

WATER PERMIT NO. 2517-2

Name of Applicant: City of Martin

Address: PO Box 687, Martin SD 57551 Phone: 605 685-6525

Amount of Water Claimed: 0.67 cfs Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: municipal County: Bennett

Type of Waste Disposal System:

Location:

PRIORITY Date Received: 1-12-2004 Application/License Fee: \$300

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

Remarks:

Diversion Point: NE ¼ SW ¼ Sec 18-T37N-R37W

Land to be Irrigated: NA

Depth of Well: 530 feet deep

Well Driller: : Sargent Drilling

Remarks:

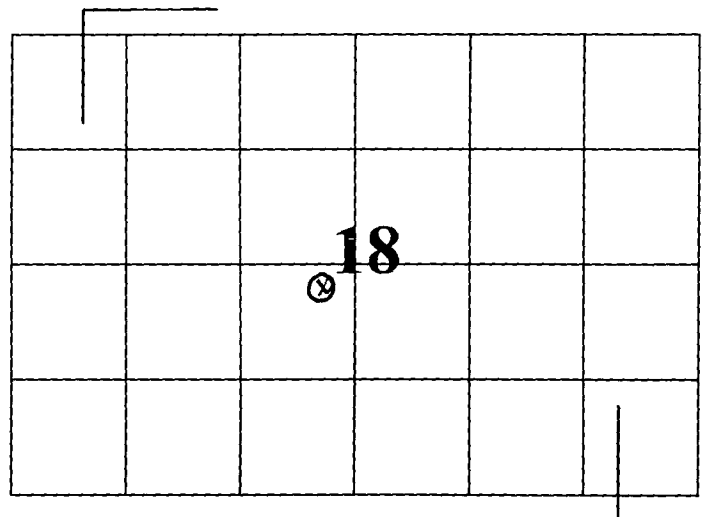
Type of Map: plat

Prepared by: William C Phillips, RLS

Reviewed and the Number Assigned on: 1-12-2004

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2517-2</u> (office use only) Hydrologic Unit <u>10140203</u>
	Basin <u>White River</u>
	Newspaper <u>Bennett Co. Booster II, Martin</u>

RECEIVED
JAN 12 2004
WATER RIGHTS
PROGRAM

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: (check one)

- ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ 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.)

1. Name of Applicant City of Martin, South Dakota Phone (605) 685-6525
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 101 Main Street, P.O. Box 687 Martin State SD 57551
(Street, RR, or Box and City) (Zip Code)
2. Amount of water claimed 0.67 *CFS or 300 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Arikaree Formation
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Bennett
NE 1/4 SW 1/4, Section 18, Township 37N, Range 37W of 6th P.M.
5. County or counties where water will be used Bennett
6. Annual period during which water is to be used Continuous Basis All Year Jan 1 - Dec 31
7. 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)

This project consists of constructing a 530 foot deep well, 150 foot high elevated storage reservoir, pump house with electrical control and chemical feed system, and a tie to the existing distribution system.

STATE OF SOUTH DAKOTA)
County of Bennett 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, E.R. Hicks, Mayor, 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 E. R. Hicks

Subscribed and sworn to before me this 31st day of December 20 03

Janet E. Speedel
Notary Public signature

My Commission Expires 5-13-08

**SOUTH DAKOTA
WATER PERMIT NO. 2517-2**

Date of first receipt of application January 12, 2004.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2517-2 to the City of Martin, PO Box 687, Martin SD 57551 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. 2517-2 appropriates 0.67 cubic feet of water per second (300 gallons per minute) from one well (Arikaree Formation) 530 feet deep located in the NE ¼ SW ¼ Section 18-T37N-R37W.
2. The water appropriated shall be used for the purpose of municipal use and may not exceed the amount of water needed for beneficial use.
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. 2517-2 is March 8, 2004.
5. The date from which applicant may claim right is January 12, 2004.
6. One-fifth of the construction is to be completed on or before September 8, 2006.
7. All construction is to be completed on or before March 8, 2009.
8. Water is to be put to beneficial use on or before March 8, 2013.
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. 2517-2 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. The City of Martin shall report to the Chief Engineer annually the amount of water withdrawn from the Arikaree Formation.

WATER MANAGEMENT BOARD

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

MAY 10 2004

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 24" Depth 530'
- b) Casing Type Steel Diameter 12 3/4" O.D Thickness 0.375"
- c) Screen Type Stainless Steel Diameter 12" Pipe Size Thickness
- d) Gravel Pack #30 Well Pack Length of Gravel Pack Approximately 180'
- e) Depth to Top of Water Bearing Material 455'
- f) Depth to Water (ground surface to water level) Approximately 150'
- g) Distance to nearest existing domestic well:
- On applicants property 1/2 mile On property owned by others Approximately 1/2 mile

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

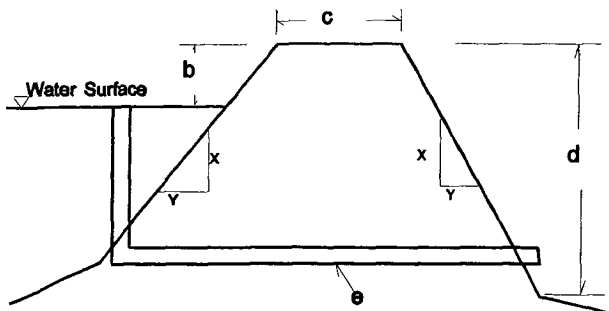
3. Dugout Information

- 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

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date January 12, 2004

RECEIVED OF City of Martin, 301 Fourth Ave., Martin SD 57551

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	275	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. _____	50	00
Fee for Filing Transfer Form _____		
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	325.00

No.

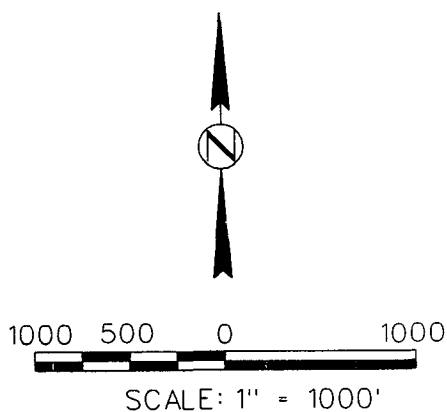
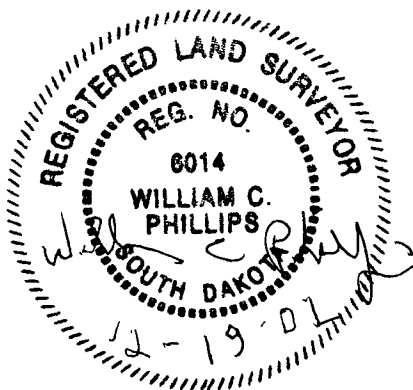
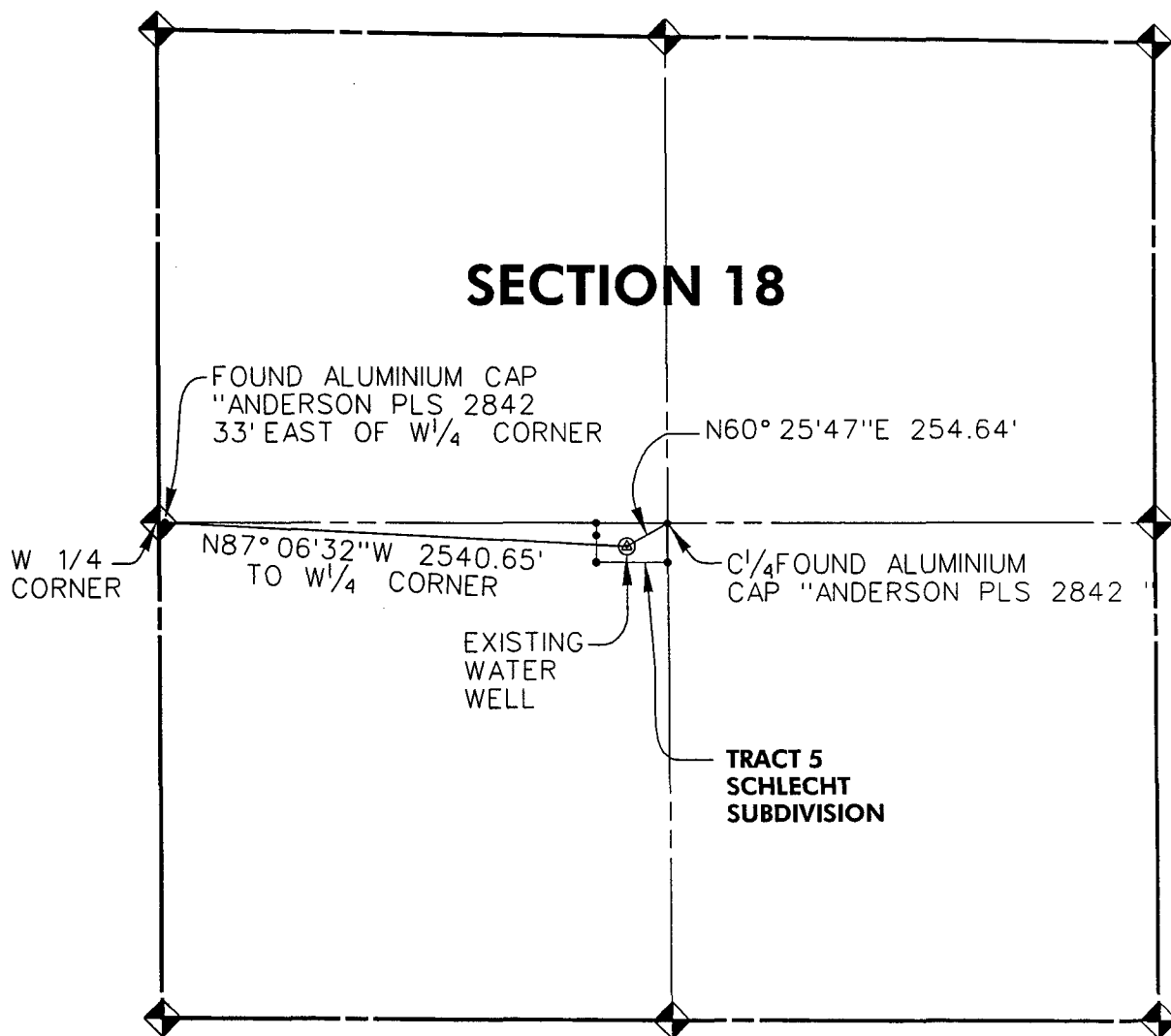
001072

By

Darland Erlise
Chief Engineer

CITY OF MARTIN WATER WELL

LOCATED IN THE NE $\frac{1}{4}$ OF THE SW $\frac{1}{4}$ OF SECTION 18, T37N, R37W, 6TH P.M.,
BENNETT COUNTY, SOUTH DAKOTA



EASEMENT PREPARED BY:
ALLIANCE OF ARCHITECTS AND ENGINEERS
706 WEST BOULEVARD
RAPID CITY, SOUTH DAKOTA
DRAWN BY A. POCHES DATE 12-18-03
CHECKED BY W. PHILLIPS DATE 12-18-03



DATE: 12-18-03

SECTION 18, T37N, R37W, 6TH P.M.

