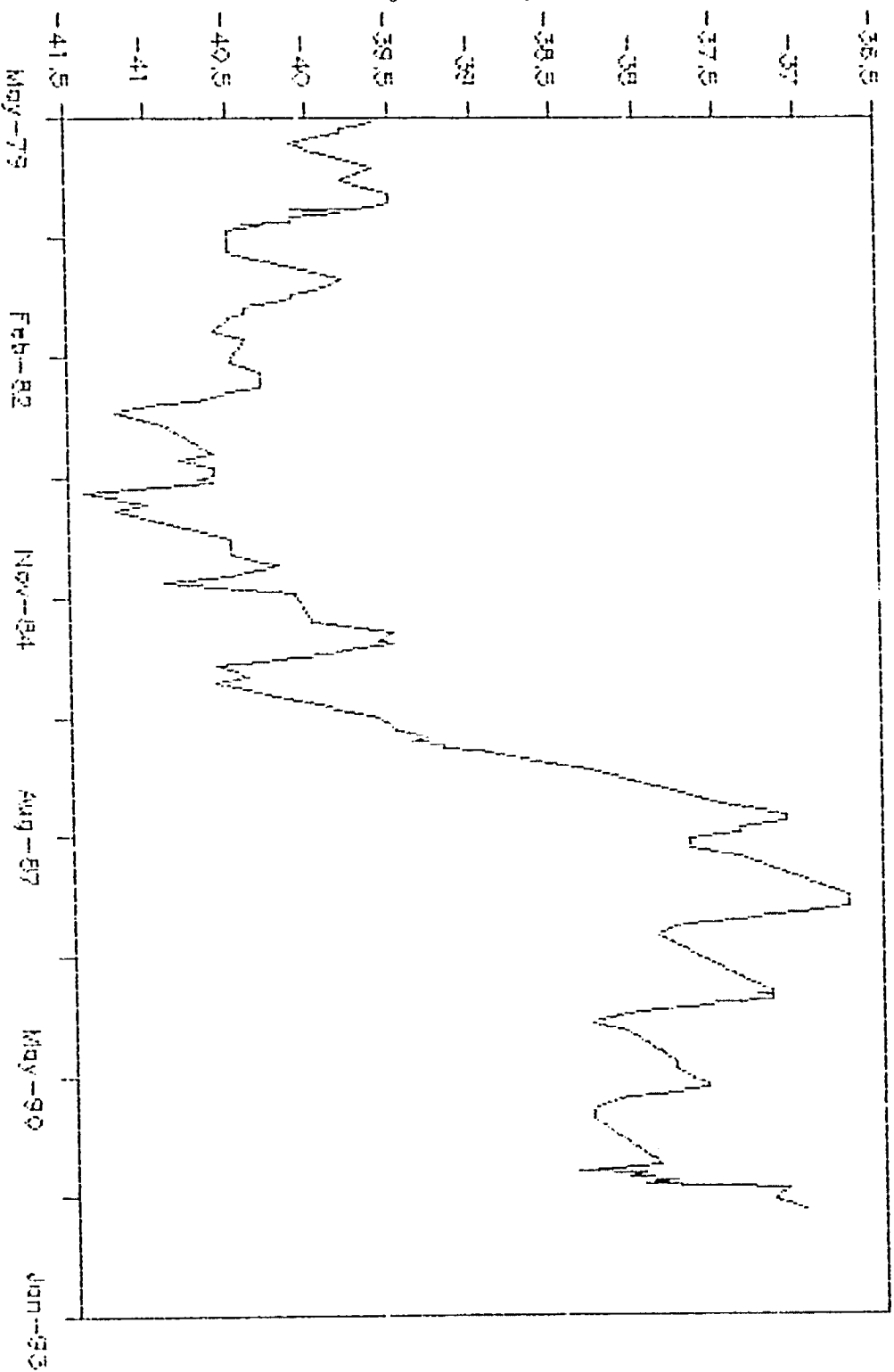


WATER RIGHTS OBSERVATION WELL

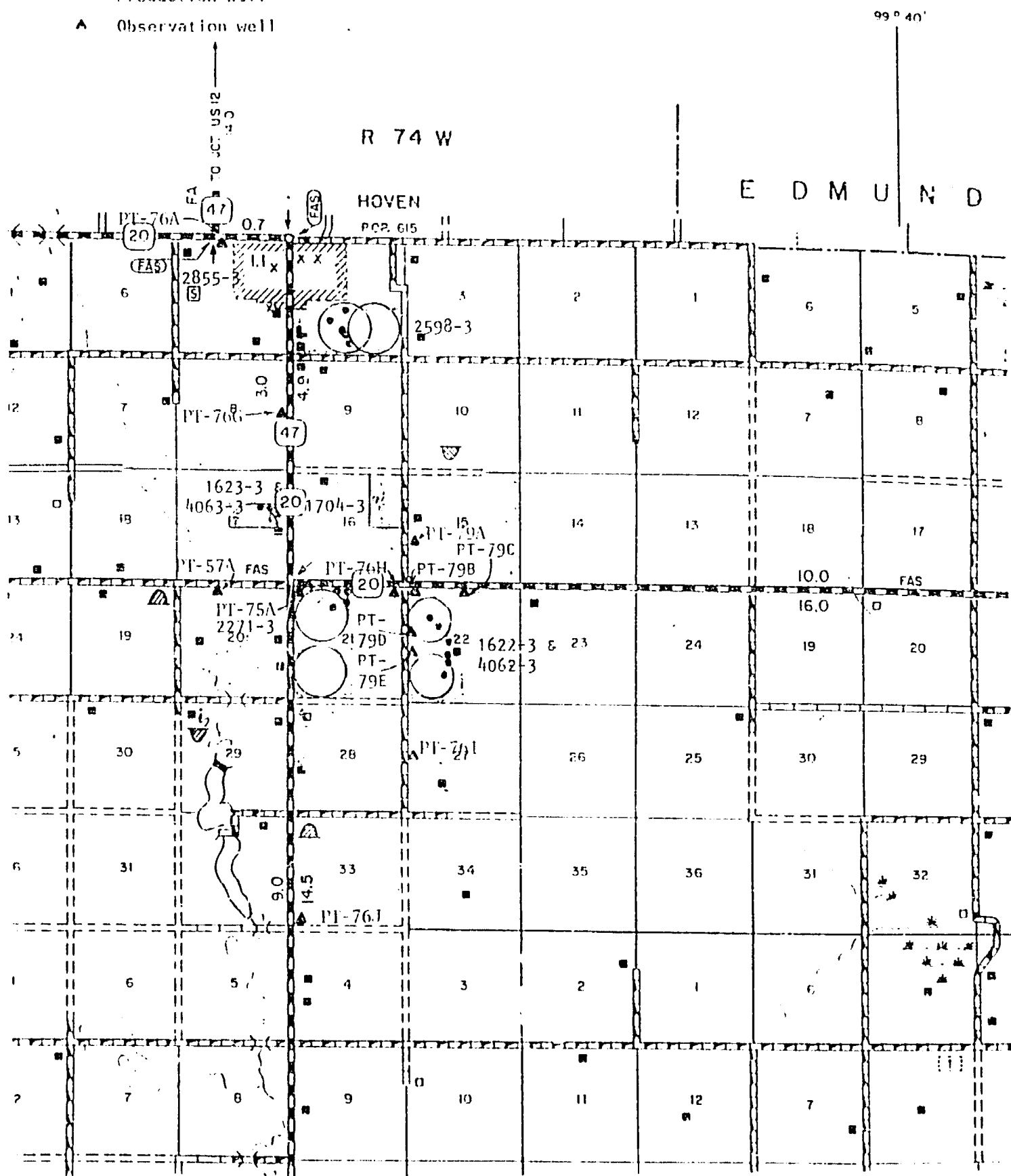
PT-79E

WATER LEVEL (FEET)

Figure No. 5



- X City well
- ~ Production well
- A Observation well



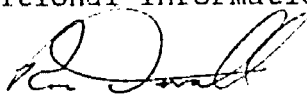
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2271A-3, Gillis Hageman

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 2271A-3, Gillis Hageman, RR 1 Box 96, Hoven, SD 57450.

