

WATER PERMIT NO. 2465-2

Name of Applicant: West River / Lyman Jones RWS, Inc.

Address: PO Box 407, Murdo SD 57559 Phone: 605 669-2931

Amount of Water Claimed: 1.0 cfs (360 AF) Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: rural water system use County: Pennington, Haakon and Jackson

Type of Waste Disposal System:

Location: south side of Quinn

PRIORITY Date Received: 7-26-2001 Fee: \$250

Corrected Application Received:: Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: NE ¼ SE ¼ Sec 6-T1S-R17E

Land to be Irrigated: NA

Depth of Well: 3080 feet deep

Well Driller: :

Remarks:

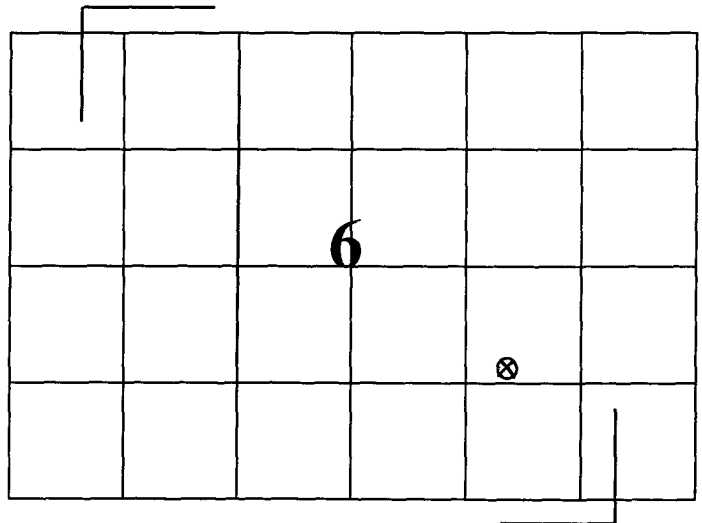
Type of Map: topo

Prepared by: Bruce Jennings, PE

Reviewed and the Number Assigned on: 7-26-2001

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 2465-2

Date of first receipt of application July 26, 2001.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2465-2 to West River/Lyman-Jones, RWS, Inc., PO Box 407, Murdo SD 57559 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. 2465-2 appropriates 1.0 cubic feet of water per second (360 acre-feet annually) from one well (Inyan Kara Formation) 3,080 feet deep located in the NE ¼ SE ¼ Section 6-T1S-R17E.
2. The water appropriated shall be used for the purpose of supplying water for rural water system use and may not exceed the amount of water needed for beneficial use for serving the cities of Quinn, Philip (potentially including the Bad River System), Wall, Cottonwood and the communities of Cedar, Johnson and Peno Basin.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2465-2 is September 24, 2001.
5. The date from which applicant may claim right is July 26, 2001.
6. One-fifth of the construction is to be completed on or before March 24, 2003.
7. All construction is to be completed on or before September 24, 2006.
8. Water is to be put to beneficial use on or before September 24, 2010.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

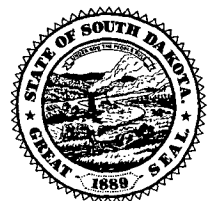
QUALIFICATIONS

1. The well 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. The well authorized by Permit No. 2465-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Water Permit No. 2465-2 authorizes a total annual diversion of 360 acre feet of water.
4. West River/Lyman-Jones RWS, Inc. shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara Formation.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

NOV 07 2001
date



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2465-2</u>	(office use only) Hydrologic Unit <u>10140102</u>
	Basin <u>Bad River</u>	
	Newspaper <u>see 1.3+</u>	



Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☒ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☒ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) _____

- Name of Applicant West River/Lyman-Jones RWS, Inc. Phone 605-669-2931
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address P.O. Box 407, Murdo State SD 57559
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.0 *CFS or 450 **GPM 360 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Well
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 well NE1/4, SE1/4, Sec. 6,
T1S, R17E
County Pennington
- County or counties where water will be used Pennington, Haakon, and Jackson
- Annual period during which water is to be used year round Jan. 1-Dec. 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
Primary water source for Creighton, Grindstone and Elbon service areas until Mni Wiconi project water becomes available. Backup source thereafter. Source area includes the cities of Wall, Quinn, Cottonwood and Philip.

STATE OF SOUTH DAKOTA)

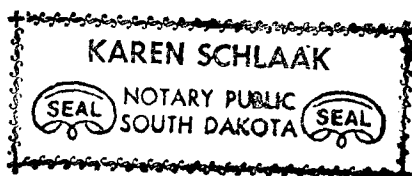
County of Hughes SS

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

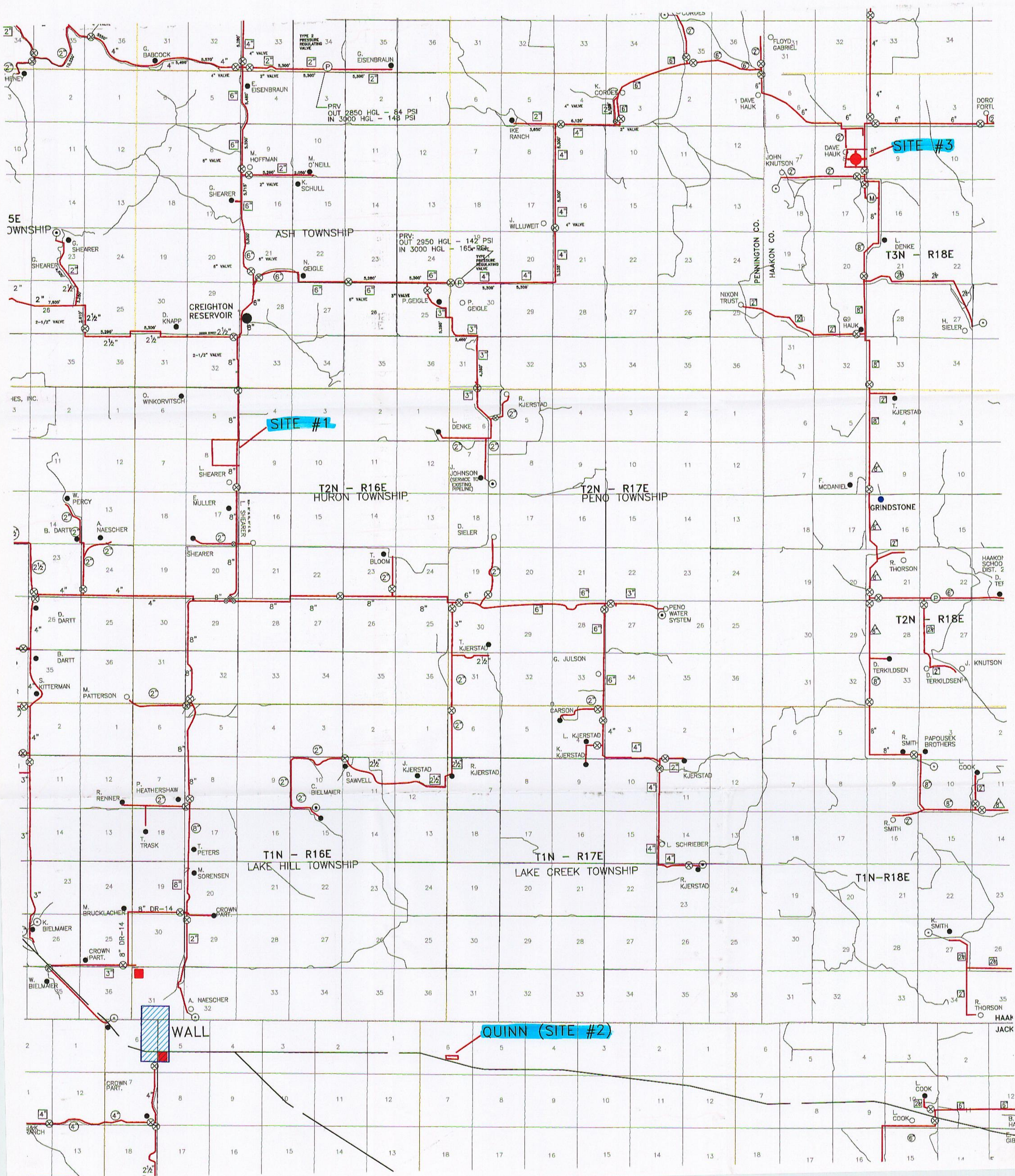
I, Mike Kurte, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature [Signature]

Subscribed and sworn to before me this 26th day of July 20 01



Karen Schlaak
Notary Public signature
My commission expires 4/01/07



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 12 3/4" & 10" Depth 3080 ft.
- b) Casing Type Steel Diameter 10" & 6" Thickness 0.365" & 0.25"
- c) Screen Type Stainless Steel Diameter 6" Thickness Schedule 80
- d) Gravel Pack Quartz Gravel Length of Gravel Pack 180 ft.
- e) Depth to Top of Water Bearing Material 2900
- f) Depth to Water (ground surface to water level) 400 ft. (estimated)
- g) Distance to nearest existing domestic well:
- On applicants property No other well On property owned by others 1,300 ft.

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

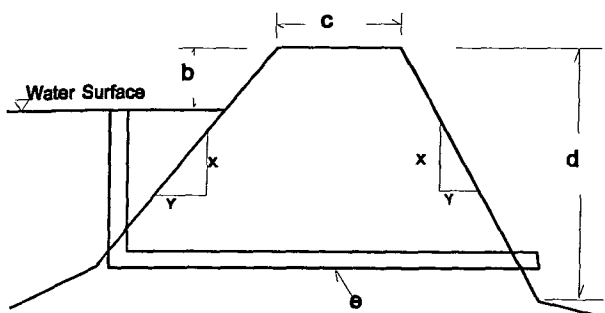
3. Dugout Information

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

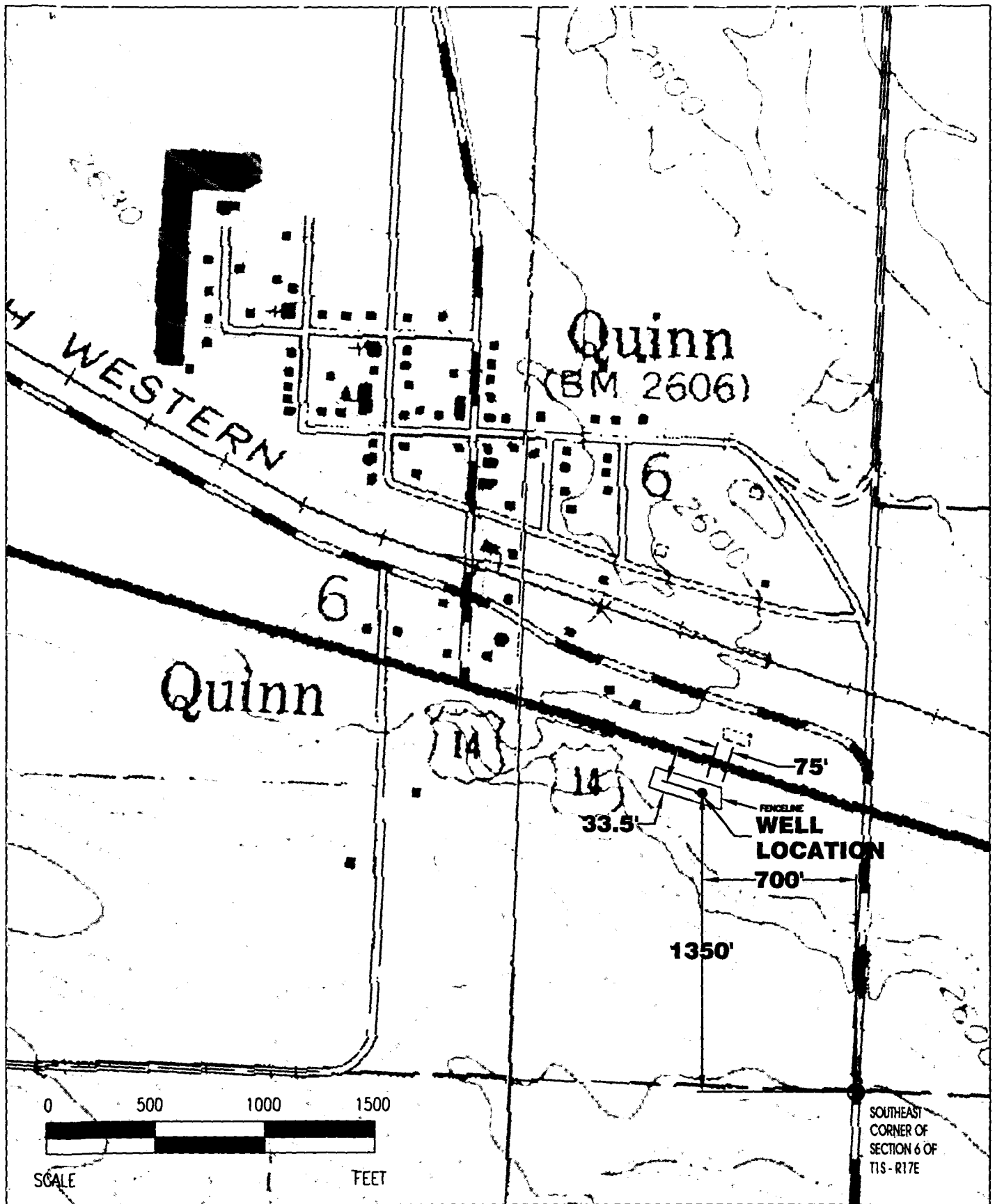
4. Water Storage Dams

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



I hereby certify that this plan, specification, or report was prepared by me or under my direct personal supervision, and that I am a duly Registered Professional Engineer under the laws of the

State of SOUTH DAKOTA Registration No. 3812
 By *Donna J. Jernigan* Date 7-25-01

P:\08\023\032 PhWalmain\dwg\Well Location

WGR

DeWild Grant Reckert
 and Associates Company
 Consulting Engineers
 Rock Rapids, Iowa

Date JULY 2001
 Drawn By WH
 Approved BAJ
 Revised
 Project No. 802332

WEST RIVER / LYMAN-JONES
 RURAL WATER SYSTEM
 MURDO, SOUTH DAKOTA
 WELL LOCATION

2465-2

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

№ 416871

Pierre, JULY 26, 20 01

RECEIVED OF West River/Lyman-Jones Rural Water Systems, Inc., PO Box 523, Murdo, SD 57559
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>2465-2</u> to Appropriate Water, to construct and to put water to beneficial use _____	250	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. <u>2465-2</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	300 00

By

Chief Engineer

Darland Erbe

gm



DeWild Grant Reckert and Associates Company
Consulting Engineers

315 First Avenue
Rock Rapids, Iowa 51246
(712) 472-2531
Fax (712) 472-2710

March 16, 2001

Steve Hodges
Blackhawk Geosciences, Inc.
301 Commercial Road, Ste. B
Golden, CO 80401



Re: WR/LJ RWS Well Project

Dear Mr. Hodges:

This letter is in reference to the WR/LJ Well Project in the Quinn, SD area. Included with this letter are the following documents:

1. Creighton Well log
2. Report on Wall Well
3. Gypsy Oil Co. Well log
4. Photo of equipment used for seismograph investigation
5. Project Area map
6. Strip Maps of the specific potential well locations

Please call if you have any questions or require further information.