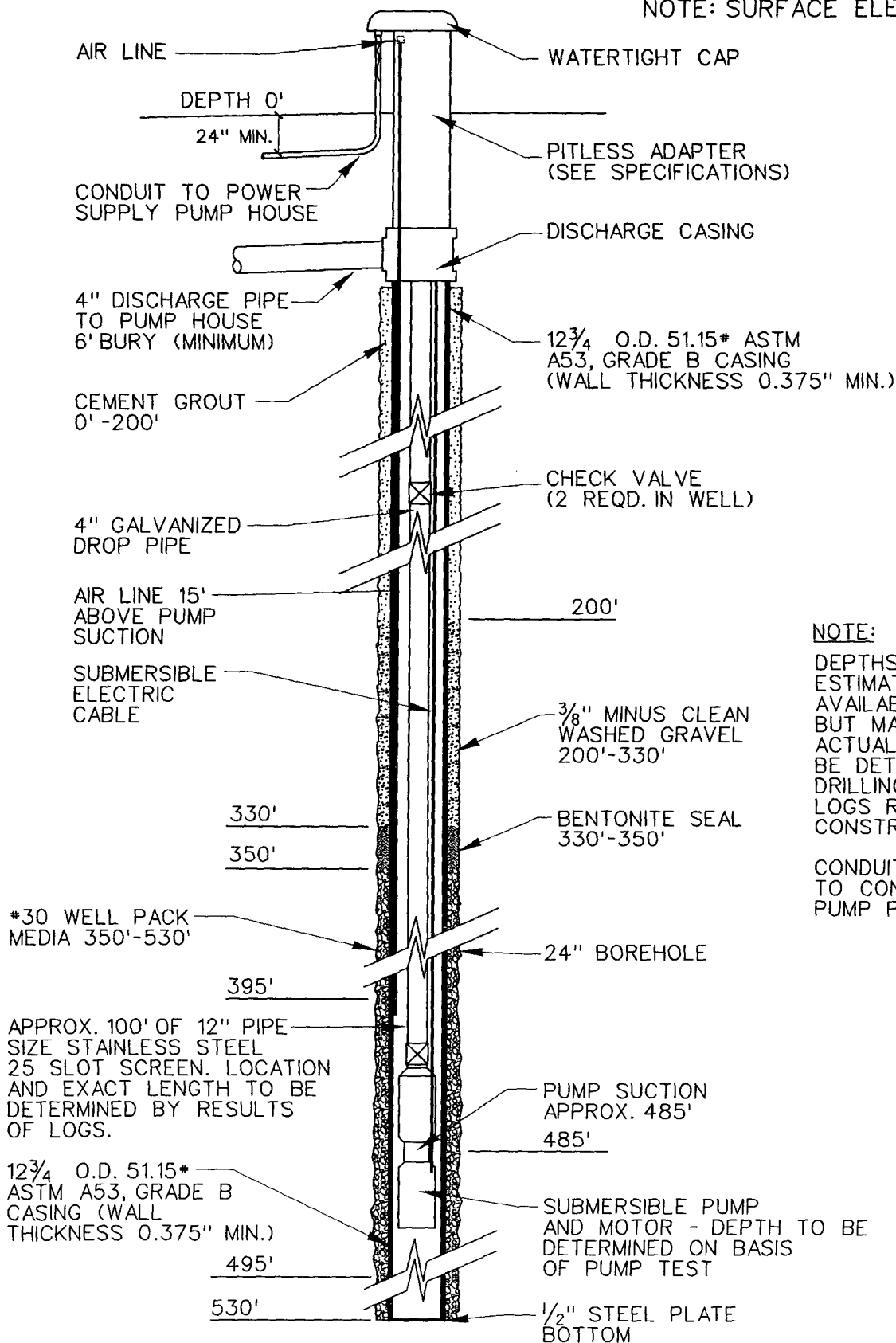
JOB NO. 03-1020

SHEET 1 OF 1

FILE: 1020PLAT01.dgn

2517-2

NOTE: SURFACE ELEVATION 3291.31



NOTE:

DEPTHS INDICATED ARE ESTIMATES BASED ON AVAILABLE INFORMATION, BUT MAY VARY. ACTUAL DEPTHS WILL BE DETERMINED FROM DRILLING SAMPLES AND LOGS RUN DURING CONSTRUCTION.

CONDUIT TO PUMP HOUSE TO CONTAIN AIRLINE AND PUMP POWER CABLE.



PROJECT

MARTIN CITY WELL

SHEET TITLE

WELL CONSTRUCTION DETAIL

N.T.S.

JOB NO.

03-1020

DRAWN BY:

AMP

CHECKED BY:

EDW

SHEET:

1 of 1

DATE:

12-18-03

Sargent Drilling

INDUSTRIAL ENGINEERING
COMPLETE MUNICIPAL AND INDUSTRIAL
PUMPS AND WELL SERVICE

Box 627
South Highway 21

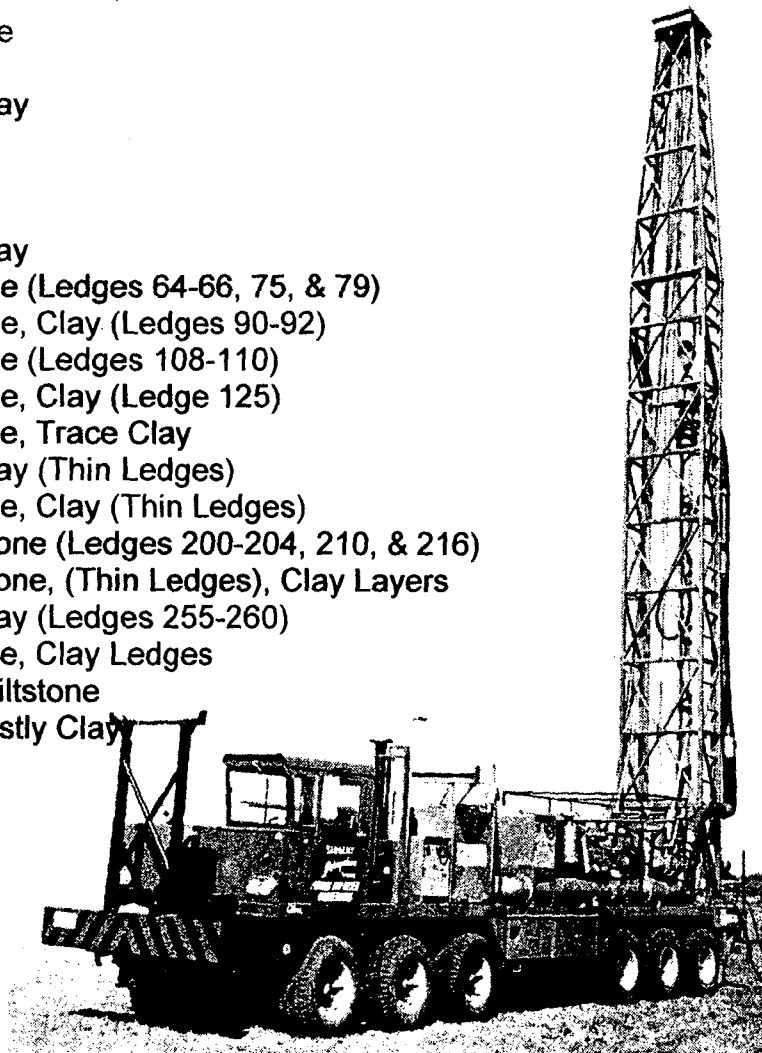
Broken Bow, Nebraska
68822

Phone
(308) 872-5125
(866) 872-6451
FAX (308) 872-6912

TEST WELL LOG VILLAGE OF MARTIN, SD TEST HOLE # 2003-1 JUNE 11, 2003

43° 10' 44.9" – 101° 44' 32.9"
Section 18, Township 37N, Range 37W

0	6	Top Soil
6	8	Ledge
8	15	Sand, Siltstone
15	16	Ledge
16	20	Sand, Siltstone
20	21	Ledge
21	28	Sand, Siltstone
28	30	Ledge
30	39	Fine sand, Siltstone
39	40	Clay
40	44	Sand, Siltstone, Clay
44	46	Ledge
46	52	Sand, Sandstone
52	53	Ledge
53	60	Sand, Siltstone, Clay
60	80	Fine Sand, Siltstone (Ledges 64-66, 75, & 79)
80	100	Fine Sand, Siltstone, Clay (Ledges 90-92)
100	120	Fine Sand, Siltstone (Ledges 108-110)
120	140	Fine Sand, Siltstone, Clay (Ledge 125)
140	160	Fine Sand, Siltstone, Trace Clay
160	180	Sand, Siltstone, Clay (Thin Ledges)
180	200	Fine Sand, Siltstone, Clay (Thin Ledges)
200	220	Fine Sand, Sandstone (Ledges 200-204, 210, & 216)
220	240	Fine Sand, Sandstone, (Thin Ledges), Clay Layers
240	260	Sand, Siltstone, Clay (Ledges 255-260)
260	271	Fine Sand, Siltstone, Clay Ledges
271	280	Fine Sand, Clay, Siltstone
280	295	Siltstone, Clay (Mostly Clay)
295	297	Ledge
297	300	Siltstone, Clay
300	311	Clay, Siltstone
311	312	Ledge