The Chief Engineer is recommending APPROVAL of Application No. 2271A-3 because 1) the proposed diversion has been developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other 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 adequate wells having prior water rights.
2. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.


for JOHN HATCH, Chief Engineer
July 8, 1993



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

July 19, 1993

Gillis Hageman
RR 1 Box 96
Hoven, SD 57450

Dear Mr. Hageman:

Water Permit Application No. 2271A-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Hoven Review printed at Hoven, SD (Ph # 948-2110). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

July 19, 1993

Hoven Review
Box 37
Hoven, SD 57450

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 2271A-3 to be published twice. Please publish the first notice on July 29, 1993, with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is Gillis Hageman, RR 1 Box 96, Hoven, SD 57450 (Ph # 948-2186).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
505 773-3352

enclosures

-----CUT HERE-----
FIRST TRANSMITTAL NOTICE TO: Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181
No. _____
Date _____
We are in receipt of your letter of _____ enclosing Notice of
Hearing to Appropriate Water by Application No. _____ which was first
published in our issue of _____. ENCLOSED IS A COPY OF THIS
FIRST PUBLICATION.

Name _____

Newspaper _____

Instruction to Newspaper - Publish first Notice on July 29, 1993, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 2271A-3 to Appropriately Water
and to Amend Water Permit No. 2271-3

Notice is given that Gillis Hageman, RR 1 Box 96, Hoven, SD 57450 has filed an application for a water permit for two additional wells to irrigate acreage authorized by Water Permit No. 2271-3 and to correct the location of two existing wells. Water Permit No. 2271-3 appropriates 4.3 cubic feet of water per second (cfs) to irrigate 302 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. An inspection of this permit found 4 wells 37 feet to 40 feet deep (Bowdle Aquifer:Hoven South Management Unit) capable of diverting 1.67 cfs irrigating 246 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. The correct location of the four wells is the NE 1/4 NW 1/4 Section 21-T120N-R74W. No increase in the developed diversion rate or number of acres being irrigated is authorized by this application.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2271A-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 23, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider this application at 9:00 a.m., September 2, 1993, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre, SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The September 2, 1993, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by August 23, 1993.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by August 23, 1993, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

NOTICE OF HEARING on Application No. 2271A-3 to Appropriate Water and to Amend Water Permit No. 2271-3

Notice is given that Gillis Hageman, RR 1, Box 96, Hoven, SD 57450 has filed an application for a water permit for two additional wells to irrigate acreage authorized by Water Permit No. 2271-3 and to correct the location of two existing wells. Water Permit No. 2271-3 appropriates 4.3 cubic feet of water per second (cfs) to irrigate 302 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. An inspection of this permit found 4 wells 37 feet to 40 feet deep (Bowdle Aquifer: Hoven South Management Unit) capable of diverting 1.67 cfs irrigating 246 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. The correct location of the four wells is the NE 1/4 NW 1/4 Section 21-T120N-R74W. No increase in the developed diversion rate or number of acres being irrigated is authorized by this application.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2271A-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest.

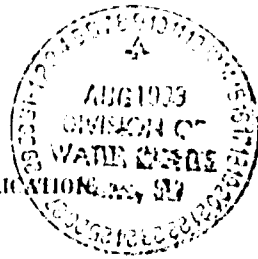
Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E. Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 23, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider the application at 9:00 a.m., September 2, 1993, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre, SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented for public hearing. The September 2, 1993, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by August 23, 1993.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. Those and any other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by August 23, 1993, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16, 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

(Published in the Hoven Review, July 29 & August 5, 1993)



AFFIDAVIT OF PUBLICATION

**STATE OF SOUTH DAKOTA
COUNTY OF POTTER—ss.**

LEONA C. WAGER, of said county being first duly sworn, on oath says that he is publisher of The Hoven Review, a weekly newspaper printed and published in Hoven in said County of Potter and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bonafide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks prior to the publication of the notice herein mentioned, and was and is printed wholly or part in an office maintained at said place of publication; that the