Sincerely,

**DEWILD GRANT RECKERT
& ASSOCIATES COMPANY**

Laura J. Fischer, EI

LJF:ljf

Enclosure

cc: Mike Kurle, WR/LJ
Rick Riggle, WR/LJ
Chuck Holsether, WR/LJ
Paul Goldhammer, WR/LJ
Jim Goodman, SD Water Rights
Warren Smith, BOR

JOHN PAUL GRIES

Consulting Geologist

238 ST. CHARLES STREET

RAPID CITY, SOUTH DAKOTA

West River Rural Water System Creighton Well.

NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 3 N., R. 16 E.

Pennington County, South Dakota

Elev. (topo map) 2957 T. D. (logger) 3417 feet

Drilled May-June 1994 by Weston Engineering, Upton, Wyo.

Induction electric log by Goodwell, Inc., Upton, Wyo.

Geologic correlation by J. P. Gries, Rapid City, S. D.

Well starts in Fox Hills formation, and penetrates full section of Pierre shale.

	<u>Top</u>
Niobrara formation	
Smoky Hill member	1922
Fort Hayes member	2010
Carlile formation	2145
Greenhorn formation	
shale member	2482
limestone	2555
shale (included in Belle Fourche)	
Belle Fourche shale	2588 (or lower)
Dakota sands	3022
Skull Creek shale	3148
Fall River-Lakota fms	3340
Total Depth	3417

REPORT ON PUMP TEST CONDUCTED IN THE
FALL RIVER/LAKOTA AQUIFER FOR THE CITY OF
WALL, SOUTH DAKOTA IN NOVEMBER, 1985

PREPARED BY: Dr. Perry H. Rahn, Geologic Consultant
Dr. J. P. Gries, Geologic Consultant
Dr. Assad Barari, South Dakota Geologic
Survey Geologist

PREPARED FOR: City of Wall
Wall, South Dakota

DATE: July 24, 1986

OBJECTIVE:

The pump test reported herein was designed to determine flow characteristics in the Fall River/Lakota formation in the Wall, South Dakota area to make it possible to properly locate new wells to serve the City of Wall, South Dakota. Static water levels were also determined as part of this test and will be recorded on a continuing basis to determine the rate at which the static water level is falling in the Fall River formation.

PROCEDURE:

Figure 1 on page 6 contains a topographic map of the City of Wall and identifies the 5 wells which were used in the pump test. All wells pump from the Fall River/Lakota sandstone aquifer. Table I on page 7 and Figure 2 on page 8 contain all descriptive information on the existing wells which was available at the time of the study. Based on information taken from the Notice of Well Construction dated May 20, 1974 on file in the State Water Rights Commission Office in Pierre, South Dakota, the Kelley well had the following characteristics:

Depth to the top of the water	
producing aquifer	3,150 feet
Total depth of drill hole	3,175 feet
Depth to the bottom of casing	3,175 feet
Casing size and length	1,007 feet of 7"
	2,187 feet of 4"
Depth to static water level	500 feet
Pump setting	735 feet
Pump type	20 gpm, 5 hp, Reda

Well log:

0-40	Badland
40-1530	Pierre Shale
1530-2130	Niobrara
2130-2140	Greenhorn

	2140-2730	Mowery Shale
	2730-2760	Muddy
	2760-2884	Skull Creek
	2884-2950	Dakota
	2950-3150	Shale
	3150-3175	Lakota
Well Driller		W. Vinekamp
Location	SE 1/4 of SE 1/4, Section 6, T1S, R16E	

Well #3 was the pumped well. This well was equipped with an air tube and a downhole electric level indicator, but the level indicator became lodged in the downhole cables early in the test and all liquid level measurements were made with the air line.

The Kelley well and Well Nos. 1, 2 and 4 were used as observation wells. Well #1 had a USGS recording float system which was used to determine water levels. The Kelley well and wells 2 and 4 were equipped with electric water level indicators. Figure 3 on page 9 presents a picture of a typical water level indicator used in the pump tests. The indicators consisted of about 800 feet of electric telephone cable, a 90 volt battery and a light bulb which lit up when the probe was lowered into the well and contacted water. Readings were made on a cloth tape positioned on the electric cable and were recorded to the nearest one-hundredth of a foot.

The test was conducted in three phases:

1. Monday, November 12, 8:00 A.M. until Tuesday, November 13, 9:30 A.M. During this interval, all wells were turned off so that pre-test trends could be established in each well.
2. Tuesday, November 13, 9:30 A.M. until Wednesday, November 14, 12:30 P.M. During this interval, Well #3 was pumped at an average discharge of 125.5 gpm. The water levels were recorded at each well approximately every minute during the first hour of pumping, but intervals between measurements were increased so that by November 14, readings were taken approximately every hour.
3. Wednesday, November 14, 12:30 P.M. until Friday, November 15, 11:00 A.M. During this interval, Well #3 was turned off and the water levels were allowed to recover.

The following individuals participated in the pump test:

Paul Goldhammer, City of Wall
Perry Rahn, SDSM&T Faculty
J. P. Gries, SDSM&T Faculty
Arden Davis, SDSM&T Faculty
Dennis Riding, SDSM&T Student
Mike Forword, SDSM&T Student
Dave Brown, SDSM&T Student
Dan Hern, USGS, Rapid City
Renee Wenzel, USGA, Rapid City
Tom McKallip, USGS, Rapid City
Chris Neuzil, USGS, Reston, VA
Floyd Matthew, Utility Engineering Corporation
Jeff Matthew, Utility Engineering Corporation
Assad Barari, SDGS, Vermillion

RESULTS:

Figures 4, 5, 6, 7 and 8 on pages 10 through 14 show the water levels for Well Nos. 1, 2, 3, 4 and the Kelley well during the pumping and recovery phases of the pump test.

Well #1 has the continuous water-level recorder. Unfortunately, the flat was not operating accurately during the pre-test monitoring period due to the fact that the wire (leading into the housing for the computer-punch mechanism) had become stuck. Therefore, pre-test data plotted on Figure 4 is subject to error, and the pre-test trend can only be estimated. During the pump test itself, accurate measurements were made by hand by USGS personnel. During the post-test recovery period, some inaccuracy is present in recording the exact time of measurement.

Well #2 (Figure 5), measured manually by an electric probe described above, gave excellent results.

Well #3 (Figure 6) is the pumped well. The water level for the pre-test interval was measured with an electric probe. This probe got stuck at the start of the test and water levels were determined by a back-up air-pressure hose. At the start of the recovery test, the air-pressure hose failed and no data were collected.

The pumping rate was determined by the meter inside the pumphouse at Well #3. This meter was calibrated by timing the filling rate for a 300 gallon tank. A valve was adjusted to provide a nearly constant pumping rate. (As the main water tank was being filled, a greater head tended to result in a smaller discharge. Thus, the valve was opened up manually to attempt to compensate for this effect.) During

the pump test, discharge was determined to be about 130 gpm during the first hour, gradually decreasing to 124.7 gpm during the last few hours of the test. The average pumping rate for the entire 27 hour pump test was 125.5 gpm.

The specific capacity of Well #3 can be determined from Figure 6.

$$\begin{aligned}\text{Sp. Cap.} &= \frac{125.5 \text{ gpm}}{140 \text{ ft. drawdown}} \\ &= 0.90 \text{ gpm/ft.}\end{aligned}$$

Well #4 (Figure 7), measured manually by an electric probe, produced an excellent set of data.

The Kelley well (Figure 8), measured manually by an electric probe, produced good data, but the water levels fluctuated in an unexplainable manner during the test and the data were not used.

DATA ANALYSIS:

Pre-test levels can be extrapolated from Figures 4, 5 and 7 and the "drawdown" from the extrapolated curve can be used to determine transmissivity (T) and storativity (S) for the aquifer.

Figure 9 on page 15 presents time drawdown plots for Well Nos. 1, 2 and 4. Drawdown values after 27 hours of pumping were:

Well #1:	12.68 ft.
Well #2:	8.10 ft.
Well #3:	140 ft. (pumped well)
Well #4:	10.75 ft.

The projected static water level was determined to be:

Well #1:	2,313 ft. MSL
Well #2:	2,312 ft. MSL
Well #3:	2,311 ft. MSL
Well #4:	2,312 ft. MSL
Kelley Well:	2,289 ft. MSL

Based on the Theis curve technique, the transmissivity values are as follows:

Well #1:	2,283 gpd per foot
Well #2:	2,115 gpd per foot
Well #4:	2,766 gpd per foot

Projected static water levels prior to the pump test and final static water levels after 27 hours of pumping are shown in Figures 10 and 11 on pages 16 and 17.

The unusual readings taken during the pump test at the Kelley well and the inconsistency of the static water level at the Kelley well render those data unusable.

CONCLUSIONS:

The pump test results indicate that the Fall River formation in the Wall area is relatively homogenous and that transmissivities are uniform in all directions. Based on these findings, it should be possible locate a new well in any direction from Wall. The minimum spacing should exceed 2,000 feet to insure that cone of depression interference is minimized.

Static water elevations taken prior to the pump test were compared with static water elevation data collected previously. Based on a comparison of these data, the static water level in the Fall River formation is dropping an estimated 6 feet per year.

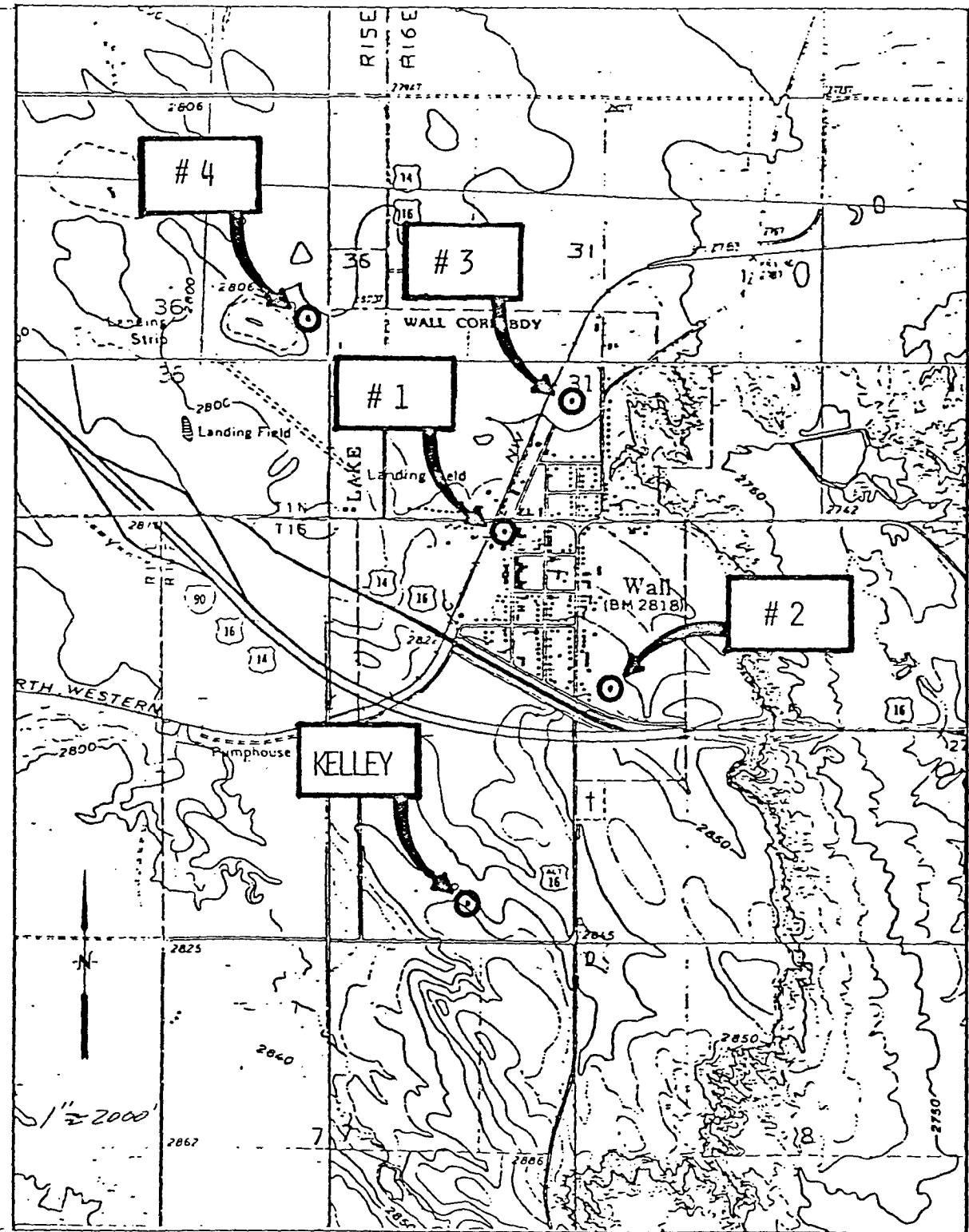


Figure 1. Map of Wall Showing Well Locations

Table I. Summary of Design and Operation Information for Wells 1, 2, 3 and 4 at Wall, South Dakota.

DESCRIPTION	WELL NUMBER			
	1	2	3	4
Location	3rd Avenue	"A" Street	City Park	Airport
Year Constructed	1960	1961	1970	1976
Top Casing Depth-Ft. Below Surface	595'	806'	812'	1189'
Present Pump Suction-Ft. Below Surface	580'	763'	765'	920'
Maximum Pump Suction-Ft. Below Surface	580'	791'	798'	1174'
Surface Datum Elevation-Ft. Above Sea Level	2821.44	2842.6	2811.23	2804.98
Well Capacity - gpm:				
When Constructed	130-150	217	130	200 (1)
Estimated Present (2)	130-0	175	130	200-185
Well Drawdown:				
When Constructed	95' @ 160 gpm	?	125' @ 130 gpm	220' @ 183 gpm
Estimated Present	? (3)	200' @ 175 gpm	175' @ 130 gpm	240' @ 200 gpm
Specific Yield-gpm/Ft. Drawdown (Present)	? (4)	0.88	0.74	0.83
Static Level-Ft. Below Surface				
Original	357-1960	370-1961	450-1970	480-1976
Most Recent	498-1978	542'-6/85	498-1984	463-1981
Estimated Static Level Drop-Ft./Yr.	9'	4.8'	4.8'	?
Pump Horsepower	30	60	40	75
Pump Design Flow and Head (5)	130 gpm @ 600'	217 gpm @ 775'	130 gpm @ 730'	200 gpm @ 870'
Gallons/Min/Hp	4.3	3.6	3.3	2.7

NOTES:

- (1) Well #4 does not have a gravel/pack. Well could produce up to 400 gpm but potential sand problems and pipe hydraulics limit the pumping rate to 250 gpm.
- (2) Based on Superintendent's best estimate. Total short term capacity = 675 gpm. Total sustained capacity = 490 gpm.
- (3) Water level drops below pump suction with sustained pumping.
- (4) No current measurements.
- (5) High water level in reservoir is 2926'.