Sargent Drilling

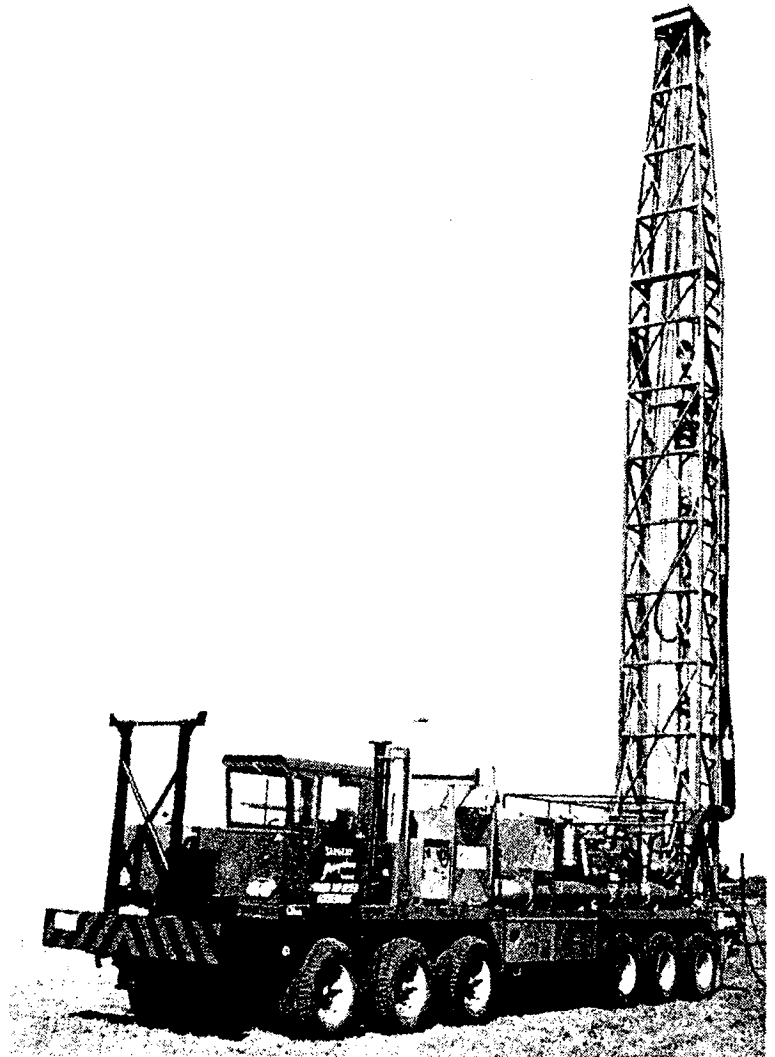
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PUMPS AND WELL SERVICE

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South Highway 21

Broken Bow, Nebraska
68822

Phone
(308) 872-5125
(866) 872-6451
FAX (308) 872-6912

312	320	Siltstone, Fine Sand
320	340	Siltstone, Clay Layers
340	360	Sandy Clay, Sandstone Layers
360	380	Sandstone, Clay (Some Siltstone)
380	400	Sandstone, Some Clay Layers (Ledges 382 & 399)
400	402	Ledges
402	410	Siltstone, Clay
410	420	Sandstone, Trace Clay
420	460	Fine Sand, Sandstone, Some Clay
460	480	Medium Sand, Sandstone
480	500	Fine Sand, Sandstone
500	520	Siltstone, Clay, Mostly Clay



SARGENT



**LOGGING
SERVICES**

TH-2003-1

COMPANY : CITY OF MARTIN SD
WELL : TH-2003-1
LOCATION/FIELD : NW OF TOWN
COUNTY : BENNET
STATE : SD
SECTION :

OTHER SERVICES:

None
None
None

TOWNSHIP :

RANGE :

DATE : 06/12/03

PERMANENT DATUM : None

DEPTH DRILLER : 520

KB : None

LOG BOTTOM : 518.50

LOG MEASURED FROM: Ground

DF : None

LOG TOP : -0.70

DRL MEASURED FROM: Ground

GL :

CASING DIAMETER : 0

LOGGING UNIT : 0309

CASING TYPE : None

FIELD OFFICE : BBDRILLING

CASING THICKNESS: 0

RECORDED BY : DAVE LARSON

BIT SIZE : 6

BOREHOLE FLUID : 0

FILE : PROCESSED

MAGNETIC DECL. : 0

RM : 0

TYPE : 9041A

MATRIX DENSITY : 2.71

RM TEMPERATURE : 0

NEUTRON MATRIX : Dolomite

MATRIX DELTA T : 54

THRESH: 2500

None

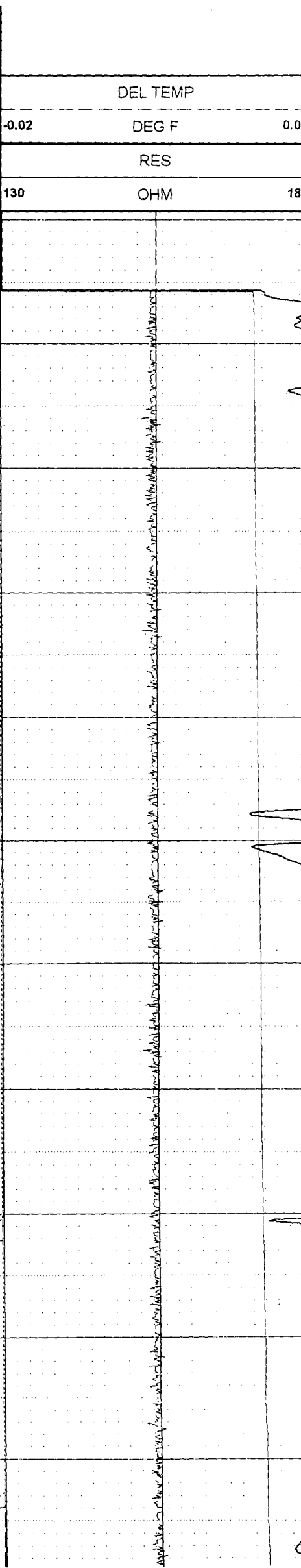
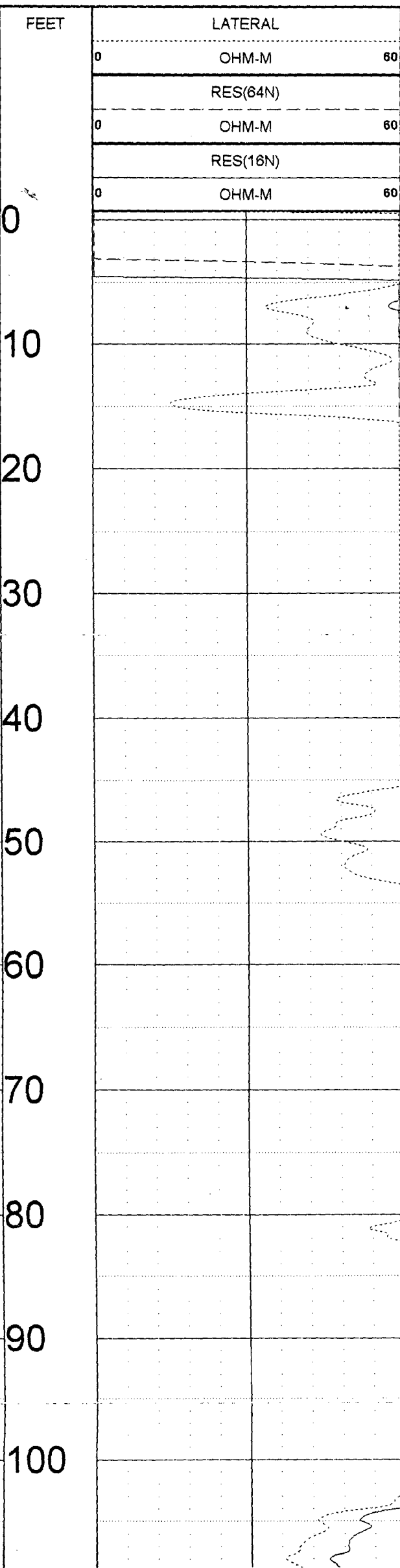
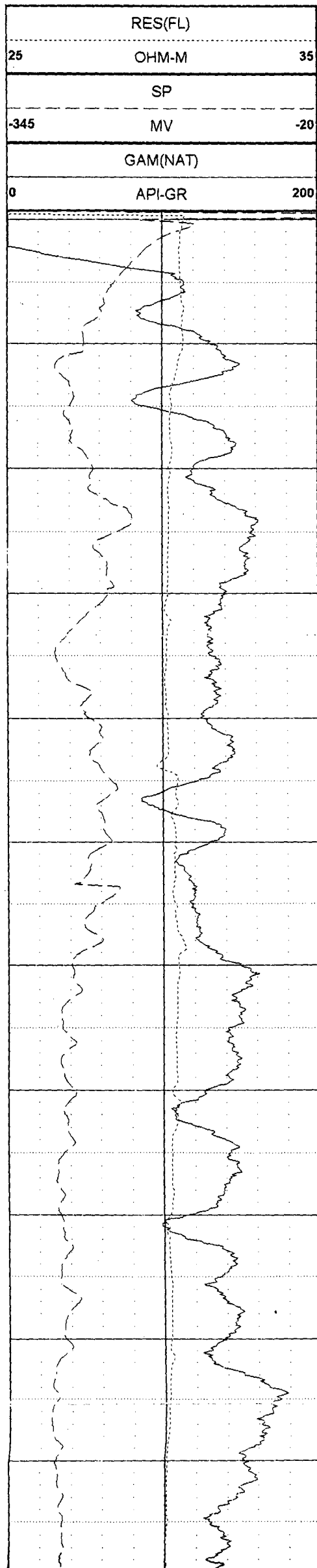
None