Gillis Hageman

a printed copy of which, taken from the paper in which same was published, is attached to this sheet, and is made in part of this Affidavit, was published in said newspaper at least

once in each week for 2 successive weeks, on the day

of each week on which newspaper was regularly published, to-wit:

*Water permit
7-29 & 8-5-93*

that the full amount of the fees for the publication of the annexed notice is \$ 96.80

*Hagen Review
Leona C. Wager*

Leona C. Wager
Publisher

Subscribed and sworn to before me this 6

day of Aug 1993

[Signature]

Notary Public
Potter County, South Dakota

My commission expires 1994

Permit No. 2271-3 and 2271A-3Missouri River - Water District

Report of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Division of Water Rights, DENR, Foss Bldg., Pierre, SD 57501

I have this day made a thorough examination of the water use system constructed by Gillis Hageman of RR 1, Box 96, Hoven, SD 57450 holder of Permit No. 2271-3 and 2271A-3, bearing the priority of May 1, 1975 authorizing the diversion of 4.3 cu. ft. per second of the waters of Bowdle Hoven South aquifer for irrigation purposes, in Potter County.

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

A. Works used to divert the water:

Well #1 - 17' deep with 23' of 16" pvc casing and 6' of pvc and 8' of stainless steel screen. Peerless pump model no. G105874, 350 gpm capacity; Franklin Electric submersible motor model no. 2366166020.

Well #2 - 40' deep with 27' of 16" pvc casing and 10' of pvc and 7' of stainless steel screen. Peerless pump model no. G105874, 350 gpm capacity; Franklin Electric submersible motor model no. 2366166020.

Well #3 - Peerless sub. pump with a 250 gpm capacity and a Franklin Electric sub. motor 25 hp.

Well #4 - Peerless sub. pump with a 125 gpm capacity and a Franklin Electric sub. motor 7.5 hp.

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

4000' of 8" pvc.

C. Works used to apply water to beneficial use:

Valley towable center pivot 1320' with 10 towers, has end gun, 750 gpm capacity.

The system is in the following condition fair. The point of diversion is located 14' W and 90' S of the N 1/4 corner of Section 21-T120N-R74W. The works are capable of diverting and conveying to the place of use 1.67 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

All in Section 21-T120N-R74W:

NW 1/4 NW 1/4	30 acres	NW 1/4 SW 1/4	30 acres
NE 1/4 NW 1/4	31 "	NE 1/4 SW 1/4	31 "
SW 1/4 NW 1/4	31 "	SW 1/4 SW 1/4	31 "
SE 1/4 NW 1/4	31 "	SE 1/4 SW 1/4	31 "

comprising a total of 246 acres of land and the license should be issued for 1.67 cfs.

Applicable permit qualifications have been complied with: Yes Y No

Exceptions to compliance are: none

Date: 9-2-92

Lynn Beck
Lynn Beck

Natural Resources Engineer
DENR, Water Rights Division

REPORT ON INSPECTION OF PERMIT NO. 2271-3

DATE: 9-2-92

Other permit(s) associated with the project: 2271A-3

DIVERSION POINT LEGAL LOCATION: 14' W and 90' S of the N 1/4 corner Section 21-120-74.

WELL INFORMATION:

- 1) Well Drilling Firm: Dakota Boring Co.
- 2) No. of Wells 2
- 3) Depth(s) 37 and 40 feet
- 4) Well log is available yes, both
- 5) Comment: These two wells are replacement wells.

Casing:

- 1) Diameter both 16 inches
- 2) Length 23 and 27 feet
- 3) Type both pvc

Screen:

- 1) Type well #1 6' pvc and 8' stainless steel, well #2 10' pvc and 7' stainless steel
- 2) Length see above feet
- 3) Static water level 15 and 14 feet

Pump:

- 1) Make both Peerless
- 2) Model both G105874
- 3) Size
- 4) Capacity 350 each GPM

Motor:

- 1) Make both Franklin Electric Submersible
- 2) Model No. 2366166020
- 3) Horsepower rating 30 each hp

- 1) Well Drilling Firm: Unknown.
- 2) No. of Wells 2

- 3) Depth(s) unknown feet
- 4) Well log is available No
- 5) Comment: These wells need application for correct location.

Casing:

- 1) Diameter unknown inches
- 2) Length unknown feet
- 3) Type unknown

Screen:

- 1) Type unknown
- 2) Length unknown feet
- 3) Static water level unknown feet

Pump:

- 1) Make Peerless Submersible
- 2) Model
- 3) Size
- 4) Capacity 250 and 125 GPM

Motor:

- 1) Make Franklin Electric Submersible
- 2) Model No.
- 3) Horsepower rating 25 and 7.5 hp

DISTRIBUTION LINES OR CANALS:

- 1) Type pvc
- 2) Size 8 inches
- 3) Length 4000 feet

SYSTEM TYPE:

Center pivot:

- 1) Make Valley towable
- 2) Overall length 1320 feet
- 3) Number of towers 10
- 4) Distance between towers feet
- 5) End gun yes

- 6) High or low pressure
- 7) Capacity 750 GPM

CHEMIGATION EQUIPMENT:

- 1) Does chemigate no

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit yes
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period yes



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

March 11, 1993

Gillis Hageman
Rr 1, Box 96
Hoven SD 57450

Dear Mr. Hageman:

We received your water permit application on March 11, 1993. Before we can proceed with the application, the filing fee of \$50 needs to be submitted.

The water permit application can not be considered until the application is complete and a soil/water permit is obtained from the Department of Agriculture.

If you have any questions, please contact this office.

Sincerely,

A handwritten signature in cursive script that reads 'Karen Schlaak'.

Karen Schlaak
Natural Resources Analyst
605 773-3352

Water Rights Division - DWNR
Conversation or File Documentation

File No. (2271-3)
new appl.

NAME OF PERSON OR FILE: Mrs. Hagerman

ADDRESS: _____ COUNTY Potter

DATE: 5-3-93 TELEPHONE 948-2186

RE: Application status

COMMENTS:

Checked to see if Hagerman had sent in the
water sample for soil/water application. The
power to the pumps won't be turned on until
May 15. They will send in a sample as soon
as the power is on.

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.

NAME: LB



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

OCT 15 1993

Gillis Hageman
RR 1 Box 96
Hoven, SD 57450

Dear Mr. Hageman:

Enclosed is Water Permit No. 2271A-3 authorizing your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

The final inspection has been completed on this Permit, and we are ready to issue the Water License. Statutes require we charge \$50 for the inspection and issuance of the final papers. Upon receipt of this amount the Water License will be sent to you.

Very truly yours,

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

enclosures

**SOUTH DAKOTA
WATER PERMIT NO. 2271A-3 FOR IRRIGATION**

Date of first receipt of application March 11, 1993.

Date Soil/Water Compatibility Permit received June 21, 1993.

Date of return to applicant for corrections, amendments or changes March 11, 1993.

Date of receipt of corrected application March 15, 1993.

The Water Management Board approved Water Permit Application No. 2271A-3 on September 2, 1993 for Gillis Hageman, RR 1, Box 96, Hoven SD 57450 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2271A-3 authorizes two additional wells to irrigate acreage authorized by Water Permit No. 2271-3 and corrects the location of two existing wells. Water Permit No. 2271-3 appropriates 4.3 cubic feet of water per second (cfs) from 2 wells to irrigate 302 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. An inspection of Permit No. 2271-3 found 4 wells 37 to 40 feet deep (Bowdle Aquifer:Hoven South Management Unit) capable of diverting 1.67 cfs irrigation 246 acres in the NW 1/4, SW 1/4 Section 21-T120N-R74W. The correct location of the four wells is the NE 1/4 NW 1/4 Section 21-T120N-R74W. No increase in the developed diversion rate or number of acres being irrigated is authorized by this permit.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 - October 31.
3. The date from which applicant may claim right is May 1, 1975.
4. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under this Permit will be located near domestic wells and other 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 adequate wells having prior water rights.
2. This permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 
John Hatch, Chief Engineer
Water Rights Division
Department of Environment and
Natural Resources

OCT 15 1993
date

RECEIPT

413924

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ October 19 __, 19 __

RECEIVED OF Delores Hageman, RR 1 Box 97, Poven, SD 54450

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct 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. <u>2271A-3</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

By *John A. Hinkel*
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

AUG 19 1994

2271A-3

Gillis Hageman
RR 1, Box 96
Hoven, SD 57450

Dear Mr. Hageman:

Enclosed is Water License No. 2271A-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 413924 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. 2271A-3, 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

rd
enclosures

NOTE: The applicable portions of Water Permit No. 2271-3 have been incorporated into this Water License No. 2271A-3.

RECEIPT

Division of Water Rights

South Dakota Department of Environment and Natural Resources

413675

Pierre, March 15, 19 93

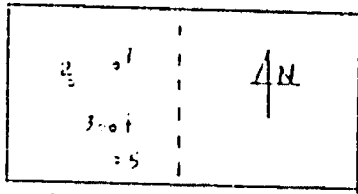
RECEIVED OF Delores Hageman, RR 1 Box 97, Hoven, SD 57450

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

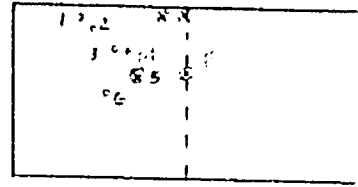
Fee for Application for Permit No. <u>2271A-3</u> to Appropriate Water, to construct and to put water to beneficial use	50	00
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form		
Fee for Filing Extension Request		
Fee for		
(Any Other Work Provided by Law)	Total	50 00

By [Signature]

Soil/water permits will be recorded by the Department of Agriculture, with the County Register of Deeds.

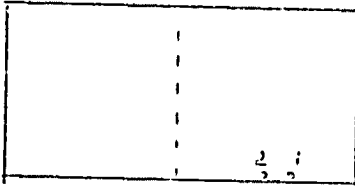


S $\frac{1}{2}$ Sec 4 T120N R74W
Permit 2598-3
Clarence Frost



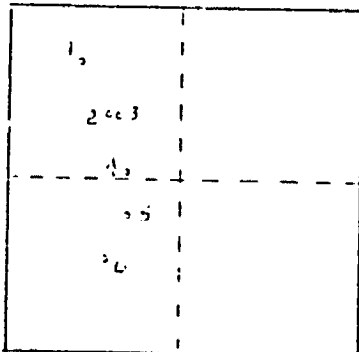
N $\frac{1}{2}$ Sec 21 T120N R74W
Permit 2271-3
Gillis Hageman

2271A-3

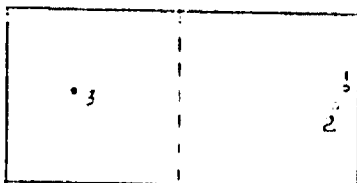


N $\frac{1}{2}$ Sec 17 T120N R74W
Permit 1623-3
Willard Zueber

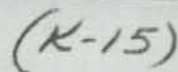
2. Production well location
and Number



Sec 22 T120N R74W
Permit 1622-3
Willard Zueber



NE $\frac{1}{4}$ Sec 16 NW $\frac{1}{4}$ Sec 15
T120N R74W
Permits
1704-3 2270-3
Allen Turner



1-25-93

2271A-3

Genny

Would you
please send me
the forms to
transform dad's
permit to me

Thank you

Dave Hageman

191 7th Ave West

Heaven & Dale

57450





**DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



December 5, 2014

2271A-3

Dave Hageman
191 7th Ave W
Hoven SD 57450

Dear Mr. Hageman:

I am writing in follow-up to the irrigation questionnaire you submitted for Water Right No. 2271A-3 listed in the name of Gillis Hageman.

Enclosed is a partially completed Notice of Transfer of Ownership form for filing an ownership change. Upon completion, please sign the form and return it to our office with a required filing fee of \$50.00. The check or money order for the fee can be made payable to the Water Rights Program.

I have also included a copy of the water right in the event you do not have one. You may keep it for your records. If I can answer any questions for you, please let me know.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosures

RECEIVED

DEC 09 2014

WATER RIGHTS
PROGRAM

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. 2271A-3

Date: 12-8-14

I/We request that Water Right No. 2271A-3

formerly owned by: Gillis Hageman

be transferred to: (name & address) DAVE HAGEMAN

191 7th AVE WEST

HOUEN SOUTH DAKOTA 57450 Telephone No. (605) 948-2503

Title to the following described land(s)/property has been transferred as described above:

246 acres in the W 1/2 Section 21, T120N, R74W

I/We understand that the validity of Water Right No. 2271A-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We DAVE HAGEMAN, the new owner, certify that the above information is true and correct.

Dave Hageman
(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 12/9, 20 14

RECEIVED OF Dave Hageman PO Box 427 Hoven SD 57450

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	50	00
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. _____		
Fee for Filing Transfer Form <u>2271A-3</u>		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	50 00

No. **07000**

By Jeanne Goodman
Chief Engineer



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



December 10, 2014

2271A-3

Dave Hageman
191 7th Ave W
Hoven SD 57450

Dear Mr. Hageman:

I am writing to acknowledge receipt of the transfer form and filing you submitted for Water Right No. 2271A-3.

The ownership change has been completed. Water Right No. 2271A-3 formerly held by Gillis Hageman is now listed in your name.

Enclosed is Receipt No. 07000 in the amount of \$50 which you paid for filing the ownership change. If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

July 13, 2020

Dave Hageman
191 7th Ave W
Hoven, South Dakota 57450

Dear Mr. Hageman,

I am writing in regard to your request for an additional well and replacement well to what is currently authorized by Water Right No. 2271A-3. Water Right No. 2271A-3 authorizes a maximum instantaneous diversion rate of 1.67 cfs from four wells completed into the Bowdle: Hoven South aquifer that are located in the top right corner of the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 21-T120N-R74W. One well authorized under Water Right 2271A-3 is going to be abandoned (no longer pumps) and replaced with a new well. An additional well to be drilled in same general location as previous four wells has also been requested for a total of five wells authorized to appropriate water under Water Right No. 2271A-3.

Upon review of the request and pursuant to SDCL 46-5-13.1, the replacement well and additional well are to be located in the top right corner of the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 21-T120N-R74W is authorized without application or publication of a notice of hearing pursuant to SDCL 46-2A-4. No increase in the authorized diversion rate of 1.67 cfs from the five wells is authorized. If the total diversion rate increases, a new water right permit will need to be obtained.

If you have any questions, please contact me at (605) 773-3352.

Sincerely,

Eric Gronlund, Chief Engineer

Water Rights Program

Approval of Location Change of Diversion Point and Additional Diversion Point

NAME: Dave Hageman**ADDRESS:** 191 7th Ave W, Hoven, South Dakota 57450**DATE:** July 13, 2020**COUNTY:** Potter**TELEPHONE:** (605) 380-2169 or (605) 948-2503**BACKGROUND:**

Water Right No. 2271A-3 appropriates 1.67 cubic feet of water per second (cfs) from four wells completed into the Bowdle: Hoven South aquifer located in the NE ¼ NW ¼ of Section 21 to irrigate 246 acres located in the NW ¼ SW ¼ of Section 21; all in T120N-R74W. A licensing investigation in August of 1994 found the four wells located in the top right corner of the NE ¼ NW ¼ of Section 21-T120N-R74W. Dave Hageman submitted a letter on June 26, 2020 indicating one of the wells no longer pumps water and is going to be abandoned, and replaced with a new well to be completed into the Bowdle: Hoven South aquifer. One more additional well will be completed into the Bowdle: Hoven South aquifer for a total of five wells authorized to appropriate water under Water Right No. 2271A-3.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**
The water source remains the Bowdle: Hoven South aquifer. The licensing investigation found the four initial wells capable of producing 1.67 cfs. Dave Hageman indicated in the letter that the replacement well and additional well, along with the three previously constructed wells, will not exceed 1.67 cfs during operation. Therefore, no additional water is appropriated.
- **If irrigation, no new land is irrigated**
Water Permit No. 2271-3 authorized 302 acres of irrigation and the licensing investigation for Water Right No. 2271A-3 found 246 acres being irrigated. Dave Hageman indicated in the letter that no additional acres would be irrigated.
- **Review of existing diversions**
The additional well and replacement well will be located in the NE ¼ NW ¼ of Section 21-T120N-R74W, in the same top right corner as the previous four wells authorized by Water Right No. 2271A-3. Water Right No. 5763-3, held by Frank and Carol Zweber, is the closest water right to Dave Hageman's diversion points. The diversion point authorized by Water Right No. 5763-3 is approximately 0.79 miles from Dave Hageman's diversion points.
The closest observation wells to Dave Hageman's diversion points are PT-76B (0.23 miles northeast) and PT-75A (0.37 miles northwest). The water levels in the observation wells display that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping condition between irrigation seasons. Aquifer recovery indicates that climatic conditions dominate changes in water level to the Bowdle: Hoven South rather than pumping.
Given the distance to other existing water rights and the aquifer consistently recovering after an irrigation season, any drawdown from pumping should not increase the potential for unlawful impairment of neighboring wells.