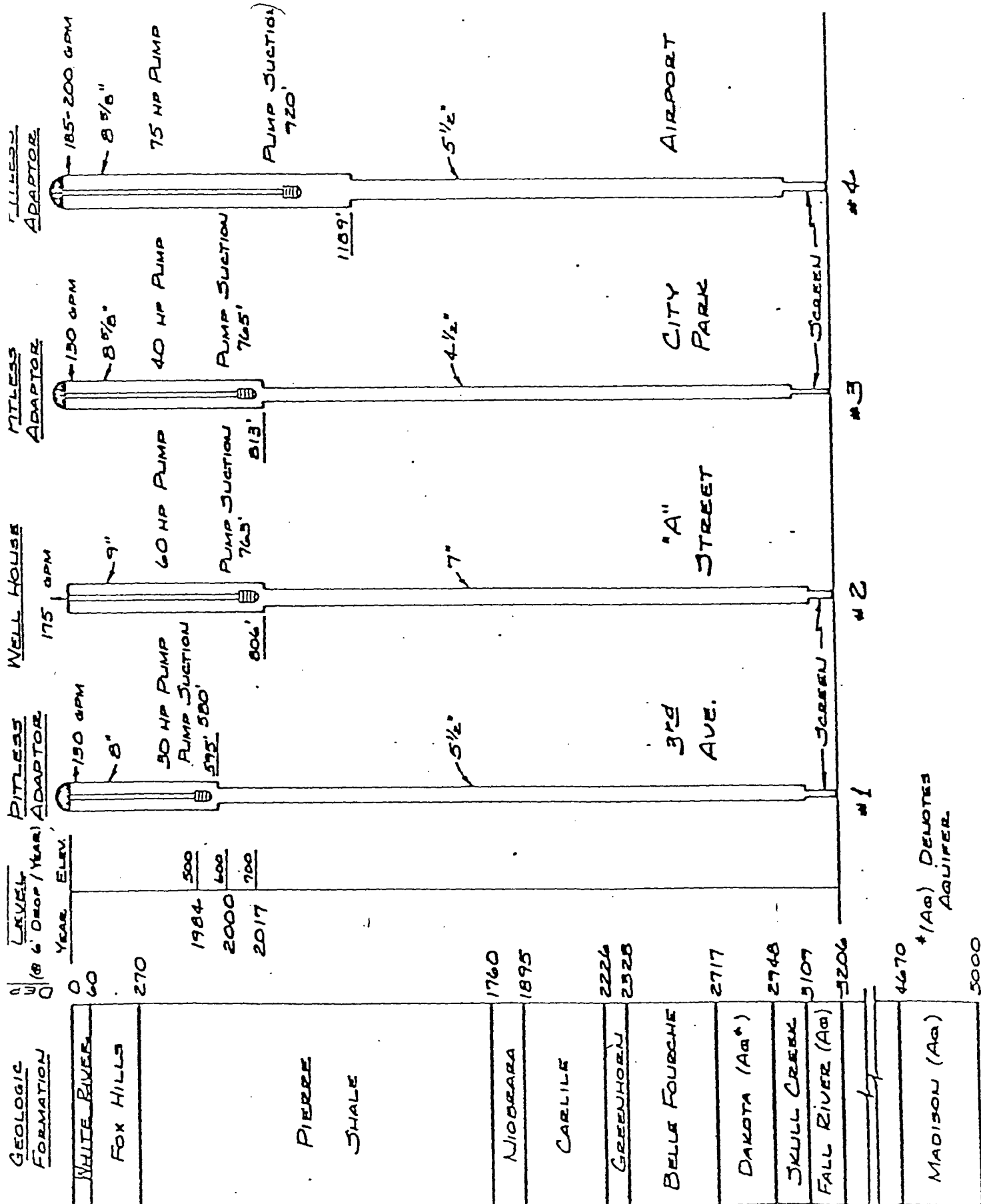


Figure 2. Profiles of Wells 1, 2, 3 & 4, Wall, South Dakota

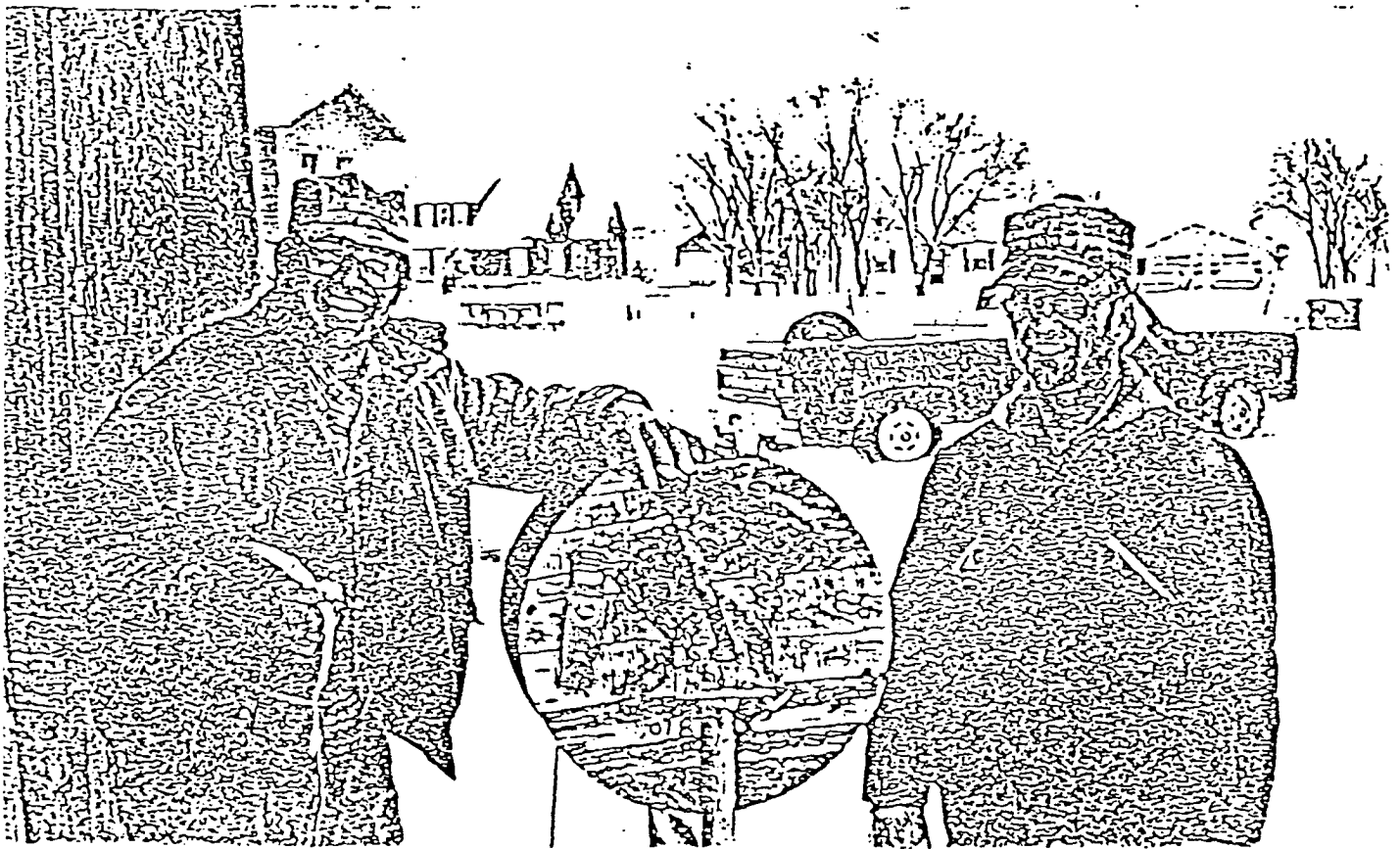


Figure 3. Electric Water Level Indicator Used at Well #3

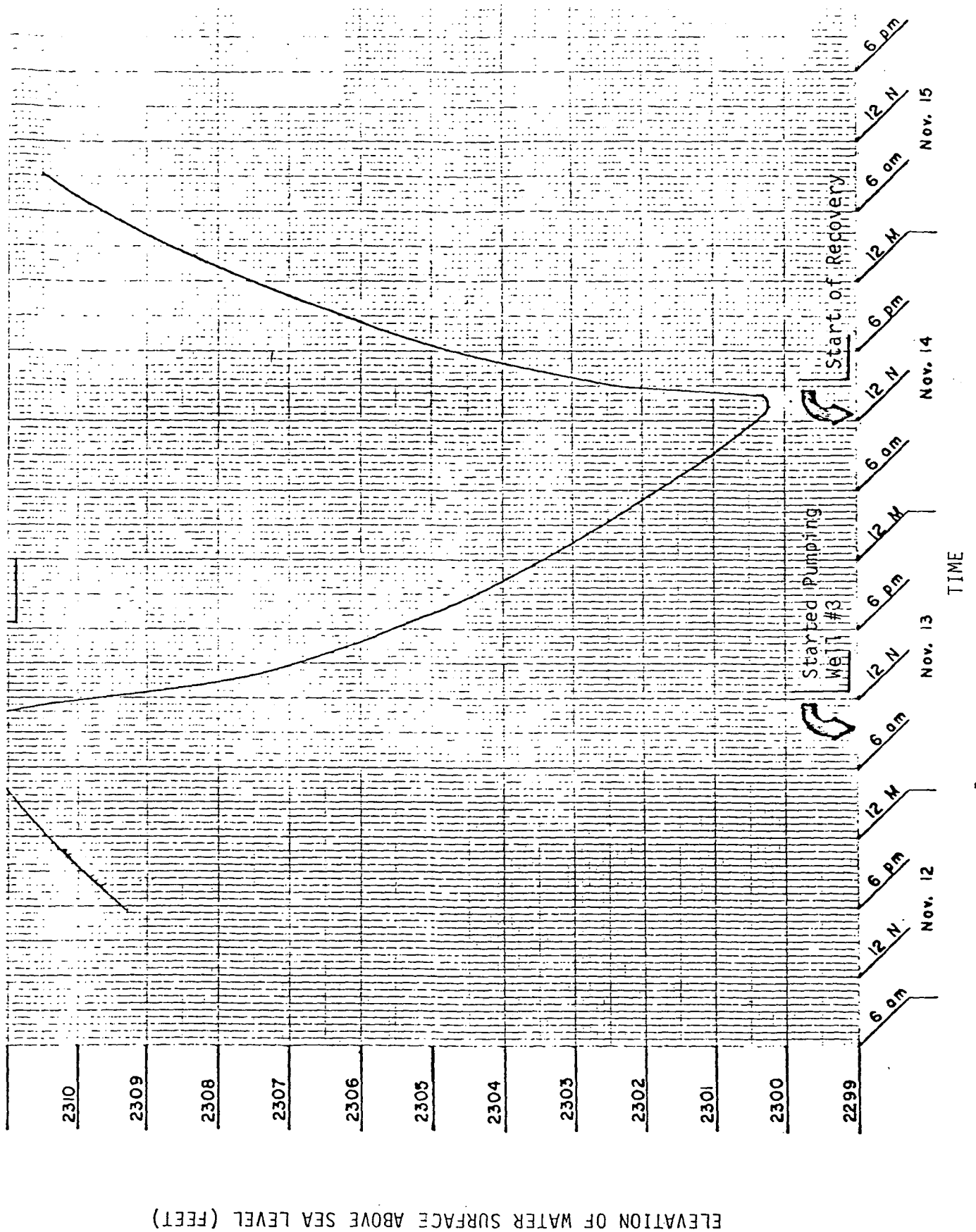


Figure 4. Recorded Water Levels in Well #1

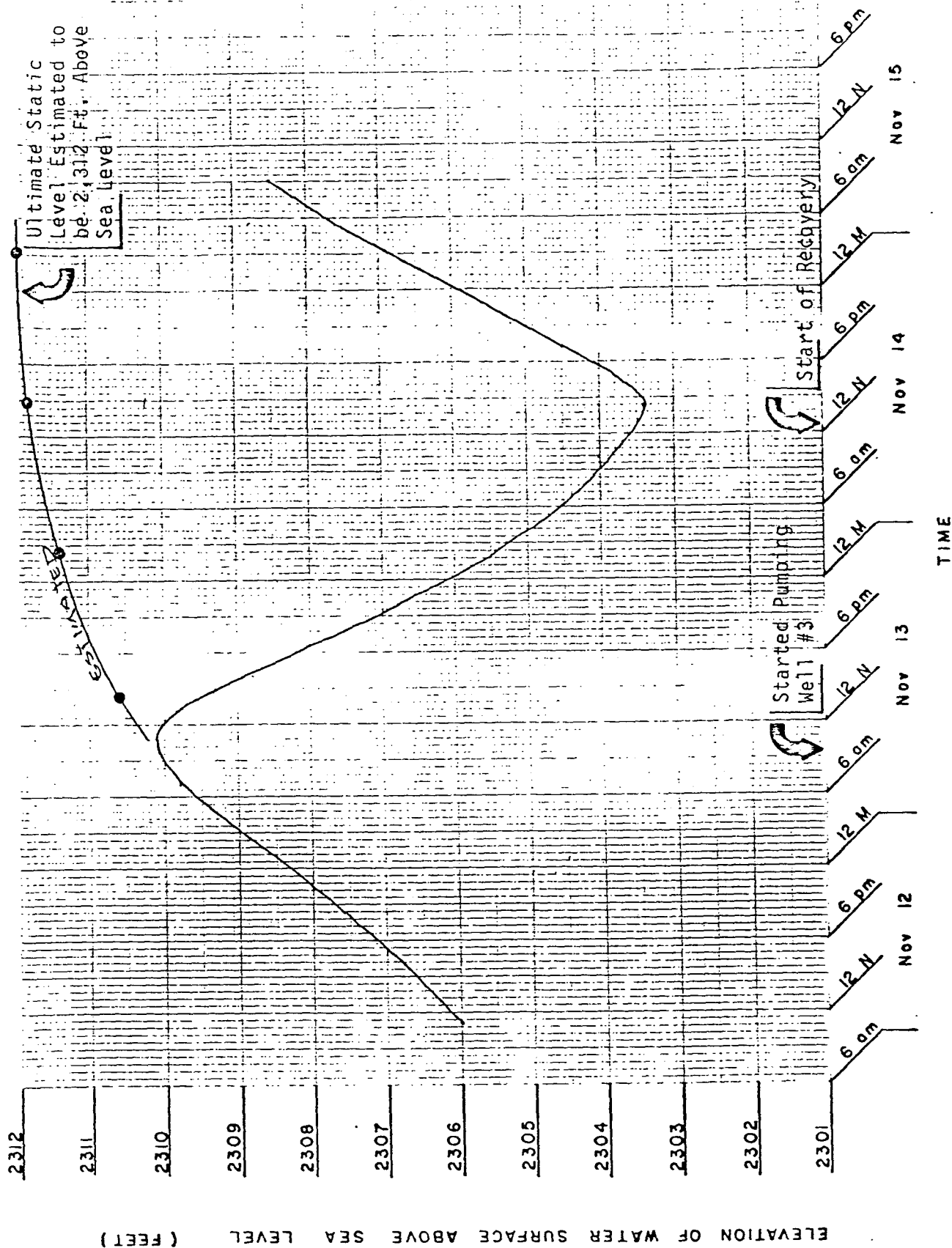


Figure 5. Recorded Water Levels in Well #2

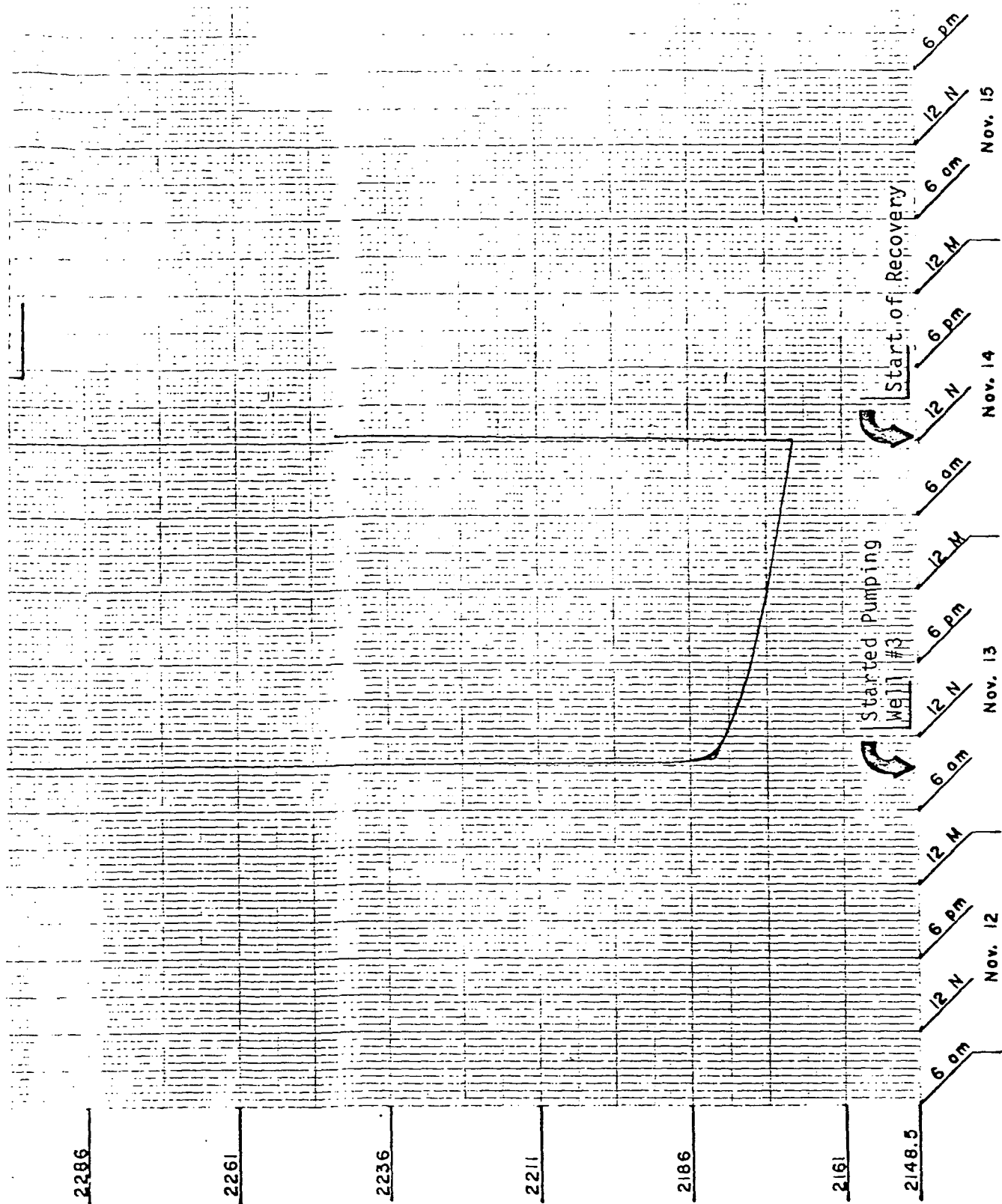


Figure 6. Recorded Water Levels in Well #3

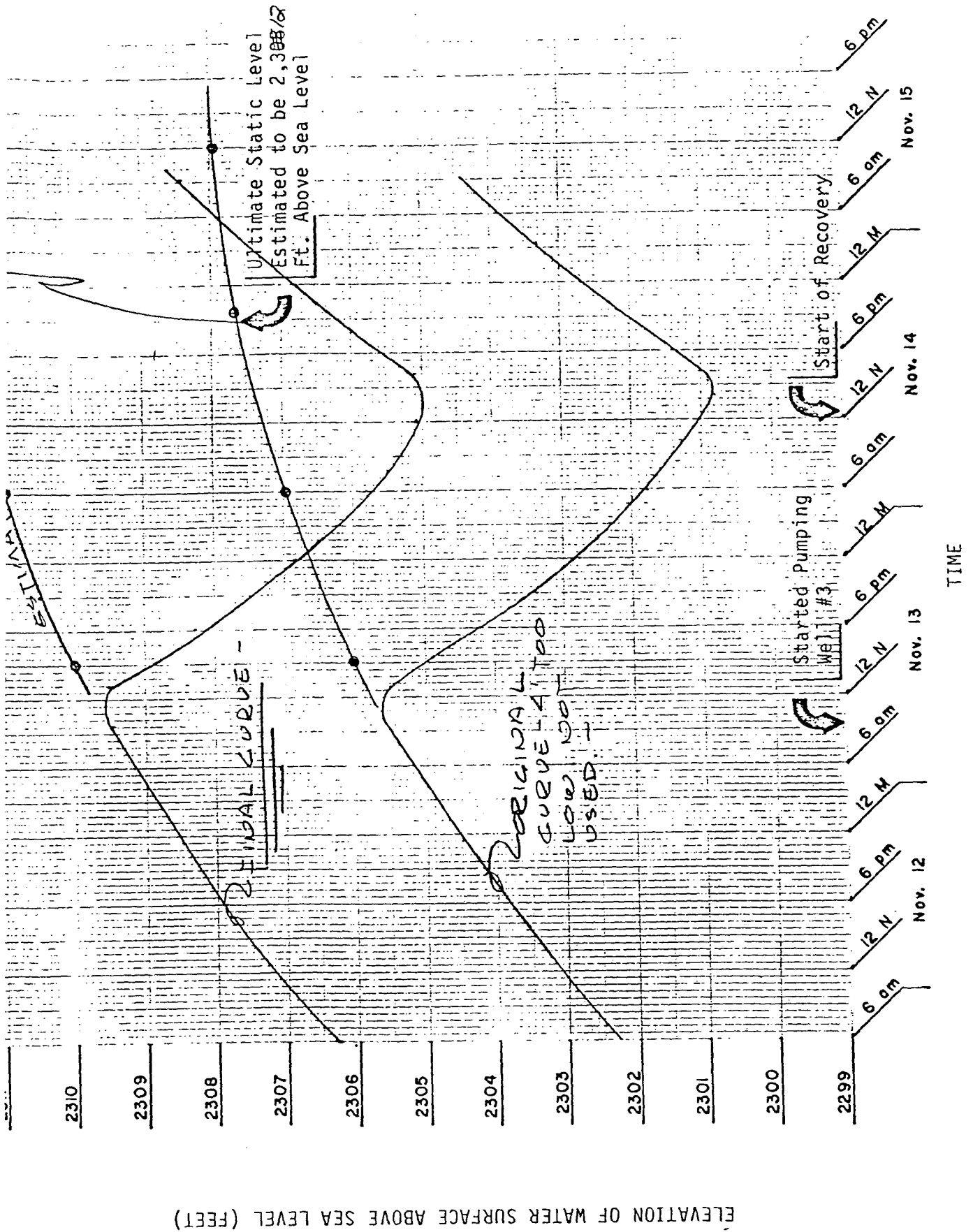


Figure 7. Recorded Water Levels in Well #4

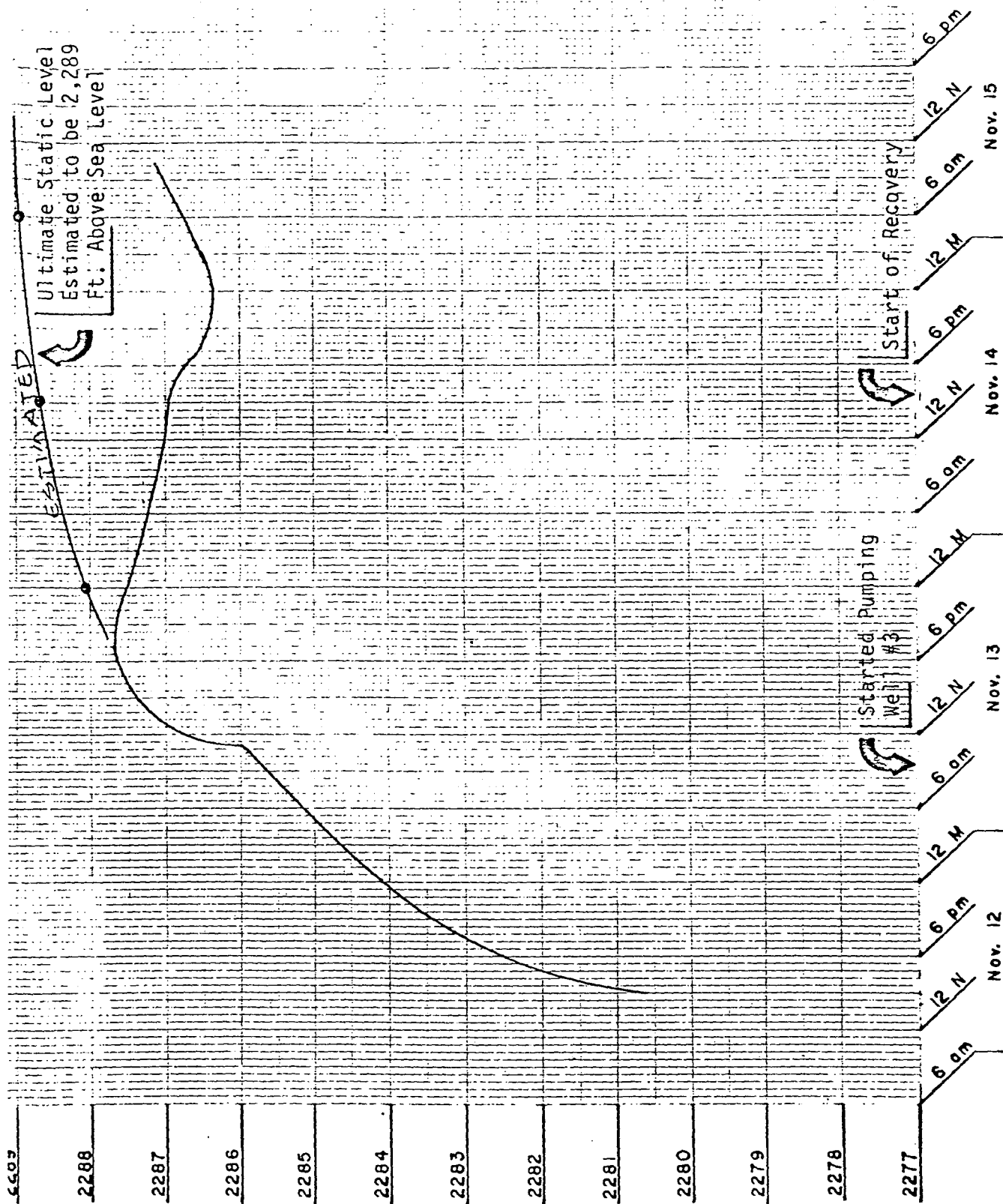


Figure 8. Recorded Water Levels in Kelley Well

CALCULATION OF TRANSMISSIVITY (T) AND STORATIVITY (S)

$$T = \frac{114.6 \cdot Q \cdot W(u)}{S} \quad Q = 125.5 \text{ gpm (Well #3)}$$

$$S = \frac{T \cdot u}{2.693 \cdot r^2}$$

Well #1 (r = 1727 ft.)

"Match Point": W(u) = 1 s = 6.3 ft.
1/u = 1 t = 120 min.

$$T = \frac{114.6 \cdot (125.5) \cdot (1)}{6.3} = 2,283 \text{ gpd/ft.}$$

$$S = \frac{2283 \cdot (1)}{2693 \cdot (1727)^2} = 0.000,0341$$

Well #2 (r = 3600 ft.)

"Match Point": W(u) = 1 s = 6.8 ft.
1/u = 1 t = 340 min.

$$T = \frac{114.6 \cdot (125.5) \cdot (1)}{6.8} = 2,115 \text{ gpd/ft.}$$

$$S = \frac{2115 \cdot (1)}{2693 \cdot (3600)^2} = 0.000,0206$$

Well #4 (r = 3450 ft.)