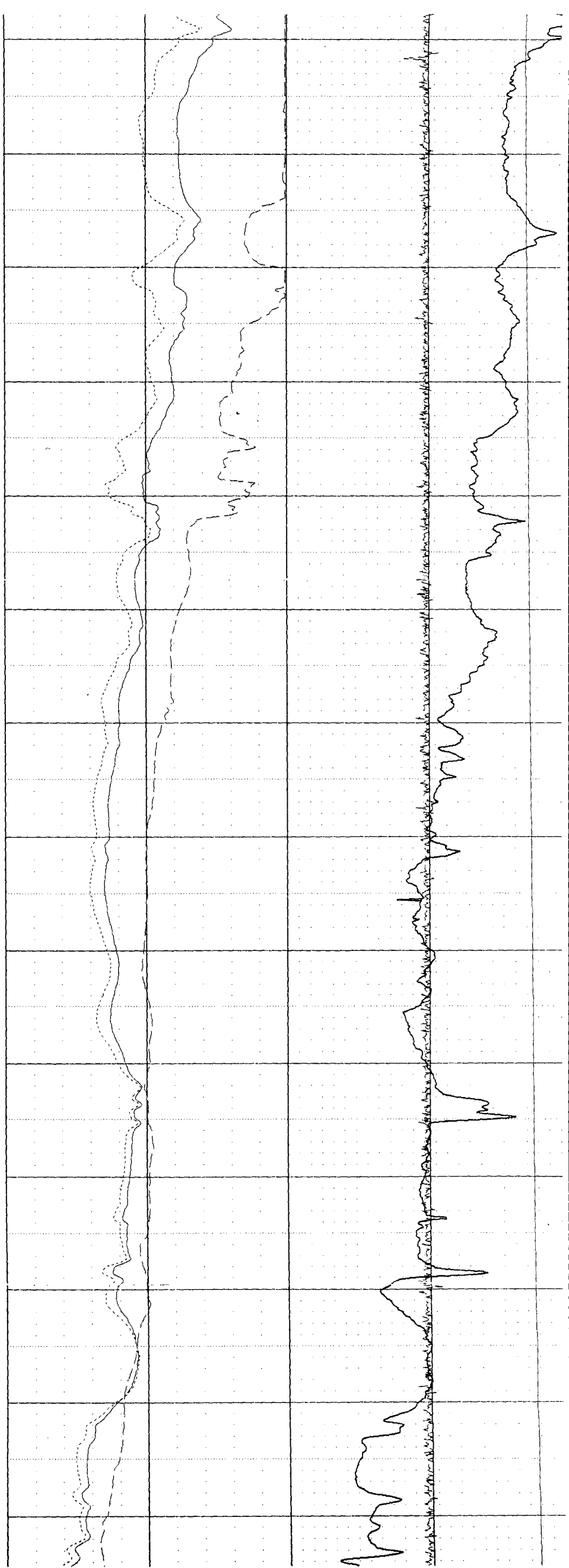
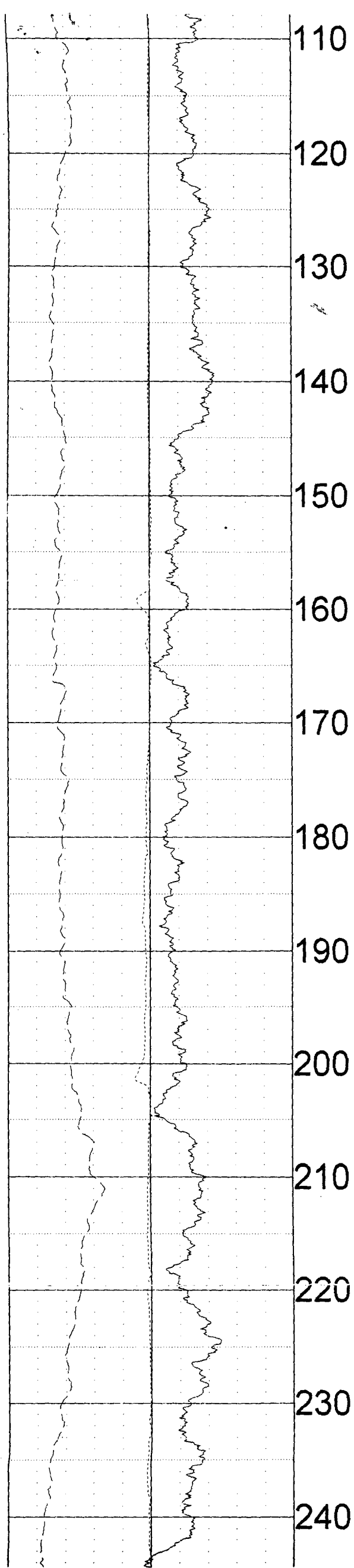
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

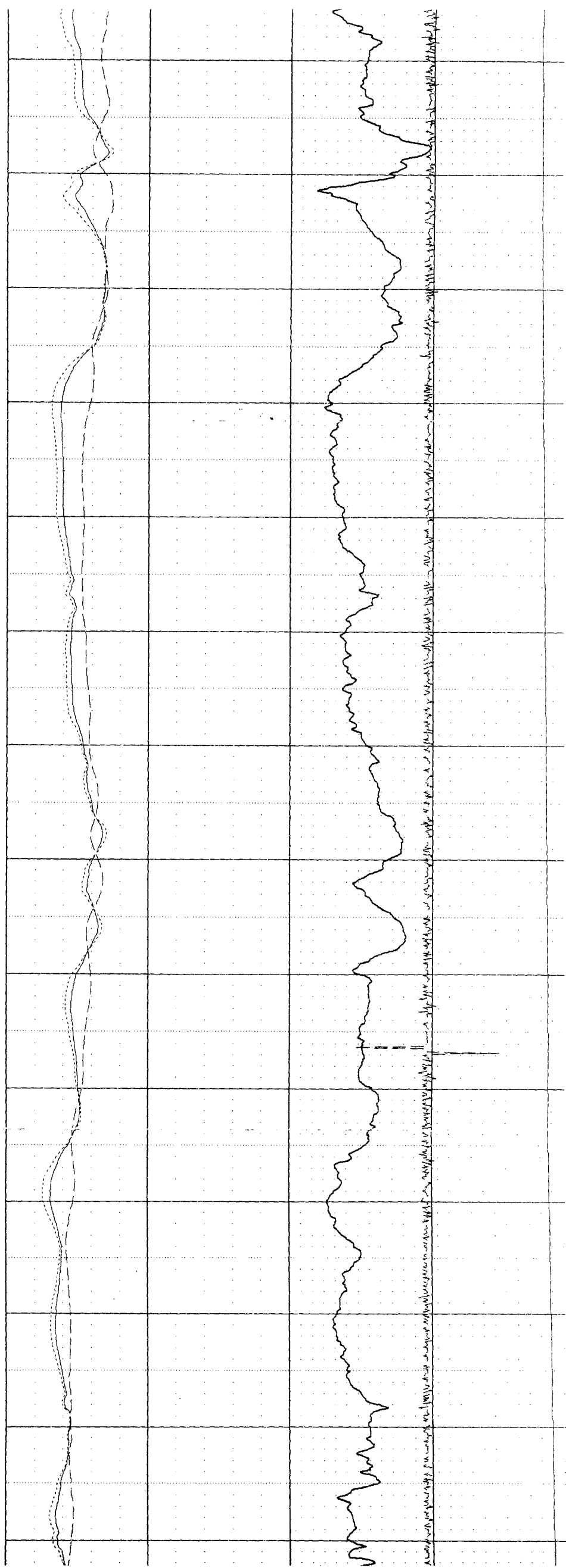
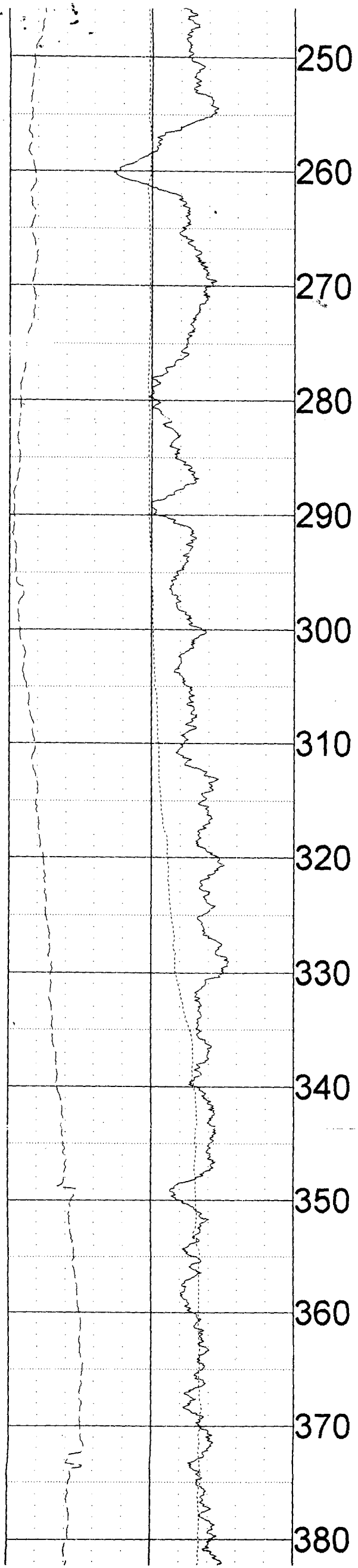
RES(FL)