RECOMENNDED ACTION:

Based on the above criteria, it is recommended that the diversion point be licensed as developed.

Nakaila Steen

Nakaila Steen
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46:5:13.1 and ARSD 74:02:01:14:01 that:

This change in location of the diversion point and additional diversion point does not increase the potential for adverse effects to existing diversions.

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program

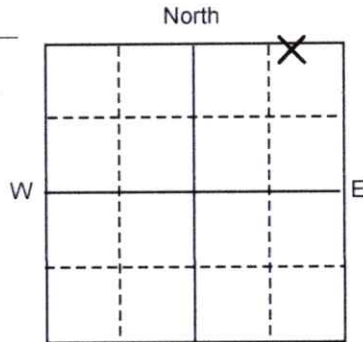
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 NE 1/4 Sec 21 Twp 120N Rg 74W

County Potter

Please mark well location with an "X"



Well Completion Date

11-18-2020

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
ft. from _____ (identify source)

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

Forward Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
class LB/FT	<u>12</u> IN	<u>+1</u> FT	<u>28</u> FT	<u>17.5</u> IN
<u>200</u> LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>bentonite</u>	<u>7</u>	<u>9.5</u> Lb/gal	<u>0</u> Ft	<u>25</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Pumped in through 1" tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12 Inches Length 10 Feet
Material stainless steel
Slot Size .030 Set From 28 Feet to 38 Feet
Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No
If so, what material? _____
Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? 100 PPM Sterilene
☐ No, Why Not? _____
Lab to which water quality sample sent for analysis _____

Well Owner: Dave Hageman

Business Name: _____

Address: 191 7TH Ave W

City, State, Zip: Hoven SD 57450

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Topsoil	0	1
Sandy Yellow clay	1	5
Red Sand to gravel	5	20
Coarse sand to Gravel	20	38
Blue Clay	38	40

STATIC WATER LEVEL 9.75 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: pumped with 5 hp 230 gpm submersible

☐ Bailed

☐ Other

Pumping Level Below Land Surface

21.2 Ft. After 3 Hrs. pumped 250 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 285 and this report is true and accurate.

Drilling firm: Manikowski Well Drilling Inc.

Signature of License Representative: _____

Byron Manikowski

Signature of Well Owner or Equitable Property Holder: _____

RECEIVED

Date: 11-20-2020

DEC 07 2020

WATER RIGHTS PROGRAM

SOUTH DAKOTA WATER WELL COMPLETION REPORT

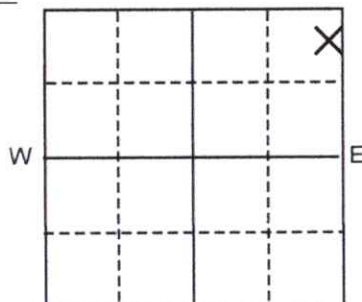
11-02

Location NE 1/4 NE 1/4 Sec 21 Twp 120N Rg 74W

County Potter

North

Please mark well location with an "X"



Well Completion Date

11-18-2020

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
30 ft. from Abandoned well (identify source)

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

Forward Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
class LB/FT <u>12</u>	IN <u>+1</u>	FT <u>24</u>	FT <u>17.5</u>	IN
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City, State, Zip: Hoven SD 57450

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WATER RIGHTS
PROGRAM