"Match Point": W(u) = 1 s = 5.2 ft.
1/u = 1 t = 320 min.

$$T = \frac{114.6 \cdot (125.5) \cdot (1)}{5.2} = 2,766 \text{ gpd/ft.}$$

$$S = \frac{2766 \cdot (1)}{2693 \cdot (3450)^2} = 0.000,0276$$

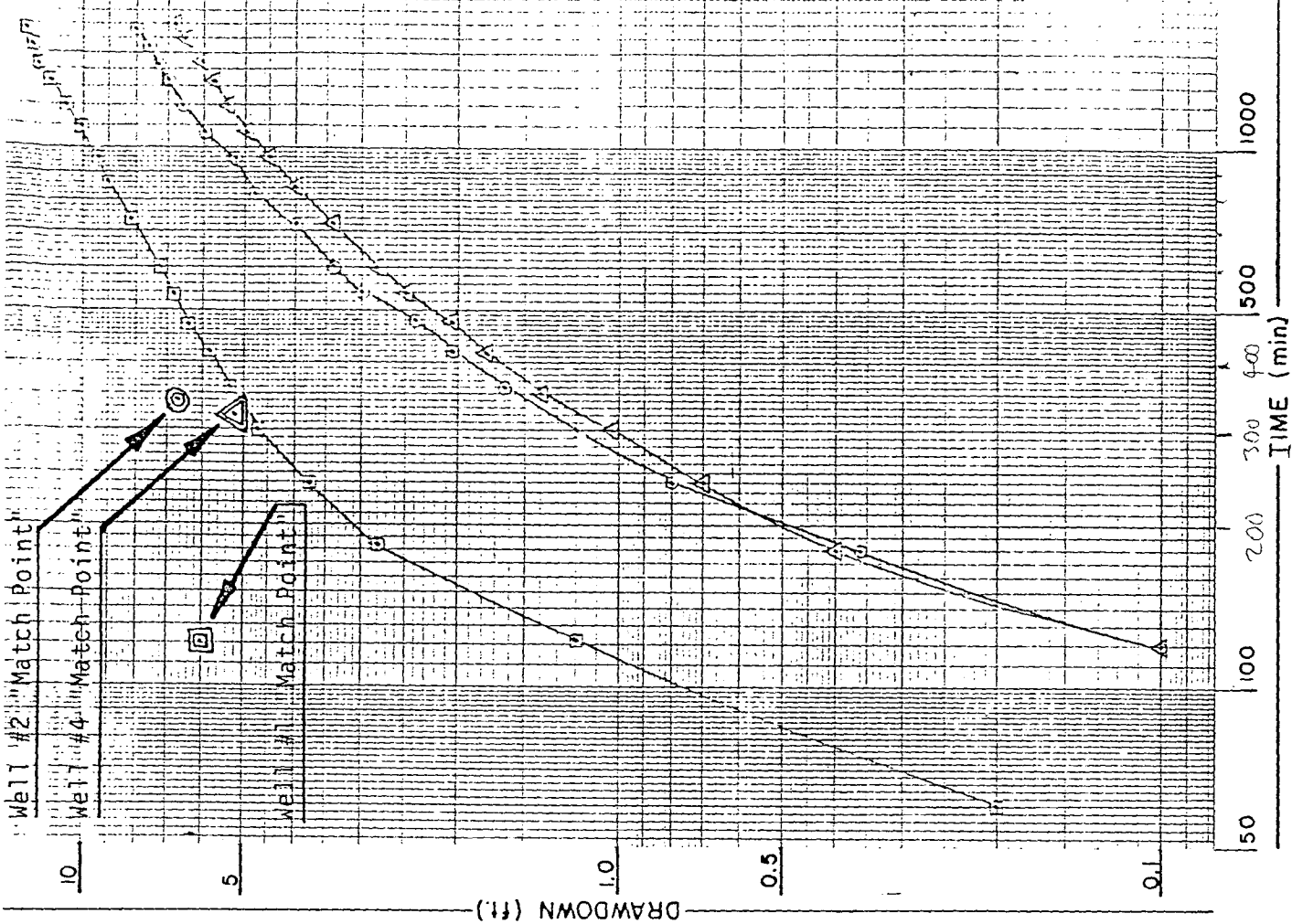
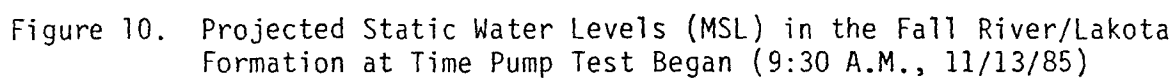


Figure 9. Time - Drawdown Plots



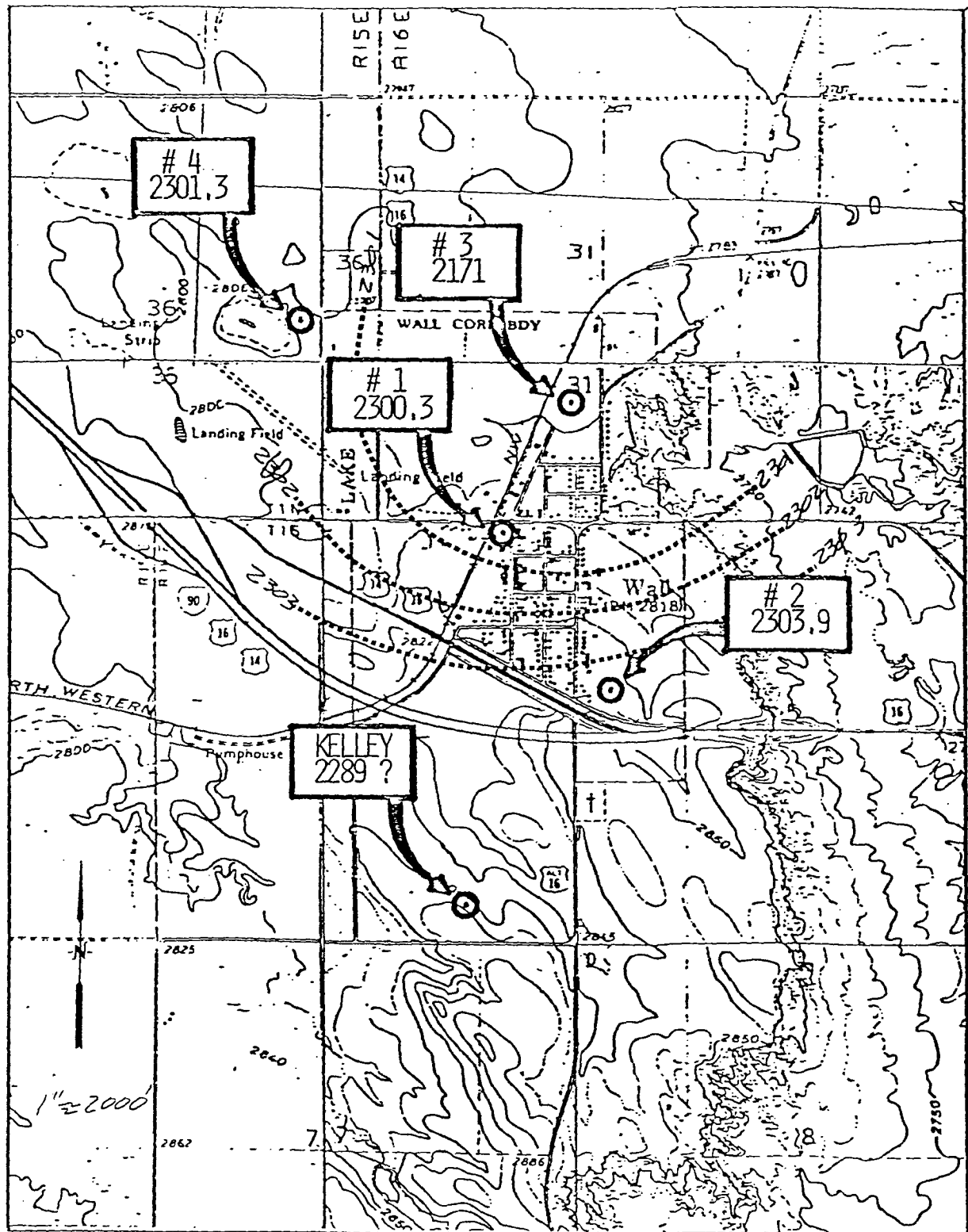


Figure 11. Contours of Drawdown in the Fall River/Lakota Formation After #3 Well was Pumped 27 Hours

B. Central Western South Dakota

7. GYPSY OIL CO. HUNTER 1, NE. $\frac{1}{4}$ SW. $\frac{1}{4}$, Sec. 28, T. 3 N., R. 16 E., Pennington County, altitude 2956.8'. Nine-inch casing set at 4513', cable tools 4573'. 5001'. See Littlefield, M.S., "Log of Wildcat Well in Pennington County, South Dakota," Am. Assoc. Petroleum Geologists Bull., vol. 23, No. 8, August, 1939, pp. 1234-1237.

0- 243'	No cuttings. <u>Fox Hills</u> formation
243- 560	No Cuttings. <u>Pierre</u> : Bentonitic clay
560-2050	<u>Pierre</u> : Clay, bentonitic, grey green, with some white chalky layers, selenite, fine mica flakes, small serpentine particles, shell fragments, including <u>Inoceramus</u>
640& 710	<u>Robulus navarroensis</u> , <u>Dorothea</u> (?) at 640'
750- 760	Abundant shell fragments, <u>hauerite</u> (?)
760- 770	Chalcopyrite, <u>Robulus</u> , abundant <u>Inoceramus</u> prisms
810	<u>Robulus</u>
830	<u>Robulus</u> , <u>Globigerina</u> , many shell fragments
840- 850	Part with very small quartz grains, noted also higher up, fine greywacke sand, chalcopyrite, many shell fragments
850- 860	A little milky chert
900- 910	<u>Dorothea</u> , <u>Globigerina</u> , <u>Robulus</u>
920	<u>Dorothea</u> , and considerable calcite
960- 970	<u>Robulus</u>
980	<u>Robulus</u> , <u>Globigerina</u>
990	<u>Dorothea</u>
1020	Some light grey limestone
1040	Some greywacke sandstone with andesite fragments, brown siltstone
1090	<u>Haplophragmoides</u>
1140	<u>Robulus</u>
1170	<u>Globigerina</u> , <u>Textularia</u> , <u>Haplophragmoides</u> , some brown limestone concretions
1180	<u>Dorothea</u> , <u>Dentalina</u>
1200	Brown septarian concretion
1210	<u>Haplophragmoides</u> , <u>Dorothea</u> , <u>Globigerina</u>
1230	<u>Nodogenerina</u>
1280	Considerable brown clay ironstone
1330	<u>Dorothea</u>
1340	Somewhat limier, <u>Globigerina</u>
1360	<u>Robulus</u> , echinoid spine, <u>Haplophragmoides</u> , <u>Globigerina</u> , <u>Dorothea</u>
1410	<u>Haplophragmoides</u>
1420	<u>Textularia</u> , <u>Globigerina</u>
1430	<u>Robulus</u> , <u>Haplophragmoides</u> , <u>Textularia</u> , <u>Globigerina</u> , <u>Dorothea</u> and <u>Miliolid</u> , sandstone, grey, medium grain with black particles
1450	<u>Haplophragmoides</u> , <u>Dorothea</u> , <u>Globigerina</u> , small pearl and <u>Chara</u> seeds, limestone, light grey, very dense, some with cone-in-cone structure

1480	<u>Dorothea</u>
1490	<u>Cribrostomoides</u>
1500	<u>Dorothea</u> , cone spaerosiderite, some hauerite (?)
1520	<u>Globigerina</u>
1530	<u>Globigerina</u> , <u>Robulus</u> , <u>Textularia</u> , <u>Dorothea</u>
1550	<u>Globigerina</u> , <u>Robulus</u> , <u>Textularia</u>
1560	Chalk, light brown
1584-1590	<u>Ammodiscus</u>
1590	<u>Textularia</u>
1602-1604	Core of mudstone, dark grey, very fine, compact
1610	<u>Haplophragmoides</u>
1630	<u>Haplophragmoides</u> , <u>Dorothea</u>
1660	Top of Sharon Springs shale, dark grey, bituminous serpentine pellets common, <u>Dorothea</u> , abundant <u>Chara</u> seed
1670	<u>Dorothea</u> , <u>Globigerina</u> , some sandstone and light grey limestone
1680	<u>Robulus</u> , <u>Globigerina</u>
1690	<u>Haplophragmoides</u> , brown clay ironstone, very dark grey marl
1700	<u>Ammodiscus</u> , <u>Dorothea</u> , <u>Textularia</u> , nonionid, some fine grit, black elliptical pebbles, fish remains, bituminous grey marl
1730	Nonionid (" <u>Cristellaria</u> "). <u>Textularia</u> , <u>Dorothea</u>
1740	Nonionid (" <u>Cristellaria</u> "), <u>Ammodiscus</u> , <u>Globigerina</u>
1750	Some small flattened chalk pellets, serpentine or glauconite pellets common
1760	<u>Robulus</u> , <u>Textularia</u> , <u>Globigerina</u> , <u>Vidalina</u> . Poly- phragma, flaky, fissile shale of two tones of dark blue-grey. Considerable biotite occurs in the Sharon Springs
1790	<u>Dentalina</u> , a little light grey, fine grained, limy sandstone
1820	Some limestone, fine texture, light grey
1830	Limestone more abundant
1860	<u>Dorothea</u>
1900-1910	Chalk-spotted marl
1910	<u>Dorothea</u>
1920	<u>Textularia</u> , miliolid
1930	<u>Robulus</u>
1940	<u>Textularia</u>
1950	" <u>Cristellaria</u> ," <u>Robulus</u> , <u>Globigerina</u> , <u>Dorothea</u>
1980	<u>Vidalina</u> , <u>Globigerina</u>
2010	<u>Vidalina</u> , <u>Globigerina</u> , <u>Robulus</u>
2040	Many small concretionary nodules of serpentinous clays, as usual, there is much caving material in the Pierre cuttings
2050-2090	<u>Niohrara</u> : marl, dark grey, chalk-spotted, <u>Robulus</u> , <u>Globigerina</u>
2090-2110	About half chalk, rest is marl
2110	Permanganate appearing substance