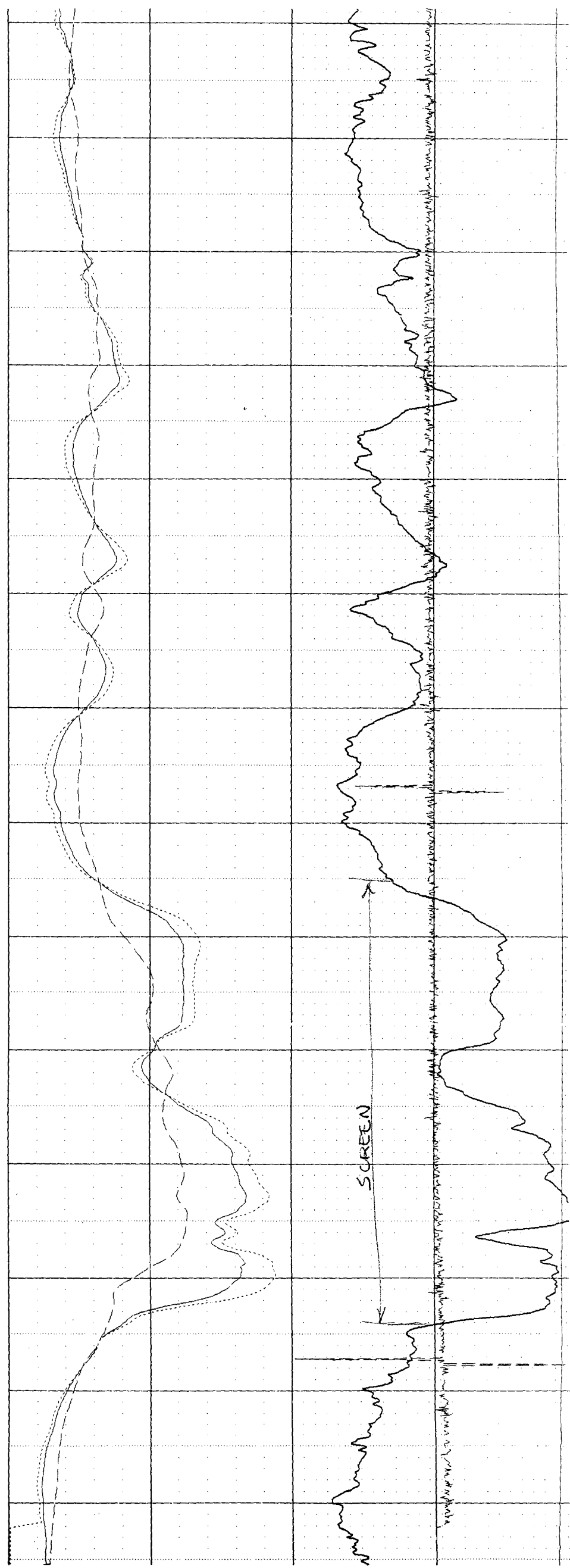
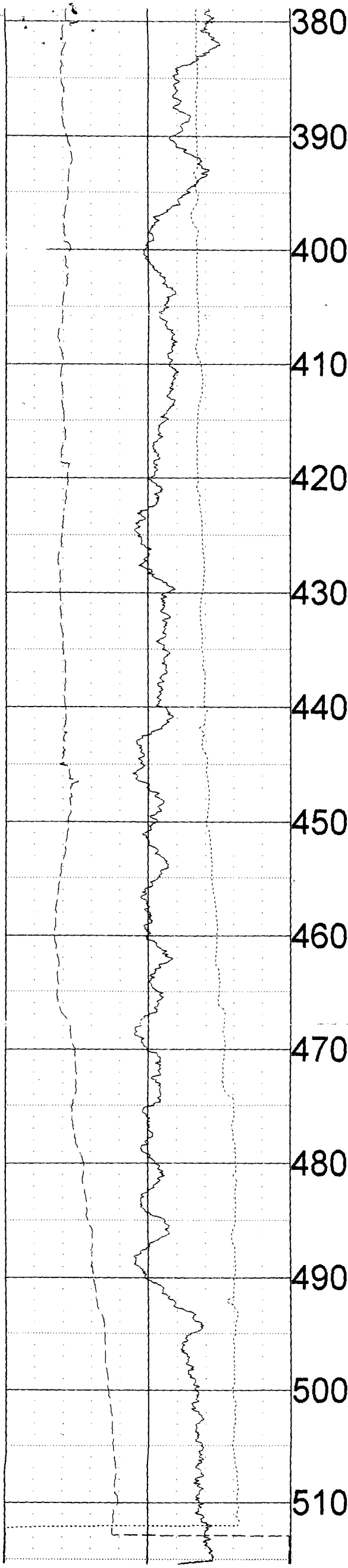
FEET

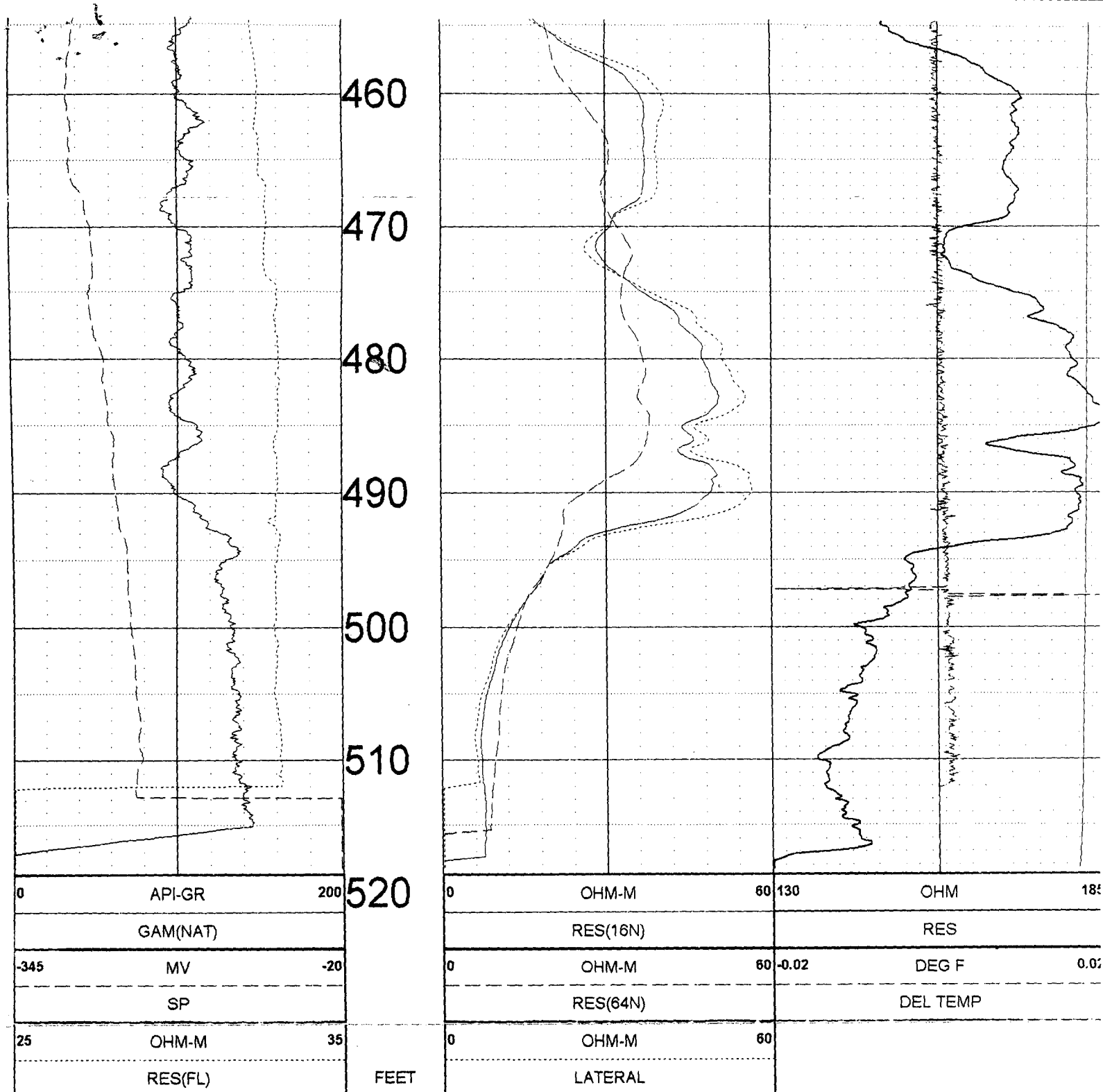
LATERAL









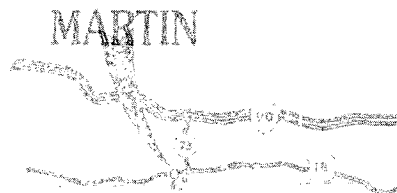


TOOL CALIBRATION TH-2003-1 06/12/03 10:28
TOOL 9041A
SERIAL NUMBER 275

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Nov20,99	00:08:57	GAM(NAT)	Default [API-GR]	Default [CPS]
	Nov20,99	00:08:57	GAM(NAT)	Default [API-GR]	Default [CPS]
2	Mar18,03	17:11:24	RES(FL)	Default [OHM-M]	Default [CPS]
	Mar18,03	17:11:24	RES(FL)	Default [OHM-M]	Default [CPS]
3	May15,03	00:32:29	SP	0.000 [MV]	59882.00 [CPS]
	May15,03	00:32:29	SP	400.000 [MV]	89460.00 [CPS]
4	May15,03	00:34:14	RES(16N)	0.000 [OHM-M]	3922.00 [CPS]
	May15,03	00:34:14	RES(16N)	1995.000 [OHM-M]	101206.00 [CPS]
5	May15,03	00:34:36	RES(64N)	0.000 [OHM-M]	3907.00 [CPS]
	May15,03	00:34:36	RES(64N)	1988.000 [OHM-M]	102661.00 [CPS]
6	Jan29,03	22:06:08	TEMP	52.000 [DEG F]	102850.00 [CPS]
	Jan29,03	22:06:08	TEMP	65.200 [DEG F]	81440.00 [CPS]
7	May15,03	00:33:43	RES	0.000 [OHM]	1113.00 [CPS]
	May15,03	00:33:43	RES	988.000 [OHM]	32491.00 [CPS]



TELEPHONE 605-685-6525 • FAX NUMBER 605-685-6452



101 Main Street
P. O. Box 687
MARTIN, SOUTH DAKOTA 57551

December 31st, 2003

Water Rights Program, DENR
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

RECEIVED

JAN 12 2004

WATER RIGHTS
PROGRAM

Please find enclosed 2 copies of an Application for a water permit for the new proposed well northwest of the City of Martin along with a check for \$325.00 for the filing fee.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Janet E. Speidel".