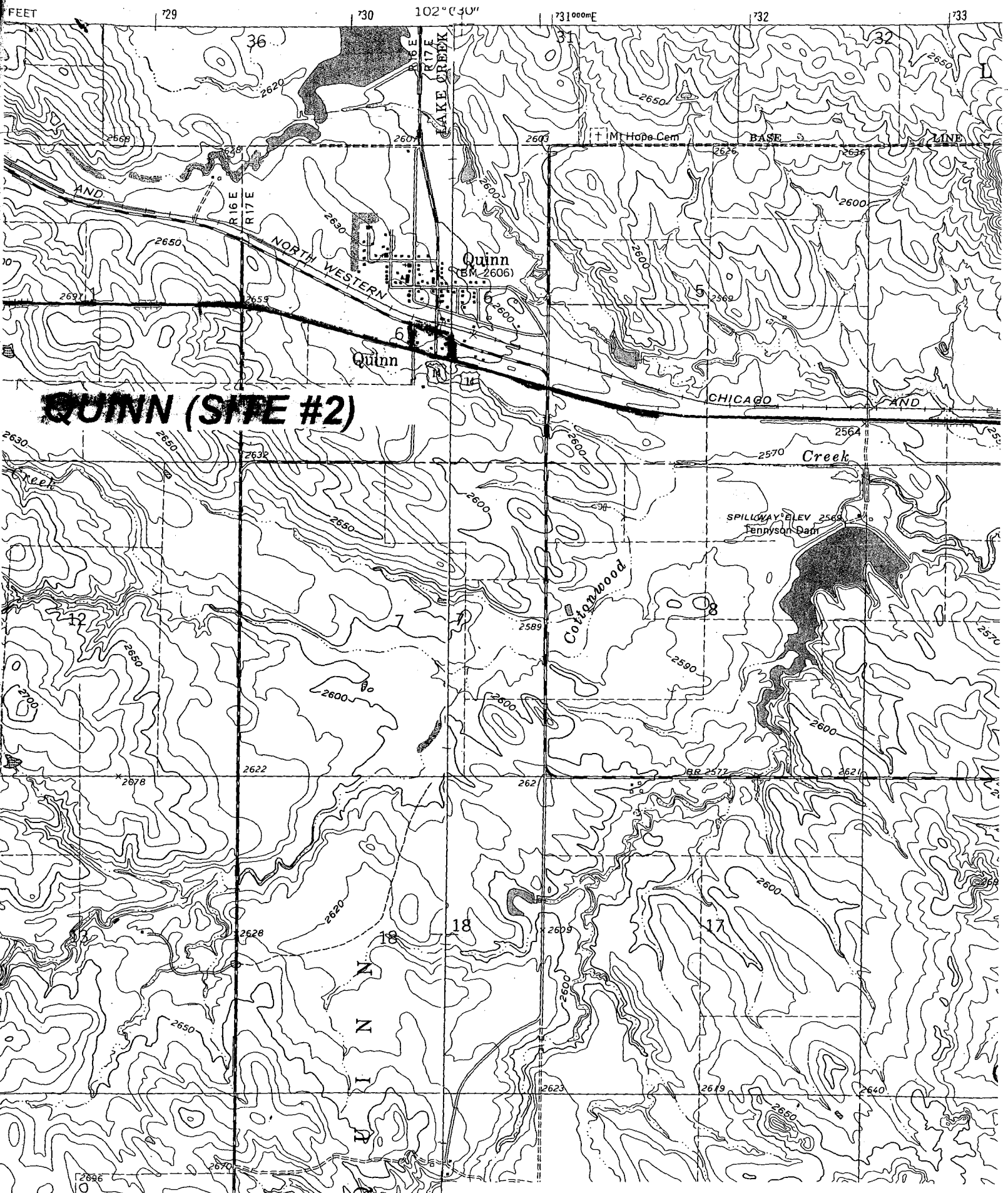
2130-2160 Some particles nearly pure chalk
 2160-2170 Less impure but solid chalk, Globigerina
 2170-2250 Carlile: Marl, dark blue grey, somewhat flaky,
 bituminous, fish remains and Inoceramus
 2250-2260 Robulus, Dorothea, some sandstone, light grey,
 micaceous
 2260 Dorothea
 2270 Globigerina, some sandstone, light grey, fine, limy
 2290 Shale very dark, nearly black, fine mica flakes,
 considerable limy sandstone, light grey, fine to
 medium, micaceous, biotite, hornblende, greywacke,
 foraminifera
 2390 Shale is dark blue grey
 2410 Sandstone as at 2290'
 2460 Shale is dark blue grey
 2500-2520 Greenhorn: Shale, almost black, with some flattened
 chalk pellets and fish remains
 2520-2563 Same but chalk particles very fine
 2563-2575 Limestone, light grey, chalky and clayey, crystal-
 line, spotted two shades grey, partly oolitic,
 (Globigerina)
 2575-2610 Graneros: Mudstone, bentonitic, flaky but not lami-
 nated
 2610 Color lighter
 2620 Vidalina, Globigerina, Dorothea
 2630 Shale again dark with small chalk spots
 2770 Some coarsely crystalline limestone with phlogopite
 2810 Shale very dark blue grey, Thermopolis (Skull Creek)
 facies. Some sandstone at 2880'
 2920 Some brown clay ironstone and sandstone, carbonaceous,
 fine
 2950 Some siltstone, light grey
 2980-3010 Dakota: Sandstone, light grey, very fine, silty.
 (Littlefield put top at 3024')
 3010-3060 Increase in amount of sandstone. Water rose from 3026'-
 3041'
 3060 Fuson: Shale dark blue grey, sparse manganosiderite
 pellets. Reported base Dakota at 3082'
 3100-3160 Sandstone, creamy white, medium grained, porous, subangular
 3160-3170 Limestone brown, with sponge spicules, siderite, a few
 FeMn pellets.
 3170-3230 Shale, dark blue grey. Casing run to 3209'
 3130-3240 Bentonite, dark green, pellets in dark blue grey mudstone
 3240-3280 Sandstone, fine grained with green bentonite matrix
 3280-3330 Shale, dark blue grey
 3330-3390 Lakota: Sandstone, light buff, medium grained,
 micaceous, angular, porous
 3390-3410 Shale, dark blue grey
 410-3420 Sandstone, grey-white, medium grained, angular,
 porous, white ashy matrix, micaceous. Some re-
 crystallized quartz, some large quartz grains partly
 rounded and frosted, a few pieces hornblende. Base
 coarser sandstone, more prevalently recrystallized

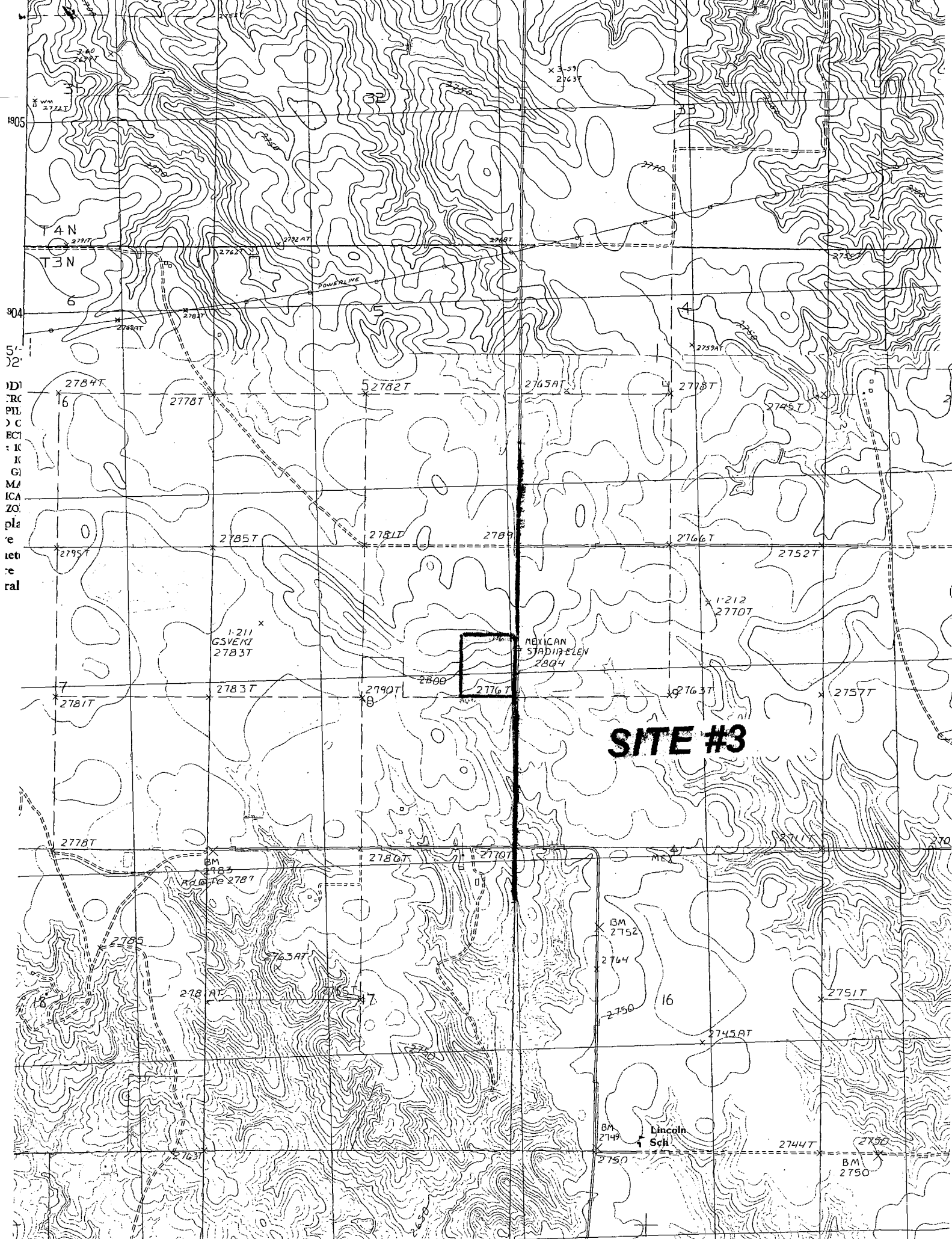
3420-3440	<u>Morrison</u> : Mudstone, light grey green, bentonitic, micaceous, and silty
3440-3450	Mostly bentonite, dull light green with spots and streaks of dark green
3450-3460	Some siltstone, terra cotta, with sand grains, more abundant sandstone, fine grained and unsorted, light green, some drab bentonite with numerous quartz grains
3460-3470	<u>Unkpapa</u> : Sandstone, buff, fine grained, angular
3470-3480	Sandstone, large quartz grains, angular, some mudstone light green grey bentonite
3480-3540	Sandstone, non-limy, buff to light grey, poorly sorted, angular, some recrystallized, becomes finer below
3540-3550	Bentonite, light green, compact, conchoidal fracture
3550-3570	Bentonite, as just above but some light grey, full of quartz grains
3570-3580	Mudstone, bentonitic, 3 shades of light green, some sandstone, bentonitic, some large subround etched grains, matrix partly limy, a little limestone
3580-3600	<u>Sundance</u> : Sandstone, light grey, medium grained, angular, porous, glauconitic
3600-3730	Siltstone, light grey, glauconitic
3730-3767	Sandstone, buff, fine grained, glauconitic, grey below
3767-3836	<u>Spearfish</u> : Sandstone, salmon, fine silty, angular. Color very light red brown
3836-3850	Sandstone, light grey
3850-3950	Anhydrite, white, and siltstone, dull brown red
3950-3980	<u>Minnekahta</u> : Limestone, dense, buff, somewhat magnesian, cavernous limestone--anhydrite mixture, some finely pisolitic
3980-4000	<u>Opeche</u> : Siltstone, dark red brown
4000-4010	Limestone--anhydrite, light grey
4010-4082	Siltstone, red brown, anhydrite at base
4082-4120	<u>Minnelusa</u> : Limestone, cream to light pink, magnesian, lithographic, becoming silty at base
4120-4130	Limestone, bentonitic, lavender, fine grained
4130-4140	Some anhydrite, mostly light pinkish brown fine grained limestone, silty, with small crystals of anhydrite
4140-4150	Anhydrite, white to pinkish
4150-4170	Limestone, dolomitic, brown buff, fine texture anhydrite, some pink, and sandstone
4170-4190	Limestone, dolomitic, cream, porcelain texture
4190-4200	Limestone, magnesian, light brown grey, fine texture, anhydrite, grey and white
4200-4220	Sandstone, salmon, fine grained, angular, white anhydrite
4220-4280	Perhaps all anhydrite, light grey and white, perhaps, at 4250'-60' some sandstone, salmon fine

4280-4300	Sandstone, light grey and pink, medium grained, angular, poorly sorted, larger grains rounded and etched, and dolomite, dark pink
4300-4330	Dolomite, pink, fine texture, anhydrite, white and grey
4330-4360	Siltstone, brown red or dark salmon, somewhat limy
4360-4380	Siltstone, dark red-vermillion, finer, shale, red, with light green-grey splotches
4380-4400	Shale, red, green-splotched, interbedded with sandstone, red, silty, micaceous, angular
4400-4420	Shale, lavender
4420-4430	Sandstone, brown, fine grained, silty, poorly sorted, limy, some white
4430-4450	Limestone, dolomitic, fine texture, brown pink, and anhydrite, white
4450-4470	Sandstone, cream, medium grained
4470-4480	Sandstone, grey, medium grained, poorly sorted, angular, somewhat limy
4480-4490	Anhydrite, grey and white, dolomite, grey-brown, fine sugary
4490-4500	Sandstone, light grey, fine, poorly sorted with some large rounded frosted grains
4500-4520	Shale, black, extremely bituminous, very small mica flakes
4520-4530	Limestone, magnesian, brown grey, fine sugary, siltstone, grey
4530-4575	Limestone, magnesian, grey, fine granular
4575-4591	Limestone, dolomitic, dove grey, fine granular
4591-4605	Limestone, grading down into darker color, then to siltstone and at base to shale, shiny black, very bituminous
4605-4611	Sandstone, light grey and white, fine, limy, recrystallized, chert, dark brown and grey
4611-4622	Sandstone, light grey, fine, angular, limy
4622-4630	Limestone, magnesian, very light grey, fine texture, with a little shale, light green. The limestone is an intermixture of dolomite and calcite crystals
4630-4641	Sandstone, light grey, very fine grained, limy
4641-4652	Shale, grey, light green and lavender, bentonitic, underlain by limestone, magnesian, very light grey, fine texture
4652-4661	Dolomite, cream to light grey, finely crystalline
4661-4671	Mudstone and siltstone, dark dull purple-red, blotched, light grey green
4671-4683	Mudstone, red, green and grey
4683-4693	Siltstone, light green grey, limy
4693-4710	Anhydrite, white
4710-4722	Limestone, magnesian, light grey, fine texture to amorphous, shale, light green, bentonitic
4722-4729	Mudstone, butternut brown with grey laminae

4729-4739	Limestone, very dark blue grey, clayey
4739-4751	Limestone, medium grey, fine granular, glauconitic, some shale, black and dark grey, bentonitic
4751-4760	Limestone, light dove grey, lithographic
4760-4768	Some bentonite, dark dull lavender
4768-4775	Shale, black
4775-4790	Bentonite, dark grey, and limestone, grey
4790-4810	Limestone, dove grey, lithographic to fine granular, calcite veins
4810-4817	Sandstone, lavender, with light grey bands, some grit size
4817-4823	Laterite, dark Indian red, bentonitic, and sandy
4823-4830	Sandstone, white, medium grained, non-sorted, some large frosted subround grains
4831-4856	<u>Pahasapa (Madison)</u> : Limestone, light dove grey, lithographic to fine granular
4856-4872	Limestone, as above, but with considerable light milky chert
4872-4917	Limestone, with a little chert, calcite veins
4917-4924	Limestone, some light brown with small dolomite crystals
4924-4955	Limestone, magnesian, light brown, with small dolomite crystals, some pink, probably rest is cream or buff
4955-4975	Limestone, with some larger dolomite rhombs
4975-5001	Limestone, dolomitic, brown, finely crystalline, porous, with small dolomite crystals

Fresh water rose 1400' in one hour from Dakota sandstone at 3041' depth. Fresh water rose 2300' in one hour from Lakota sandstone at 3325' depth. Fresh water rose 3000' in 15 minutes from Morrison sandstone at 3461' depth. One-half bailer of water per hour from Minnelusa limestone at 4520'-4580' depth. Fresh water rose 3850' from top of Madison Pahasapa limestone of 4855'-72' depth. Fresh water rose 4000' from Madison magnesian limestone at 4934' depth.