Janet E. Speidel
City Finance Officer

enclosures

WATER PERMIT APPLICATION NO. 2517-2
CITY OF MARTIN
FEBRUARY 10, 2004

Water Permit Application No. 2517-2 proposes to appropriate 0.67 cubic feet of water per second from one well (Arikaree Formation) 520 feet deep located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec.18, T37N-R37W, Bennett County. The water is for municipal use.

AQUIFER: Arikaree (ARKR)

The High Plains Aquifer consists of the upper sandstone units of the Arikaree Formation, the Ogallala Formation, and the Sand Hills Formation, and any terrace or alluvial deposits, all of which are hydraulically connected (Kolm and Case, 1983). The High Plains aquifer underlies 4,750 square miles of South Dakota and contains an estimated 700 million acre feet of water in the state (Gutentag and others, 1984). The upper members of the High Plains aquifer have been entirely eroded away in this area, leaving only the Arikaree Formation. This well site is approximately 27 miles south of the northernmost extent (erosional limit) of the Arikaree (Martin and others, in progress). The Arikaree Formation consists mainly of clayey siltstones and sandstones. The saturated thickness of the High Plains aquifer is estimated to be 400-600 feet thick in this area (Kolm, 1983). The Arikaree Formation underlies approximately 755,840 acres of Bennett County and contains an estimated 2,267,520 acre-feet of recoverable water in storage in the county (Allen, 1985). The aquifer is under unconfined conditions with the water table controlled locally by topography. Precipitation is the principal source of recharge to the aquifer. The annual recharge rate has been estimated to be 8 percent of the precipitation rate, or about 1.3 in./yr to 1.8 in./yr (Kolm, 1983). Natural discharge occurs to streams and springs, and directly to the atmosphere by evapotranspiration.

WATER AVAILABILITY:

Water Rights Program monitors 38 observation wells completed into the Arikaree Formation, of which 22 are located in Bennett County. Water Rights' Observation Well BT-78C is located approximately four miles southwest of this well site, Observation Well BT-76E is located approximately four miles south of this well site, Observation Well BT-77E is located approximately five miles south-southwest of this well site, and Observation Well BT-78E is located approximately six miles southeast of this well site. These observation wells are read monthly and hydrographs of the water levels (figures 1-4) show only slight fluctuations due to existing pumping and changes in climatic conditions (Water Rights, 2004b).

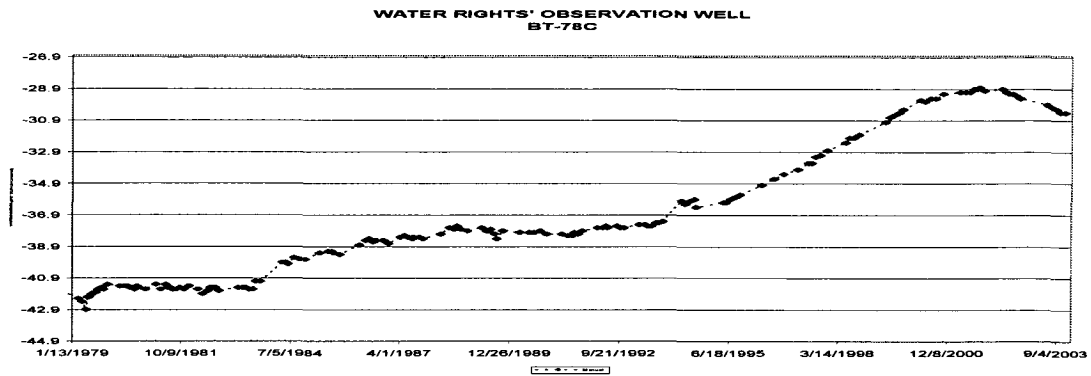


Figure 1. Water Rights' Observation well located approximately four miles southwest of the well site proposed by this application.

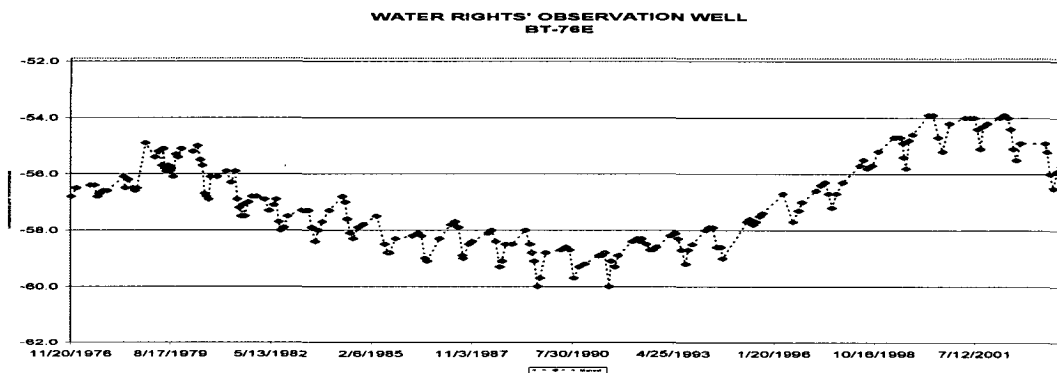


Figure 2. Water Rights' Observation well located approximately four miles south of the well site proposed by this application.

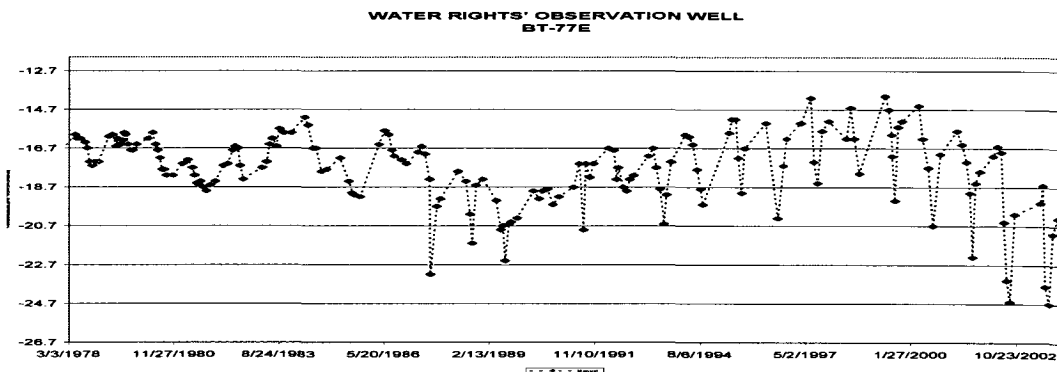


Figure 3. Water Rights' Observation well located approximately five miles south of the well site proposed by this application.

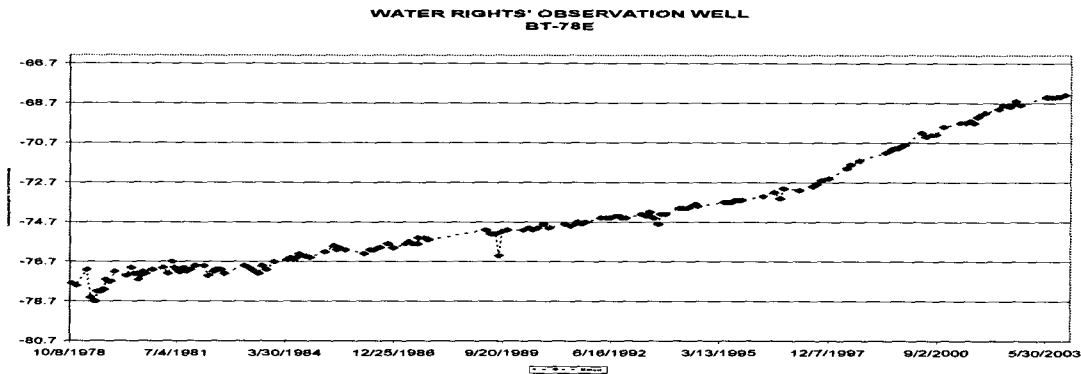


Figure 4. Water Rights' Observation well located approximately six miles southeast of the well site proposed by this application.

There are 27 permits/rights which appropriate water from the Arikaree aquifer in South Dakota. There are 16 Water Rights from the Arikaree in Bennett County, mostly south and east of the City of Martin. The nearest appropriation from the Arikaree is Water Right No. 1414-2, Buckles Ranch which is located approximately four miles south of Martin.

AFFECTS ON EXISTING RIGHTS:

The hydrographs of the Arikaree aquifer observation wells in the area document the climatic effects on the aquifer and in the case of observation wells BT-76E and BT-77E, the effects of pumping nearby high capacity irrigation wells. The diversion of 0.67 cfs proposed by this application is not expected to adversely affect existing water rights in the area.

CONCLUSIONS:

1. The Arikaree aquifer is a viable aquifer in this area, and unappropriated water from the aquifer is available for this appropriation.
2. Well interference should not be a problem in this area.

Ken Buhler

Natural Resources Engineering Specialist

James A. Goodman, P.E.

Natural Resources Engineering Director

- Allen, J.C., Iles, D.L., and Petres, A.K., 1985, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3A.B.C. and 4A.B. Groundwater Resources Inventory: SD DENR- Geological Survey for US Army Corps of Engineers Contract DAWC 45-82-C-015,
- Ellis, M.J., Ficken, J.H., and Adolphson, D.G., 1971, Hydrology of the Rosebud Indian Reservation, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-355
- Gutentag, E.D., Heimes, F.J., Krothe, N.C., Luckey, R.B., Weeks, J.B., 1984, Geohydrology of the High Plains Aquifer in Parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming, U.S. Geological Survey Professional Paper 1400-B,
- Kolm, K.E., Case, H.L.III, 1983, A Two-Dimensional, Finite-Difference Model of the High Plains Aquifer in Southern South Dakota: U.S. Geological Survey Water-Resources Investigations Report 83-4175,
- Martin, J.E., Sawyer, J.F., Fahrenbach, M.D., Tomhave, D.W., Schultz, L.D., In Progress, Geologic Map of South Dakota-Draft: S.D. Dept. Environment and Natural Resources-State Geological Survey, Scale 1:500,000
- Water Rights Program, 2004a, Domestic Well Log Files, DENR-Water Rights Program,
- Water Rights Program, 2004b, Observation Well Files, DENR-Water Rights Program,
- Water Rights Program, 2004c, Water Permit/Right Files, DENR-Water Rights Program,



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
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. 2517-2, City of Martin**

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. 2517-2, City of Martin, c/o E.R. Hicks, PO Box 687, Martin SD 57551.

The Chief Engineer is recommending APPROVAL of Application No. 2517-2 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. 2517-2 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. The City of Martin shall report to the Chief Engineer annually the amount of water withdrawn from the Arikaree Formation.

See report on application for additional information.

Garland Erbele, Chief Engineer
February 11, 2004

Affidavit of Publication

State of South Dakota }
County of Bennett } ss.

Mandy Scherer

being duly sworn, says: the Bennett County Booster II is, and during all the times hereinafter mentioned was, a weekly legal newspaper as defined in SDCL 17-2-2, as amended published at Martin, Bennett County, South Dakota; that affiant is and during all of said times was, an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is attached, was

published in said newspaper for 2 successive issues, bearing the following dates:

Feb 18, 2004

Feb 25, 2004

_____, 20____

_____, 20____

_____, 20____

_____, 20____

that the full amount of the fee charged for publishing

the same, to-wit, the sum of \$ 39.21, inures solely to the benefit of the publisher of said newspaper; that no agreement or understanding for the division of the fee has been made with any person, and that no part of the fee has been agreed to be paid to any other person.

Mandy Scherer

Subscribed and sworn to before me this 10 day of March, 2004.

Kimberly J. Harris
Notary Public

County of Bennett, South Dakota

My commission expires 3-7, 2006.



NOTICE OF APPLICATION NO. 2517-2 to Appropriate Water

Notice is given that the City of Martin, E. R. Hicks, Mayor, P.O. Box 687, Martin SD 57551 has filed an application for a water permit to appropriate 0.67 cubic feet of water per second (300 gallons per minute) from one well (Arikaree Formation) 530 feet deep located in the NE 1/4SW 1/4 Section 18-T37N-R37W. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2517-2 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 application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and

Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, 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 March 8, 2004.

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. 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. 2tc-2/25

RECEIVED
MAR 12 2004
WATER RIGHTS
PROGRAM



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

www.state.sd.us/denr

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

February 11, 2004

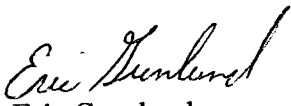
City of Martin
% E R Hicks Mayor
PO Box 687
Martin SD 57551

Dear Mayor Hicks:

Water Permit Application No. 2517-2 for municipal 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 Bennett Co. Booster II printed at Martin, SD (Ph # 605-685-6866). You will need to contact the newspaper and authorize publication of this notice. 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. Upon receiving authorization, 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 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
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

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

February 11, 2004

Bennett Co Booster II
PO Box 610
Martin SD 57551-0610

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 2517-2 to Appropriate Water to be published twice. Please publish the first notice on February 18, 2004 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 City of Martin, % E. R. Hicks, Mayor, PO Box 687, Martin SD (Ph # 605-685-6525).

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
Natural Resources Engineer
605 773-3352

enclosures

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

No. 2517-2

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

Date _____

We are in receipt of your letter of February 11, 2004 enclosing Notice of Hearing to Appropriate Water by Application No. 2517-2 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 February 18, 2004 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2517-2 to Appropriate Water

Notice is given that the City of Martin, E. R. Hicks, Mayor, PO Box 687, Martin SD 57551 has filed an application for a water permit to appropriate 0.67 cubic feet of water per second (300 gallons per minute) from one well (Arikaree Formation) 530 feet deep located in the NE ¼ SW ¼ Section 18-T37N-R37W. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2517-2 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 application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, 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 March 8, 2004.

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. 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.



MAY 10 2004

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

City of Martin
% E R Hicks Mayor
PO Box 687
Martin SD 57551

Dear Mayor Hicks:

Enclosed is Water Permit No. 2517-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license 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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 SW 1/4 Sec 18 Twp 37N Rg 37W

County

Bennett

North

Please mark well location with an "X"

W

E

Well Completion Date

7/28/2004

1 Mile

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? 1,000.0 ft. from Septic Tank (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
51.2 LB/FT	12.00 IN	0.0 FT	395.0 FT	24.00 IN
51.2 LB/FT	12.00 IN	495.0 FT	530.0 FT	24.00 IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Neat Cement	426	15.5 Lb/gal	0.0 Ft	200.0 Ft

Describe grouting procedure
Tremmie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 100.0 FeetMaterial Stainless SteelSlot Size .025 Set From 395.0 Feet to 495.0 FeetOther information Stainless Steel Wire Wrap

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? Chlorine
☐ No, Why Not?

Lab sample sent to for water quality analysis

State Health Lab - Pierre, SD

Well Owner: City of Martin

Business Name:

Address: 101 Main Street, PO Box 687City, State, Zip: Martin SD 57551

WELL LOG:

DEPTH

FORMATION

FROM

TO

See Attached

STATIC WATER LEVEL 112.9 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? Yes

WELL TEST DATA:

☒ Pumped Describe: Test Pumped for 19 Hours
☐ Bailed

☐ Other

Pumping Level Below Land Surface

368.0 Ft. After 5.5 Hrs. pumped 250.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 250.0 GPM

REMARKS

RECEIVED

SEP 27 2004

This well was drilled under license # 273

And this report is true and accurate.

Drilling firm: Charles Sargent Irrigation, Inc.

Signature of License Representative:

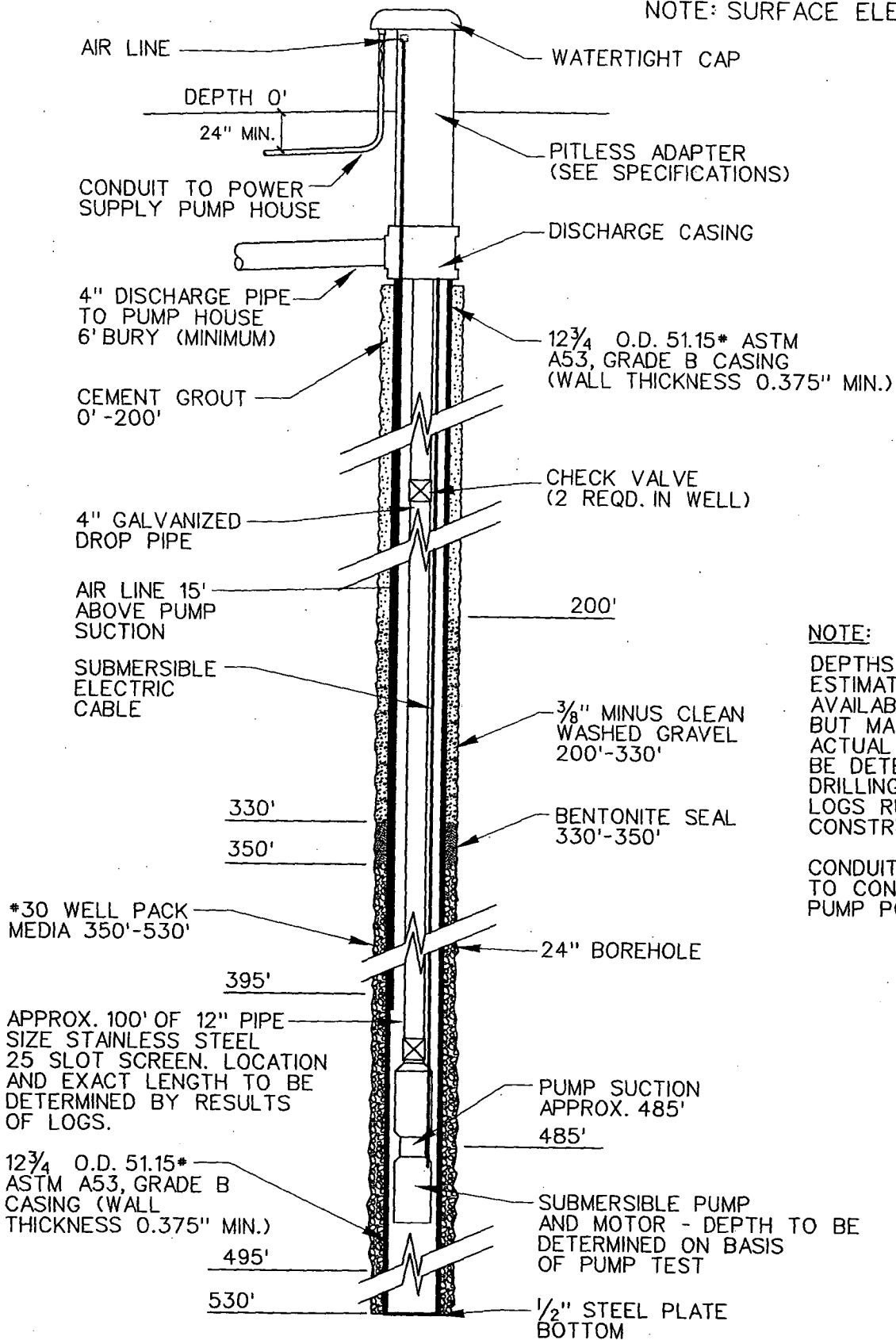
Mike Whitel

Signature of Well Owner or Equitable Property Holder:

Elizabeth Stearns, Finance OfficerDate: 9-23-04

WATER RIGHTS PROGRAM

NOTE: SURFACE ELEVATION 3291.31



NOTE:

DEPTHS INDICATED ARE ESTIMATES BASED ON AVAILABLE INFORMATION, BUT MAY VARY. ACTUAL DEPTHS WILL BE DETERMINED FROM DRILLING SAMPLES AND LOGS RUN DURING CONSTRUCTION.

CONDUIT TO PUMP HOUSE TO CONTAIN AIRLINE AND PUMP POWER CABLE.



PROJECT

MARTIN CITY WELL

SHEET TITLE

WELL CONSTRUCTION DETAIL

N.T.S.

JOB NO.

03-1020

DRAWN BY:

AMP

CHECKED BY:

EDW

SHEET:

1 of 1

DATE:

12-18-03

Sargent Drilling

INDUSTRIAL ENGINEERING
COMPLETE MUNICIPAL AND INDUSTRIAL
PUMPS AND WELL SERVICE

Box 627
South Highway 21

Broken Bow, Nebraska
68822

Phone
(308) 872-5125
(866) 872-6451
FAX (308) 872-6912

TEST WELL LOG CITY OF MARTIN WELL LOG

N 43° 10' 44.9" – W 101° 44' 32.9"
SW ¼, Sec. 18, Town. 37 N, Range 37 W, Bennett Co.

0	6	Top Soil
6	8	Ledge
8	15	Sand, Siltstone
15	16	Ledge
16	20	Sand, Siltstone
20	21	Ledge
21	28	Sand, Siltstone
28	30	Ledge
30	39	Fine Sand, Siltstone
39	40	Clay
40	44	Sand, Siltstone, Clay
44	46	Ledge
46	52	Sand, Sandstone
52	53	Ledge
53	60	Sand, Siltstone, Clay
60	80	Fine Sand, Siltstone (Ledges 64-66, 75, & 79)
80	100	Fine Sand, Siltstone, Clay (Ledges 90-92)
100	120	Fine Sand, Siltstone (Ledges 108-110)
120	140	Fine Sand, Siltstone, Clay (Ledge 125)
140	160	Fine Sand, Siltstone, Trace Clay
160	180	Sand, Siltstone, Clay (Thin Ledges)
180	200	Fine Sand, Siltstone, Clay (Thin Ledges)
200	220	Fine Sand, Sandstone (Ledges 200-204, 210, & 216)
220	240	Fine Sand, Sandstone (Thin Ledges), Clay Layers
240	260	Sand, Siltstone, Clay (Ledges 255-260)
260	271	Fine Sand, Siltstone, Clay Ledges
271	280	Fine Sand, Clay, Siltstone
280	295	Siltstone, Clay (Mostly Clay)
295	297	Ledge
297	300	Siltstone, Clay
300	311	Clay, Siltstone

Sargent Drilling

**INDUSTRIAL ENGINEERING
COMPLETE MUNICIPAL AND INDUSTRIAL
PUMPS AND WELL SERVICE**

Box 627
South Highway 21

Broken Bow, Nebraska
68822

Phone
(308) 872-5125
(866) 872-6451
FAX (308) 872-6912

311	312	Ledge
312	320	Siltstone, Fine Sand
320	340	Siltstone, Clay Layers
340	360	Sandy Clay, Sandstone Layers
360	380	Sandstone, Clay (Some Siltstone)
380	400	Sandstone, Some Clay Layers (Ledge 382 & 399)
400	402	Ledges
402	410	Siltstone, Clay
410	420	Sandstone, Trace Clay
420	460	Fine Sand, Sandstone, Some Clay
460	480	Medium Sand, Sandstone
480	500	Fine Sand, Sandstone
500	530	Siltstone, Clay, Mostly Clay



TRANSMITTAL LETTER

OUR PROJECT # 03-1020

DATE: September 24, 2004

TO: Water Rights Program
DENR
Joe Foss Building
523 E Capitol Avenue
Pierre, South Dakota 57501-3181

RECEIVED
SEP 27 2004
WATER RIGHTS
PROGRAM

706 West Boulevard
Rapid City, SD 57701
605-342-9470
Fax 605-342-2377
e-mail: alliance@allianceae.com

ATTN:

RE: Martin Water Improvements

WE TRANSMIT:

☒ herewith	☐ in accordance with your request
☐ hand delivered	☐ under separate cover via ☐
☒ mailed	☐ faxed

FOR YOUR:

☐ approval	☐ review and comment	☐ distribution
☒ use	☐ information	☐ record
☐ signature	☐ per request	☐ completion

THE FOLLOWING:

☐ drawings	☐ specifications	☐ payment app.
☐ report	☐ shop drawings	☒ report
☐ change order proposal		

REMARKS:

One copy of the South Dakota Water Well Completion Report on the above referenced project.

ALLIANCE OF ARCHITECTS AND ENGINEERS

Robert A. Rothermel, PE

COPIES TO:

Permit No. 2517-2
White River - Water District

Other permit/license(s) associated with project: Water Right Nos. 1844-2 and 677-2 are for wells used by the city for municipal use but are not affiliated with the well authorized by Permit No. 2517-2

Contact Person & Address: Jean Kirk, Finance Officer, 101 Main Street, PO Box 687 Martin SD 57551

Paul Noel, Utility Manager, 101 Main Street, PO Box 687 Martin sD 57551

Report Of Examination Of Works

On, September 22, 2010, I made a thorough examination of the water use system constructed by the city of Martin of 101 Main Street, PO Box 687, Martin SD 57551 holder of Permit No. 2517-2, bearing the priority of January 12, 2004 authorizing the diversion of 0.67 cu. ft. per second of the waters of Arikaree Aquifer for municipal purposes, in Bennett County.

The system is in the following condition excellent. The point of diversion is located in the NE ¼ SW ¼ Section 18, T37N, R37W and approximately 2,560 feet north and 2,500 east of the SW corner of Section 18 with a longitude of -101.7426 and a latitude of 43.1791. The works are capable of diverting and conveying to the place of use 0.67 cu. ft. per second of water which is being used for municipal. Water has been put to beneficial use to the maximum extent and the license should be issued for 0.67 cfs.

Review of 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
- 4) Exceptions to compliance are: none

Report On the Specifics of the System

Diversion Point Information:

- 1) Well Drilling Firm: Sargent Irrigation No. 273
- 2) No. of Wells 1
- 3) Depth(s) 530 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 12 inches
- 2) Length 395 feet
- 3) Type steel

Screen:

- 1) Type stainless steel
- 2) Length 100 feet
- 3) Static water level 112.9 feet

Pump\ Motor:

- | | |
|------------------------------|-----------------------------------|
| 1) Pump Make <u>Grundfos</u> | 2) Pump Model # |
| 3) Capacity <u>300</u> GPM | 4) Motor Make <u>Franklin</u> |
| 5) Motor Model No. # | 6) Horsepower rating <u>50</u> hp |

Static water level at time of test in January 2010 was 115 feet

See Sargent Drilling pump test information from January 28, 2010

COMMENTS: This well is known as city well No. 5. Mr. Noel indicated that the well when it kicks on produces 300 gpm but balances out at approximately 260 gpm. I propose the license be issue for 0.67 cfs which equates to 300 gpm.



Eric Gronlund PE
Natural Resources Engineer
DENR, Water Rights Program



Date

Sargent Drilling Co.
INDUSTRIAL ENGINEERING
COMPLETE MUNICIPAL AND INDUSTRIAL
WELL AND PUMP SERVICE

PO Box 627
 South Hwy 21

Broken Bow, NE
 68822

Phone 308-872-5125
 Fax 308-872-6912

SARGENT PUMP TEST

DATE: 01/28/10

OWNER: City of Martin

OPERATER:

CITY: Martin

STATE: South Dakota

WELL #: 5

WELL ID#:

GPS N-LATITUDE: - -

W-LONGITUDE: - -

MOTOR MFG: Franklin

HP: 50 FRAME: 6 In. MOTOR EFFICIENCY: 83 %

PUMP MFG: Grundfos

SETTING: 486 Ft. 4 X Sub BOWL: 15 Stage 203S500

STATIC W. L.(Ft.): 115

DESIGN SP (GPM/Ft. DD): 0

SHUT OFF (PSI): 300

CONDITION	TEST #1	TEST #2	TEST #3
Pump RPM	3475	3475	3475
Pumping Pressure (PSI)	75	65	55
Pump Loss (Ft.)	30.23	31.46	32.3
Pumping Level (Ft.)	314.6	321.7	329
TDH (Ft.)	518.08	503.31	488.35
GPM: Meter	291	296	300
GPM: Test Equipment	277	283	287
Water HP	36.24	35.97	35.39
SP Capacity (GPM/Ft.)	1.4	1.4	1.3
KW	46.9	46.83	46.6
Input HP	62.87	62.77	62.47
Pump HP	52.18	52.1	51.85
Wire To Water (%)	57.6	57.3	56.7
Pump Efficiency (%)	69.5	69	68.3



City of Martin Well No. 5 authorized by Water Permit No. 2517-2

WATER PERMIT No. 2517-2, CITY OF MARTIN



0 330 660 1,320 1,980 2,640 Feet



Well located in the NE 1/4 SW 1/4 Section 18, T37N, R37W
2,560 feet north and 2,500 east of SW Corner of Section 18
Longitude -101.7426 Latitude 43.1791

Eric Gronlund

Eric Gronlund PE
Water Rights Program, DENR
Date of Investigation - September 22, 2010



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

FEB 11 2011

2517-2

City of Martin
E R Hicks, Mayor
PO Box 687
Martin SD 57551

Dear Mr. Hicks:

Enclosed is Water License No. 2517-2. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

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.

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2517-2

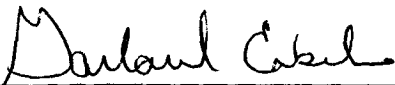
(1) City of Martin, PO Box 687, Martin SD 57551 made Application No. 2517-2, January 12, 2004 for a water permit to divert 0.67 cubic feet of water per second from groundwater (one well), Bennett County, South Dakota for municipal purposes. Permit No. 2517-2, with a priority date of January 12, 2004 was approved March 8, 2004 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 8, 2009 and for the application to beneficial use of water on or before March 8, 2013.

(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. 2517-2 is issued a license, bearing a priority date of January 12, 2004 to appropriate 0.67 cubic feet of water per second from groundwater (one well) for municipal use.

The diversion point is located: approximately 2,560 feet north and 2,500 feet east of the southwest corner of Section 18-T37N-R37W (NW ¼ SE ¼) [known as city well No. 5].

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 2517-2 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. 2517-2 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.
- The City of Martin shall report to the Chief Engineer annually the amount of water withdrawn from the Arikaree Formation.



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

FEB 11 2011

date