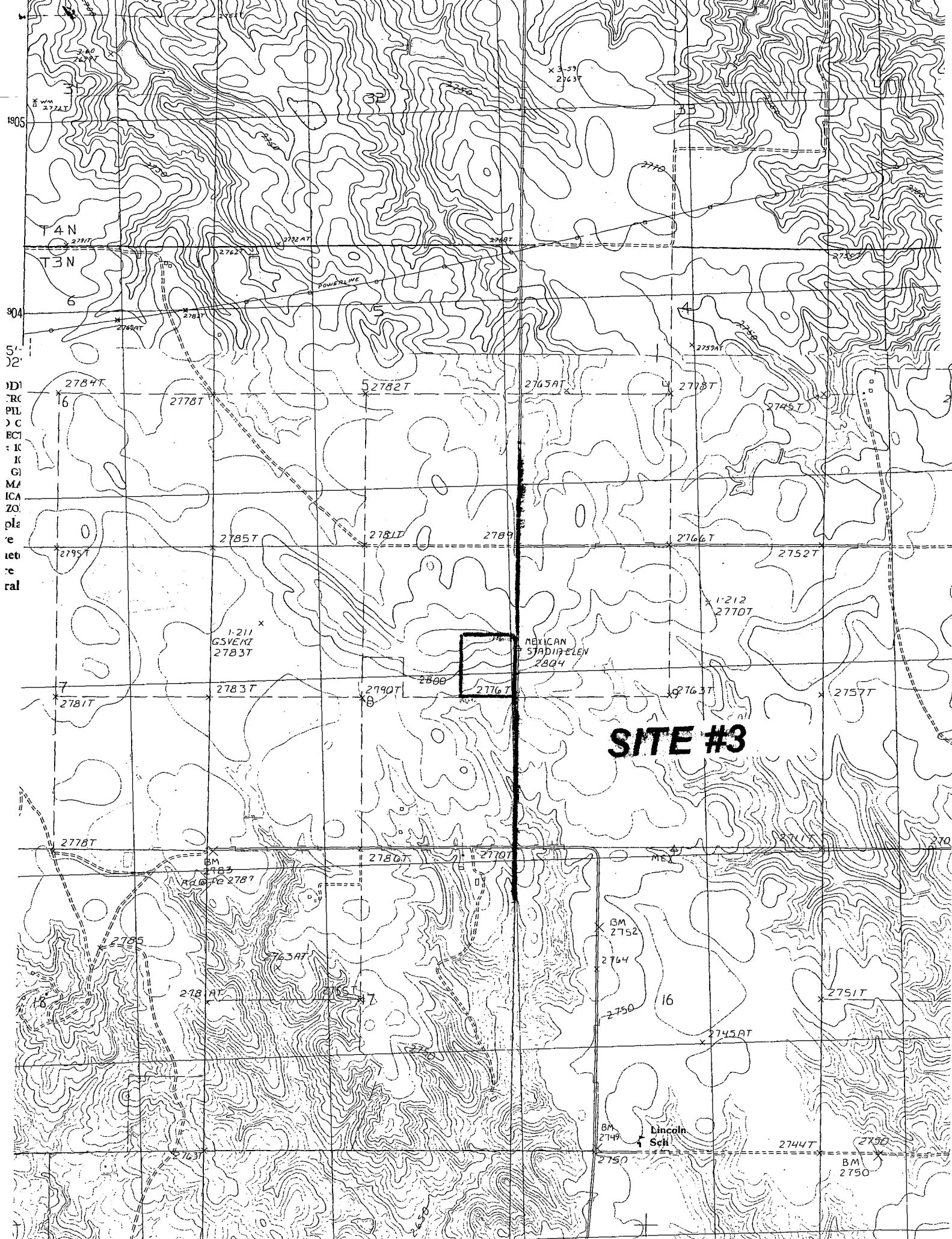


SITE #3

MEXICAN
STADIUM
2804

Lincoln
Sch

1-211
GSVEKT
2783T



WATER PERMIT APPLICATION Nos. 2464-2 & 2465-2
WEST RIVER/LYMAN JONES RWS, INC.
AUGUST 28, 2001

Water Permit Application No. 2464-2 proposes to appropriate 1.0 cubic feet of water per second (cfs) [(360 acre-feet annually) from one well (Inyan Kara aquifer) 3,340 feet deep located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 8, T2N-R16E, in Pennington County. Application No. 2465-2 proposes to appropriate 1.0 cubic feet of water per second (360) acre-feet annually) from one well (Inyan Kara aquifer) 3,080 feet deep located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 6, T1S-R17E, in Pennington County.

The water will be for rural water system use, which includes serving the cities of Quinn, Philip (potentially including the Bad River system), Wall, Cottonwood and the communities of Ceder, Johnson and Peno Basin.

AQUIFER: Inyan Kara (INKR)

GENERAL:

The Inyan Kara Aquifer consists of the Fall River Formation and the underlying Lakota Formation. The Fuson Shale sometimes separates these two formations, but it is often difficult to differentiate the bottom of the Fall River from the top of the Lakota. The two formations are probably hydraulically connected and therefore can be considered a single aquifer. In general, the Inyan Kara Aquifer consists of interbedded sandstone (thin bedded to massive), siltstone, and shale. The aquifer is areally extensive, underlying over 36,000 square miles of western South Dakota (Allen, 1984). The aquifer underlies 1,245,440 acres and contains an estimated 23,352,000 acre-feet of recoverable water in storage in Pennington County alone (Allen, 1984). The top of the Inyan Kara is expected to be approximately 3200 feet below grade at the Creighton well site (Application No. 2464-2), and is estimated to be approximately 2900 feet below grade at the Quinn well site (Application No. 2465-2), (Allen, 1984). The Inyan Kara is estimated to be 150 feet thick at this site (Allen, 1984). The thickness of the Inyan Kara Aquifer does however, vary considerably within short distances. The Inyan Kara is under confined conditions in this area.

WATER AVAILABILITY:

The Water Rights Program does not monitor any observation wells completed into the Inyan Kara Aquifer in the Black Hills Area. Water level information in this area is limited. Data suggests that water levels in the City of Wall declined over 100 feet between 1961 and 1989 (Winter, 1994). The decline of water levels, actually localized drawdown, is probably the result of increased development and usage by the City of Wall rather than an indication of over appropriation. As the city increases pumping from the aquifer the water level in the area of the wells will continue to drawdown until a dynamic equilibrium is achieved.

EXISTING WATER RIGHTS:

There are 13 Water Rights/Permits supplied from the Inyan Kara aquifer within approximately 15 miles of either the Creighton well site or the Quinn well site. These existing water rights include:

Permit No.	Name	Use
1102-2	Donald & Robert Kelly	SHD
1103-2	Peno Basin Water System	RWS
1222-2	Squaw Creek Water Users	RWS
1250-2	Johnson Water System	RWS
1361-1	City of Wall	MUN
1647-2	Town of Quinn	MUN
1757-2	Cedar Comm. Water Assoc.	RWS
1834-2	Grindstone RWS	RWS
2075-2	City of Wall	MUN
2285A-2	West River RWS, Inc.	RWS
639-2	City of Wall	MUN
724-2	City of Wall	MUN
998-2	City of Wall	MUN

The Creighton well site is over eight miles from the nearest existing Inyan Kara well, with the exception of an existing West River Rural Water System well (Water Right No. 2285A-2). The Quinn site is within one-half mile of the well that supplies water to the Town of Quinn. Presumably, West River/Lyman Jones RWS will service Quinn upon completion of this proposed well (No. 2465-2). The Quinn well site is over six miles from other existing Inyan Kara wells. Interference is not expected to be a concern due to the distance between wells.

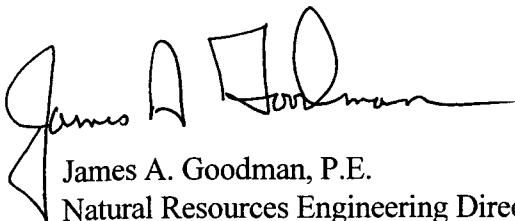
CONCLUSIONS:

1. The Inyan Kara Aquifer is a viable aquifer in this area, and water is available for this appropriation.
2. Well interference should not be a problem at the proposed well sites because of the distance from existing wells.



Ken Buhler
Natural Resources Engineering Specialist

approved by



James A. Goodman, P.E.
Natural Resources Engineering Director

REFERENCES:

- Allen, J.C., D.Iles, A.Petres, 1984, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3 & 4: Groundwater Resources Inventory, US Army Corps of Engineers Contract DAWC 45-82-C-015, SD DENR-Geological Survey, Vermillion SD
- Water Rights Program, 2000_a, " Observation Well Files," DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2000_b, "Domestic Well Log Files" DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2000_c, "Water Right/Permit Files" DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Winter, D.R., 1994, Water Levels through 1989 in Bedrock Aquifers in South Dakota, U.S. Geological Survey Open-File Report 94-320, Rapid City, SD



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2465-2, West River / Lyman-Jones RWS, Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2465-2, West River / Lyman-Jones RWS, Inc., c/o Mike Kurle, Manager, PO Box 407, Murdo SD 57559.

The Chief Engineer is recommending APPROVAL of Application No. 2465-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well 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. The well authorized by Permit No. 2465-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Water Permit No. 2465-2 authorizes a total annual diversion of 360 acre feet of water.
4. West River/Lyman-Jones RWS, Inc. shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara Formation.

See report on application for additional information.

Garland Erbele, Chief Engineer
August 30, 2001



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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523 EAST CAPITOL
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www.state.sd.us/denr

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

August 30, 2001

West River/Lyman-Jones RWS, Inc.
Mike Kurle
PO Box 407
Murdo, SD 57559

Dear Mr. Kurle:

Water Permit Application Nos. 2464-2 and 2465-2 for rural water system 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 Rapid City Journal printed at Rapid City, SD (Ph # 605-394-8300), The Pioneer Review, printed at Philip, SD (Ph# 605-859-2516), and the Kadoka Press, printed at Kadoka, SD (Ph#605-837-2259). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendations 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 newspapers to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publishers have 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 also 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/KS

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

c: John Madden, DeWild Grant Reckert

NOTE: If you plan to contest any part of the Chief Engineer's recommendations, 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 57501-3182
www.state.sd.us/denr

August 30, 2001

Rapid City Journal
PO Box 450
Rapid City, SD 57709-0450

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application Nos. 2464-2 and 2465-2 to Appropriate Water to be published twice. Please publish the first notice on September 6, 2001 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 West River/Lyman-Jones RWS, Inc., Mike Kurle, PO Box 407, Murdo, SD 57559 (Ph # 605-669-2931).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund /ks

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

No. 2464-2 and 2465-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of August 30, 2001 enclosing Notice of Hearing to Appropriate Water by Application Nos. 2464-2 and 2465-2 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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August 30, 2001

The Pioneer Review
Box 788
Philip, SD 57567-0788

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application Nos. 2464-2 and 2465-2 to Appropriate Water to be published twice. Please publish the first notice on September 6, 2001 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 West River/Lyman-Jones RWS, Inc., Mike Kurle, PO Box 407, Murdo, SD 57559 (Ph # 605-669-2931).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund /ks
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

No. 2464-2 and 2465-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of August 30, 2001 enclosing Notice of Hearing to Appropriate Water by Application Nos. 2464-2 and 2465-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

August 30, 2001

Kadoka Press
Box 309
Kadoka, SD 57543-0309

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NOTICE OF APPLICATION NOS. 2464-2 and 2465-2 to Appropriate Water

Notice is given that West River / Lyman - Jones RWS, Inc., PO Box 407, Murdo SD 57559 has filed the following applications for a water permit. Application No. 2464-2 proposes to appropriate 1.0 cubic feet of water per second (360 acre-feet annually) from one well (Inyan Kara Formation) 3,340 feet deep located in the NE ¼ NE ¼ Section 8-T2N-R16E. Application No. 2465-2 proposes to appropriate 1.0 cubic feet of water per second (360 acre-feet annually) from one well (Inyan Kara Formation) 3,080 feet deep located in the NE ¼ SE ¼ Section 6-T1S-R17E.

The water will be for rural water sytem use which includes serving the cities of Quinn, Philip (potentially including the Bad River System), Wall, Cottonwood and the communities of Cedar, Johnson and Peno Basin.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2464-2 and 2465-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the applications or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

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The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

)SS

COUNTY OF JACKSON

Ronda K. Dennis of said County and State, being duly sworn, on oath says:

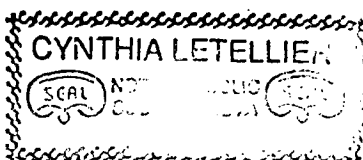
THE KADOKA PRESS is a weekly newspaper of general circulation, printed and published in KADOKA, in said County and State and has been such newspaper during the times hereinafter mentioned; that the said KADOKA PRESS is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bona fide subscribers, that I, the undersigned, am **Legal Advertising Manager** of said newspaper, and in charge of the advertising department thereof, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed Notice of Application

a printed copy of which is hereto attached, was printed and published in said newspaper for two successive issue(s), the first publication being on the 10th day of Sept. 20 01 and the last publication on the 13th day of Sept. 20 01 that \$ 51.85

being the full amount of the fee for publication of the annexed notice insures solely to the benefit of the publishers said newspaper; that no arrangement or understanding for a division thereof has been made with any person that no part thereof has been agreed to be paid to any other person whomsoever.

Ronda K. Dennis

Subscribed and sworn to before me this 2nd day of Oct. 20 01



Cynthia Letellier
Notary Public

My Commission Expires
March 21, 2003

NOTICE OF APPLICATION NOS. 2464-2 and 2465-2 to Appropriate Water

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The water will be for rural water system use which includes serving the cities of Quinn, Philip (potentially including the Bad River System), Wall, Cottonwood and the communities of Cedar, Johnson and Peno Basin.

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Steven M. Pirner, Secretary
Department of Environment
and Natural Resources

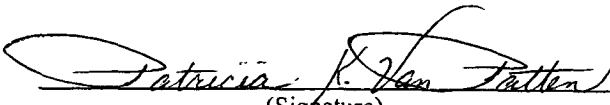
PUBLISH: Sept. 6 & 13, 2001

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SSCounty of Pennington)I, Patricia K. Van Pattencertify that the attached printed Notice was
takenfrom the Rapid City Journalprinted and published in Rapid CityCounty of Pennington and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

September 6, 2001September 13, 2001Cost of Printing Ninety-eight dollarsand eighty cents (\$98.80)
(Signature)Legal Advertising Rep
(Title)September 13, 2001
(Date Signed)

Sept. 6, 13 L986339
NOTICE OF APPLICATION
NOS. 2464-2 AND 2465-2
TO APPROPRIATE WATER
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 tem), Wall, Cottonwood and
 the communities of Cedar,
 Johnson and Peno Basin.

Pursuant to SDCL 46-2A-2,
 the Chief Engineer recom-
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 Chief Engineer's address is "Wa-
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 Pierre, SD 57501 (605-773-
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 mailing address is given
 above. A petition filed by
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 and mailing address of the pe-
 titioner or the petitioner's le-
 gal counsel, if legal counsel is
 obtained. Contact Eric Gran-
 lund at the above Water
 Rights Program address to re-
 quest copies of information
 pertaining to these applications.

Steven M. Pirner, Secretary
 Department of Environment
 and Natural Resources

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

)ss

COUNTY OF HAAKON

Donna Koehn, of said County and State, being duly sworn, on oath says: THE PIONEER REVIEW is a weekly newspaper of general circulation, printed and published in PHILIP, in said County and State and has been such newspaper during the times hereinafter mentioned; that the said THE PIONEER REVIEW is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bonafide subscribers; that I, the undersigned, am Legal Advertising Manager, of said newspaper, and in charge of the advertising department thereof, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed

Notice of Application Nos. 2464-2 and 2465-2 to Appropriate Water

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive issues, the first publication being on the 6th day of September, 20 01 and the last publication on the 13th day of Sept., 20 01 that \$ 45.83 being the full amount of the fee for publication of the annexed notice insures solely to the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Donna Koehn

Subscribed and sworn to before me this 27th day of September, 20 01.

Tamara Ravellette

Notary Public, State of South Dakota

My Commission Expires
January 24, 2002



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Steven M. Pirner, Secretary,
Department of Environment and
Natural Resources

[Publish September 6 & 13, 2001]



NOV 07 2001

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

West River/Lyman-Jones RWS, Inc.
Mike Kurle
PO Box 407
Murdo, SD 57559

Dear Mr. Kurle:

Enclosed are Water Permit Nos. 2464-2 and 2465-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Two form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return these completed forms after you have finished the systems and have put the water to beneficial use. An investigation can then be scheduled so the water licenses may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Permit No. 2465-2
Bad River (10140102) - Water District

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

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

I have this day, October 29, 2003, made a thorough examination of the water use system constructed by West River / Lyman-Jones holder of Permit No. 2465-2, bearing the priority of July 26, 2001 authorizing the diversion of 1.0 cu. ft. per second of the waters from the Inyan Kara Formation for rural water system purposes, with the diversion point located in Pennington County.

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

A. Works used to divert the water:

A 3,100 foot deep Inyan Kara Well with pump capable of producing 450 gpm

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

Water is pumped through water pipeline to the rural area

C. Works used to apply water to beneficial use:

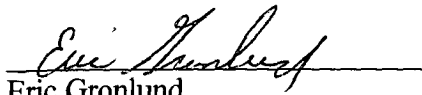
For the cities of Quinn, Philip, Wall Cottonwood and the communities of Cedar, Johnson and Peno Basin.

The system is in the following condition excellent. The point of diversion is located approximately 1,580 feet north and 1,575 feet east of the SE Corner (NW ¼ SE ¼) of Section 6, T1S, R17E (Lat/Lon N 43.984427 W-102.12525). The works are capable of diverting and conveying to the place of use 1.0 cu. ft. per second of water (450 gpm) which is to be used for rural water system purposes. Water has been put to beneficial use to the maximum extent and the license should be issued for 1.0 cfs (450 gpm)

Applicable permit qualifications have been complied with: YES

Exceptions to compliance are: well outside of described area on permit (see attachment

Date Report Completed: February 12, 2004


Eric Gronlund
Natural Resources Engineer
DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 2465-2

DATE OF INVESTIGATION:	October 29, 2003
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Jake Fitzgerald, employee RWS's Philip office
NAME & ADDRESS OF PERMIT HOLDER	West River/Lyman-Jones RWS c/o Mike Kurle PO Box 407 Murdo SD 57559
DIVERSION POINT LEGAL LOCATION	<u>approximately 1,580 feet north and 1,575 feet east of the SE Corner (NW ¼ SE ¼) of Section 6, T1S, R17E (Lat/Lon N 43.984427 W- 102.12525</u>

WATER SUPPLY Source: **Inyan Kara Formation**

Well Information:

- | | |
|---|--|
| 1) Well Drilling Firm: <u>Weston Engineering</u> | 2) No. of Wells <u>1</u> |
| 3) Depth(s) <u>approx. 3103</u> feet | 4) Well log is available <u>not of file</u> |

Casing:

- | | |
|--------------------------------------|----------------|
| 1) Diameter <u>10" and 6"</u> | 2) Length feet |
| 3) Type <u>steel</u> | |

Screen:

- | | |
|--|----------------------|
| 1) Type <u>stainless steel</u> | 2) Length _____ feet |
| 3) Static water level <u>?</u> feet | |

Pump:

- | | |
|-----------------------------|---|
| 1) Make <u>Gould</u> | 2) Model <u>8RJLC-10 Serial No. 451833</u> |
| 3) Size <u>_</u> | 4) Capacity <u>450</u> GPM |

Motor:

- | | |
|---|--|
| 1) Make <u>Franklin</u> | 2) Model No. <u>2793131000 Serial 10-0015</u> |
| 3) Horsepower rating <u>100</u> hp | |

West River/Lyman-Jones RWS has outstanding records on the well and pump information. See attached pump report for diversion rate. Pump is set at 672 feet.

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Special qualifications to permit being abided by **Yes**
- 2) All structures, wells and lands on map **Yes**
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period **not applicable**

Approval of an Change of Diversion Point

NAME: West River/Lyman-Jones RWS, Inc.

ADDRESS: PO Box 407, Murdo SD 57559

DATE: February 12, 2004 COUNTY: Pennington TELEPHONE:

BACKGROUND:

Water Permit No. 2465-2 appropriates 1.0 cubic feet of water per second (360 acre feet annually) from one well (Inyan Kara Formation) to be located in the NE ¼ SE ¼ Section 6, T1S, R17E.

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:

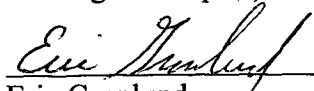
- The licensing investigation for Water Permit No. 2465-2 found the well located in the NW ¼ SE ¼ of Section 6, T1S, R17E. This is in the neighboring quarter-quarter section to the west. This location was documented on the map by Jake Fitzgerald, an employee for the rural water system, and further documented by a GPS.
- There are no existing diversion that will be impacted by allowing this change of diversion point. The city of Quinn does have a Inyan Kara well located north of this well. However, the city is connecting to the rural water system.

CONCLUSION

- The change in the location of the well may be authorized without adversely effecting domestic use or existing diversions.

RECOMMENDED ACTION

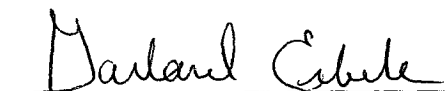
Based on the above criteria, it is recommended that the change of diversion point (see license investigation report) be incorporated into Water License No.2465-2.



Eric Gronlund
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 of diversion point does not increase the potential for adverse effects to existing diversions.



Garland Erbele, Chief Engineer
Water Rights Program



Quinn well authorized by Water Permit No. 2465-2
Photo taken looking east

Daily Pump Report - QUINN WELL

Date	Runtimes (hours)								Flow Total	Flow Rate		
	#1	#2	#3	#4	#5	#6	#7	#8		Low	High	Average
07-01-2003	12.8	0.0	12.8	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	382.27
07-02-2003	13.9	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	380.14
07-03-2003	15.9	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0	0.0	2,550.0	419.94
07-04-2003	14.6	0.0	14.9	0.4	0.0	0.0	0.0	0.0	0	0.0	400.0	374.27
07-05-2003	15.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	379.8
07-06-2003	12.6	0.0	12.6	0.0	0.0	0.0	0.0	0.0	0	0.0	420.0	382.7
07-07-2003	15.9	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	379.31
07-08-2003	13.5	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	380.29
07-09-2003	12.1	0.0	12.1	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	382.54
07-10-2003	14.4	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	380.76
07-11-2003	16.1	0.0	16.1	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	377.95
07-12-2003	18.1	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	376.33
07-13-2003	16.7	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	378.26
07-14-2003	19.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	372.83
07-15-2003	22.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0	0.0	390.0	369.82
07-16-2003	16.5	0.0	16.5	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	373.21
07-17-2003	21.2	0.0	21.2	0.1	0.0	0.0	0.0	0.0	0	0.0	400.0	368.62
07-18-2003	18.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	371.55
07-19-2003	17.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	373.86
07-20-2003	17.9	0.0	17.9	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	372.12
07-21-2003	23.9	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0	360.0	380.0	369.62
07-22-2003	16.2	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0	0.0	410.0	373.77
07-23-2003	24.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0	360.0	370.0	369.08
07-24-2003	24.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0	360.0	380.0	366.42
07-25-2003	19.2	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	368.01
07-26-2003	24.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0	360.0	390.0	370.63
07-27-2003	19.5	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	367.09
07-28-2003	18.3	0.0	18.3	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	367.34
07-29-2003	20.4	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	367.89
07-30-2003	24.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0	360.0	380.0	366.38
07-31-2003	18.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0	0.0	400.0	368.12

#1 - WELL	=	554.7 Hours
#2 - STATION FLOOD	=	0.0 Hours
#3 - CHLORINE PUMP	=	555.4 Hours
#4 -	=	0.5 Hours
#5 - STATION TEMP	=	0.0 Hours
#6 - POWER	=	0.0 Hours
#7 -	=	0.0 Hours
#8 -	=	0.0 Hours
Total Flow	=	0 GAL
Flow Rate Low	=	0.0 GPM
Flow Rate High	=	2,550.0 GPM
Flow Rate Average	=	375.19 GPM

ump Report - QUINN WELL

Date	Runtimes (hours)				#5	#6	#7	#8	Flow Total	Flow Rate		Average
	#1	#2	#3	#4						Low	High	
10-01-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-02-2002	16.3	0.0	16.3	0.0	7.4	0.0	0.0	0.0	0	0.0	420.0	339.45
10-03-2002	16.3	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0	0.0	340.0	330.12
10-04-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-05-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-06-2002	13.8	0.0	13.8	0.0	0.0	0.0	0.0	0.0	0	0.0	430.0	342.75
10-07-2002	16.8	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0	0.0	340.0	332.08
10-08-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-09-2002	7.7	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0	0.0	420.0	346.1
10-10-2002	24.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0	320.0	340.0	332.92
10-11-2002	15.9	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0	0.0	390.0	333.35
10-12-2002	8.2	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0	0.0	340.0	329.39
10-13-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-14-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-15-2002	16.2	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0	0.0	430.0	339.94
10-16-2002	17.1	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0	0.0	340.0	329.83
10-17-2002	8.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0	0.0	420.0	368.19
10-18-2002	15.3	0.0	15.3	0.0	0.0	0.0	0.0	0.0	0	0.0	380.0	364.05
10-19-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-20-2002	5.9	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0	0.0	430.0	375.25
10-21-2002	7.5	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0	0.0	380.0	364.47
10-22-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-23-2002	5.6	0.0	5.6	0.0	14.0	0.0	0.0	0.0	0	0.0	430.0	383.93
10-24-2002	16.4	0.0	16.4	0.0	0.0	0.0	0.0	0.0	0	0.0	380.0	368.97
10-25-2002	15.1	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0	0.0	440.0	372.33
10-26-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-27-2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0
10-28-2002	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0	0.0	440.0	373.33
10-29-2002	11.3	0.0	11.3	0.0	0.8	0.0	0.0	0.0	0	0.0	370.0	364.47
10-30-2002	0.0	0.0	0.0	0.0	17.7	0.0	0.0	0.0	0	0.0	0.0	0.0
10-31-2002	8.1	0.0	8.1	0.0	11.2	0.0	0.0	0.0	0	0.0	450.0	405.8

#1 - WELL = 256.9 Hours
 #2 - STATION FLOOD = 0.0 Hours
 #3 - CHLORINE PUMP = 256.9 Hours
 #4 - = 0.0 Hours
 #5 - STATION TEMP = 51.1 Hours
 #6 - POWER = 0.0 Hours
 #7 - = 0.0 Hours
 #8 - = 0.0 Hours
 Total Flow = 0 GAL
 Flow Rate Low = 0.0 GPM
 Flow Rate High = 450.0 GPM
 Flow Rate Average = 228.93 GPM

Oct 11 8:30 am 530' PWL - 40.7 hrs runtime
 5:00 pm 377' SWL - 8.5 hrs OFF
 Oct 12 8:00 am 528' PWL - 15 hrs runtime
 8:25 am 417' SWL - 10 min OFF
 Oct 15 7:30 am 361' SWL - 72 hrs OFF
 8:30 am 506' PWL - 30 min runtime

2-19-03 364' SWL - 5 hrs OFF

Feb runtime- 4-5 hrs/day



Well located approximately 1,580 feet north and 1,575 feet west of the SE corner (NW 1/4 SE 1/4) Section 6, T1S, R17E
Lat/Lon N43.984427 - W102.12525



Eric Gronlund
Eric Gronlund
Water Rights Program, DENR
License Investigation - October 29, 2003

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2465-2

(1) West River/Lyman-Jones, RWS, Inc., PO Box 407, Murdo SD 57559 made Application No. 2465-2, July 26, 2001 for a water permit to divert 1.0 cubic feet of water per second from groundwater (one well), Pennington County, South Dakota for rural water system use purposes. Permit No. 2465-2, with a priority date of July 26, 2001 was approved September 24, 2001 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 24, 2006 and for the application to beneficial use of water on or before September 24, 2010.

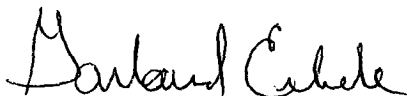
An investigation conducted for licensing purposes found the well under Water Permit No. 2465-2 was not in the location authorized by the permit. Pursuant to SDCL 46-5-13.1, the Chief Engineer makes a finding that the change in location of diversion point does not increase the potential for interference with existing water rights.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 2465-2 is issued a license, bearing a priority date of July 26, 2001 to appropriate 1.00 cubic feet of water per second from groundwater (one well) for rural water system use purposes. The system serves the cities of Quinn, Philip, Wall, Cottonwood and the communities of Cedar, Johnson and Peno Basin.

The diversion point is located: 1,580 feet north and 1,575 feet east of the southeast corner of Section 6-T1S-R17E (NW ¼ SE ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 2465-2 including the following now applicable qualifications:

- The well 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.
- The well authorized by Permit No. 2465-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
- Water Permit No. 2465-2 authorizes a total annual diversion of 360 acre feet of water.
- West River/Lyman-Jones RWS, Inc. shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara Formation.



Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 14 2004

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

MAY 14 2004

2464-2
2465-2

West River/Lyman-Jones RWS Inc
PO Box 407
Murdo SD 57559

Dear Sir:

Enclosed are Water License Nos. 2464-2 and 2465-2. This is the final water right document completing your process of obtaining a Water Right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

A handwritten signature in black ink that reads "Garland Erbele". The signature is fluid and cursive.

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures