Water Order
File when
Approved for
injection

SDX RESOURCES, INC.
P.O. BOX 5061
MIDLAND, TEXAS 79704
(915) 685-1761

May 26, 2000

NMOCD
2040 S. Pacheco
Santa Fe, NM 87505

NMOCD
811 S. First St
Artesia, NM 88210

Re: Application for Authority to Inject
Sec. 23, T17S, R27E
Eddy Co., NM

Gentlemen:

Enclosed is Form C-108 (Application for Authority to Inject) for the following well operated by SDX Resources Inc.

Woden Federal #1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FEL
Eddy Co., NM

The legal ad will be run in the "Artesia Daily Press". We will forward that affidavit to you as soon as we receive it.

Should you have any questions, please contact us at the letterhead address.

Sincerely,

Bonnie Atwater

Bonnie Atwater
Regulatory Tech

/ba

attachment

ENERGY AND MINERALS DEPARTMENT

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: SDX Resources, Inc.

Address: PO Box 5061, Midland, TX 79704

Contact party: Chuck Morgan Phone: 915/685-1761

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Bonnie Atwater Title Regulatory Tech

Signature: Bonnie Atwater Date: 5/26/00

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office

Application for Authorization to Inject
SDX Resources, Inc.

Woden Federal # 1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FWL
Eddy Co., New Mexico

I. SDX plans to convert this well to an injection well in the Penn formation.

II. Operator: SDX Resources, Inc.
PO Box 5061
Midland, TX 79704

III. Well Data: See Attachment A1 - A3.

IV. This is not an expansion of an existing project.

V. See Attachment B1 & B2 (1/2 – 2 mile map & large scale map)

VI. See Table VI

VII. (1.) Proposed Average Daily Injection Volume: 400 BWPD.
Maximum Daily Injection Volume: 2000 BWPD.

(2.) This will be a closed system.

(3.) Proposed Average Injection Pressure: Unknown.
Proposed Maximum Injection Pressure: 1570#.

(4.) Injection water would be produced water from the producing wells on the Berry Federal lease in the San Andres and Grayburg formations. Injection fluid analysis attached (Attachment C).

(5.) Formation Water Analysis not available.

VIII. (1.) The proposed injection interval is the portion of the Penn consisting of porous dolomite.

(2.) Limited fresh water zones overlie the proposed injection zone at appx. 150'.

IX. The proposed injection interval may be acidized with 15% HCL acid.

X. Well logs are on file at the OCD.

XI. No fresh water wells are within a ½ mile radius.

XII. Geologic and engineering data have been examined and no evidence of open faults or any other hydrological connection between the injection zone and any fresh water aquifer has been found.

XIII. (1.) Certified letters sent to offset operators. (Attachment D)
Surface Owner: Bureau of Land Management.

(2.) Copy of legal advertisement. (Attachment E)

ATTACHMENT A1

III. Well Data: Woden Federal #1

A. (1.) Unit B, Sec 23, T17S, R27E
Eddy Co., New Mexico
660' FNL 1650' FEL

(2.) Casing: 13-3/8", 48#, set at 400'. Cement with 463 sx. TOC surface.
8-5/8", 32#, set at 1800'. Cement with 675 sx. TOC surface.
Propose to set 5-1/2" 17# casing to 7850 and cement with 1000 sacks and circulate to surface.
Well P&A'd in 1999 as shown in Attachment A2.

(3 & 4.) Proposed well condition: Open Hole from 7850' – 8938'.
2-7/8" PC tubing with an AD-1 PC packer. Set at 7750' as shown in Attachment A3.

B. (1.) Injection Formation: Canyon/Strawn

(2.) Injection interval will be thru open hole 7850'-8938'.

(3.) Well was drilled and tested in the Morrow formation. No commercial production was encountered.

(4.) Morrow zone isolated by 60 sack plug set at 9138'-8938'.

(5.) Next shallow oil or gas zone: San Andres.
Next deeper oil or gas zone: Morrow.

WELL NAME: Woden Fed. #1 FIELD AREA: Undes. Logan Draw Morro

LOCATION: Sec. 23 T17S R27E 660' FNL 1650' FEL (B)

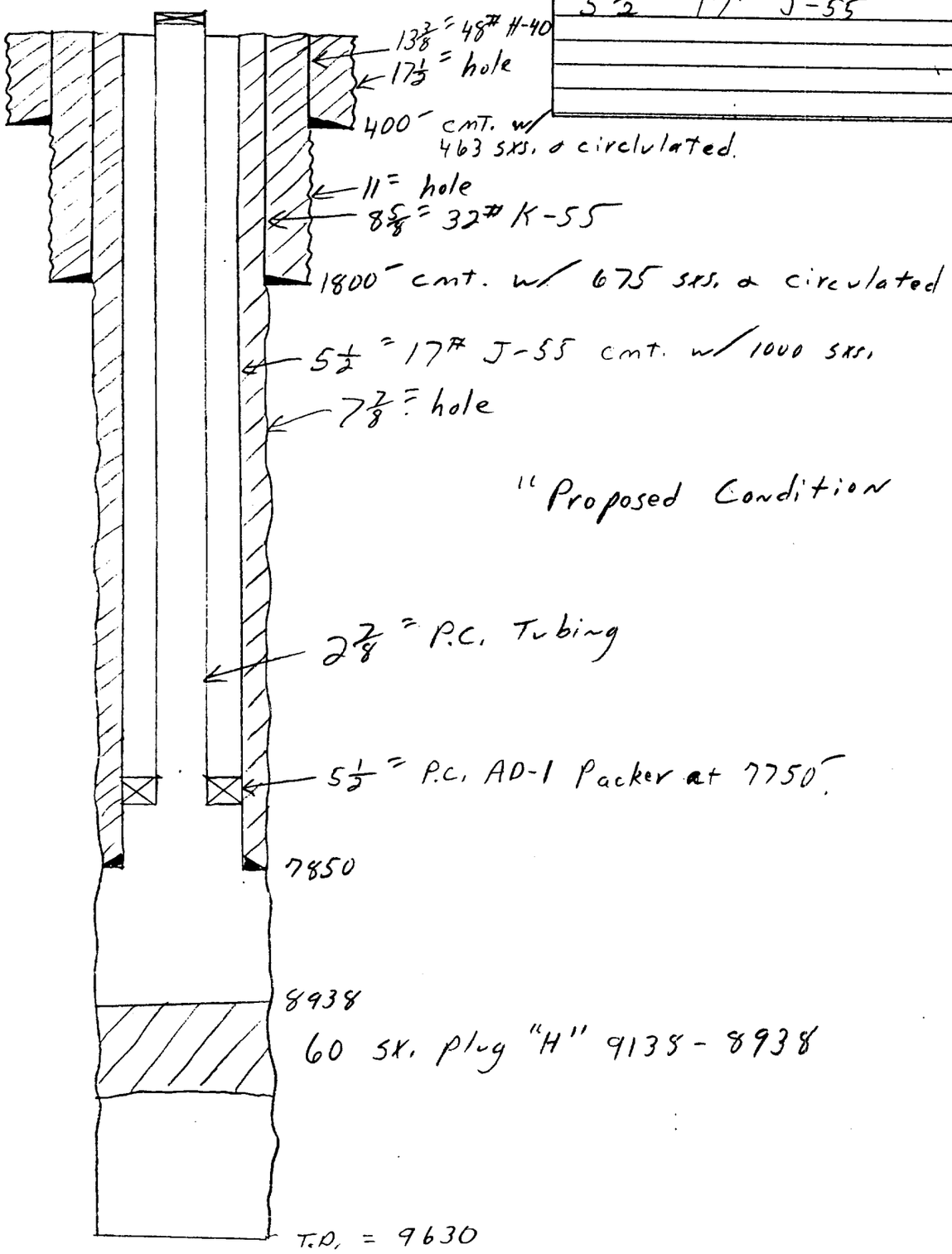
GL: 3495' ZERO: _____' AGL: _____'

KB: 3512' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: _____

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SE
13 3/8" 48# H-40	400
8 5/8" 32# K-55	1800
5 1/2" 17# J-55	7850



- SKETCH NOT TO SCALE -

REVISED: _____

A-3

WELL NAME: Woden Fed. #1 FIELD AREA: Undes. Logan Draw Morro

LOCATION: Sec. 23 T17S R27E 660' FNL 1650' FEL (B)

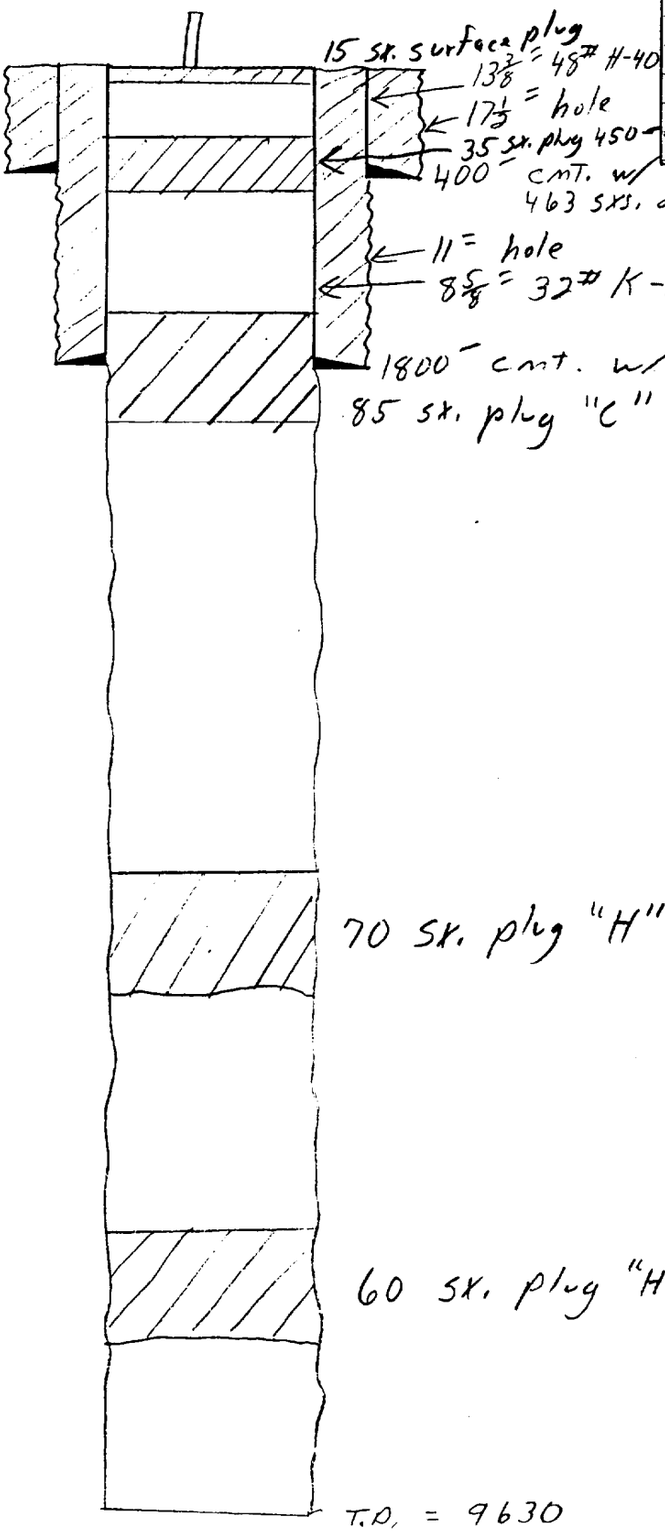
GL: 3495' ZERO: _____' AGL: _____'

KB: 3512' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: _____

CASING PROGRAM:

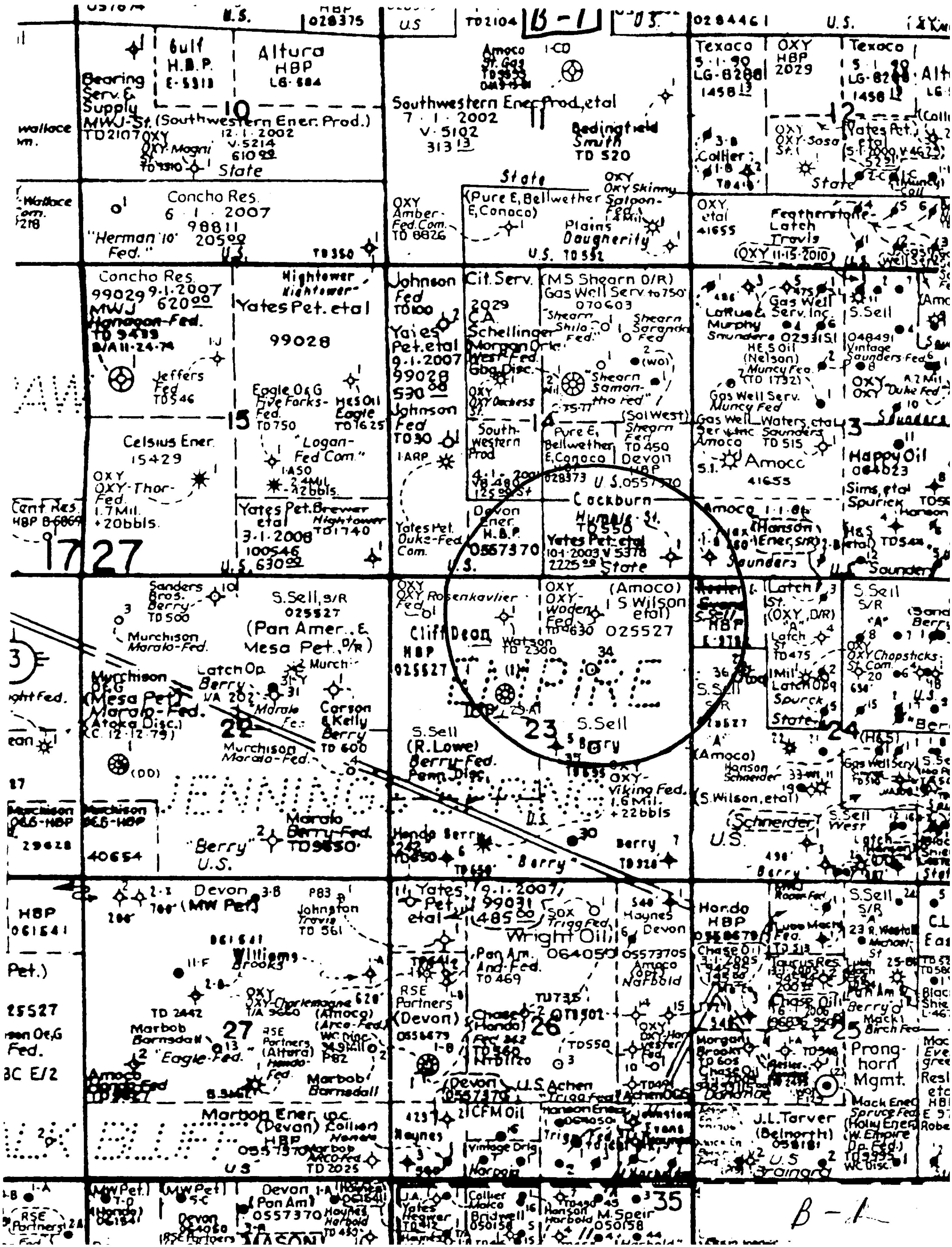
SIZE/WT./GR./CONN.	DEPTH S
13 3/8" 48# H-40	40
8 5/8" 32# K-55	180
350	



"Current Condition"

- SKETCH NOT TO SCALE -

REVISED: _____


B-1
Gulf H.B.P. E-5313
Altura HBP LG-584
Bearing Serv. & Supply
MWJ-St. (Southwestern Ener. Prod.)
12-1-2002 V-5214
State
Southwestern Ener. Prod., etal 7-1-2002 V-5102
Bedingfield Smith TD 520
Texaco 5-1-90 LG-8288
OXY HBP 2029
Concho Res. 6-1-2007 98811
"Herman 10" Fed."
Concho Res. 9-1-2007 99029
Hightower
Yates Pet. etal 99028
Jeffers Fed TD 546
Eagle O & G Five Forks-Fed.
Celsius Ener. 15429
Johnson Fed
Yates Pet. etal 9-1-2007 99028
Cit. Serv. 2029 C.A.
(MS Shearn O/R) Gas Well Serv. to 750' 070603
Pure E, Bellwether E, Conoco
Cockburn Humble St.
Yates Pet. etal 10-1-2003 V 5378 State
Devon Ener. H.B.P. 0557370
Amoco 41655
Happy Oil
S. Sell
Sims, etal Spurick
Saunders
Yates Pet. Brewer etal 3-1-2008 100546
Cent. Res. HBP B-6869
S. Sell, S/R 025527
(Pan Amer. & Mesa Pet. O/R)
Murchison Maralo-Fed.
Latch Op. Berry
Carson & Kelly Berry TD 600
Cliff Dean HBP 025527
OXY OXY-Woden Fed TD 630
(Amoco) S. Wilson etal 025527
S. Sell Berry
S. Sell (R. Lowe) Berry-Fed. Penn Disc.
OXY-Viking Fed. 1.6 Mil. +22 bbls
(Amoco) Hanson Schneider
(S. Wilson, etal)
Schneider U.S.
Maralo Berry-Fed. TD 9850
"Berry" U.S.
Murchison O&G-HBP 29628
Murchison O&G-HBP 40654
Hondo Berry
Berry
EMPIRE
17 27 10 12 15 14 13 22 23 24 27 26 25 35
Devon (MW Pet.)
HBP 061541
Williams Brooks
Johnston Travis TD 561
Marbob Barnsdall
Eagle-Fed.
Marbon Ener. Inc. (Devon) Collier HBP
Yates Pet. etal 9-1-2007 99031 485
Wright Oil 064050
Pan Am. And-Fed. TD 469
RSE Partners (Devon)
Chase (Hondo)
Devon U.S. Achen
CFM Oil
Hondo HBP
Chase Oil 3-1-2005
Prong-horn Mgmt.
J.L. Tarver (Belnorth)
U.S. Brainard
S. Sell S/R
Mack Ener. Spruce Fed.
Devon (Pan Am) 0557370
M. Speir 050158
MASON
U.S.
B-1

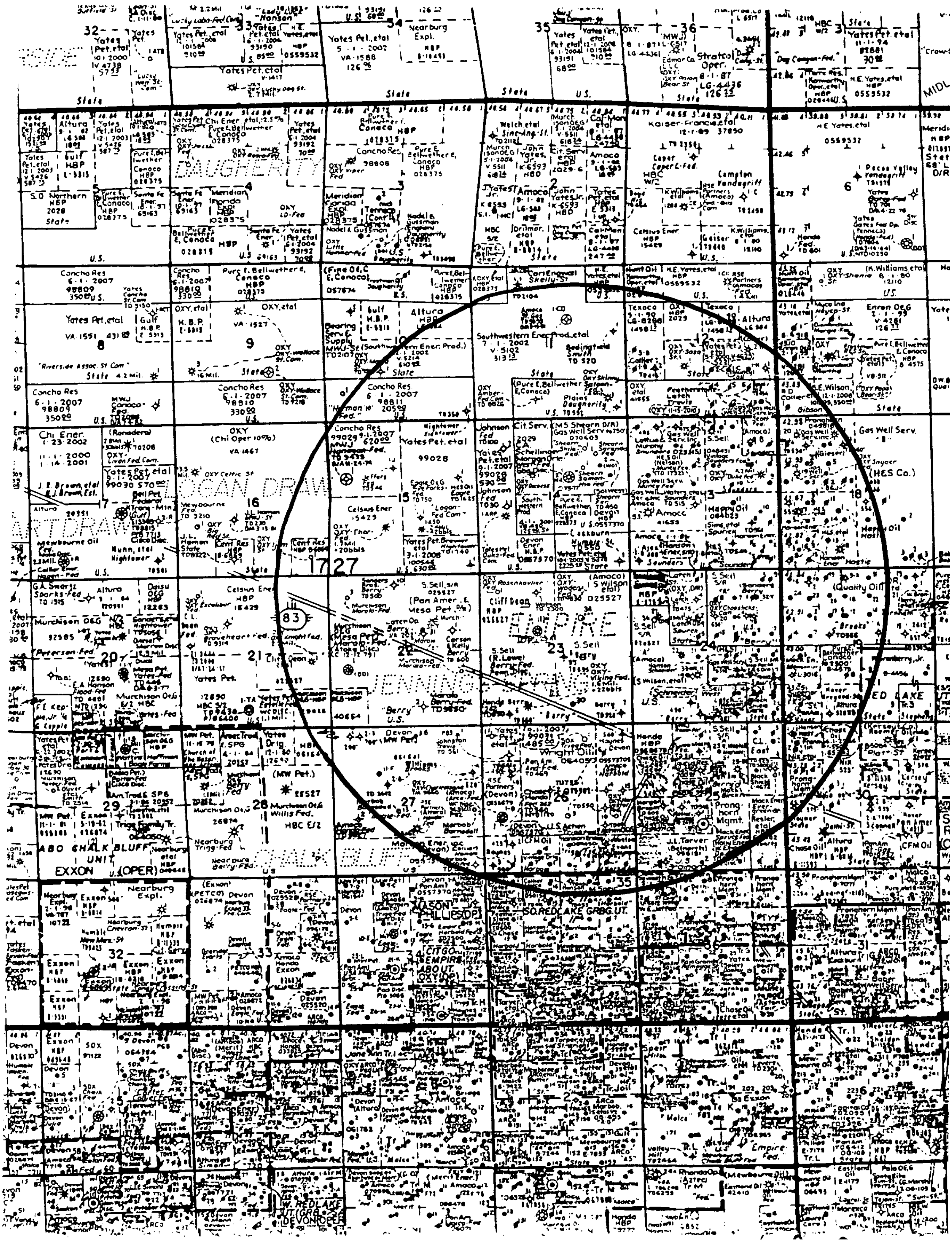

DAUGHERTY
LOGAN DRAW
EMPIRE
JENNINGS
ABO CHALK BLUFF UNIT
EXXON (OPER)
SO. RED LAKE GRBG. UT.
MASON PHILLIPS (OP)
CITGO EMPIRE ABO UT. OXY (OP)
W. RED LAKE UT (GRBG) DEVON (OPER)
Yates Pet. etal
Concho Res
Southwestern Ener. Prod., etal
Celsius Ener
Kaiser-Francis etal

Table VI

Berry Federal # 29
(formerly Berry Fed. #1)

"F" Sec. 23 T17S R27E
1980' FNL & 1980 FWL

Spudded:1/22/62 Completed: 4/18/62 Plugged Back: 1/28/65

Original TD 10,427 PBTD: 1550

13-3/8" 48# set at 400 and circulated with 400 sxs
9-5/8" 36# set at 1690' and circulated with 950 sxs.
5-1/2" 17# set at 10,427 and cemented with 525 sxs.

CRT set at 10,200 and O.H. sqz'd with 150 sxs.
9541-81 perf'd, acidized & fracd
CRT set at 9300
9154-64 perf'd, acidized, & fracd
9292-9453 perf'd & acid fracd

Perfs 9154-9453 IP'd at 680 MCFGPD
Well non-commercial after several months

35sx plug set at 9200-8920 & 5-1/2" csg cut & pulled at 8200
40 sx plug set at 7664-7384, 35 sxs at 6370-6090, 35 sxs at 5200-4920, 35 sxs at 3280-3000, 20 sxs at 1750-1800, and 20 sxs at 1500-1550.

Perforated in the Queen 1148-63 IP: 70 MFCGPD

Frac'd with 20,000 gals. Gelled water and 10,000 # sand

Currently operated as a gas well by SDX Resources, Inc.
In the Red Lake-Qn-Gb-SA field.

Wellbore Skematic attached

WELL NAME: Berry "A" #1 FIELD AREA: Red LAKE

LOCATION: Sec. 23 T17S R27E 1980' FNL 1980' FWL "F"

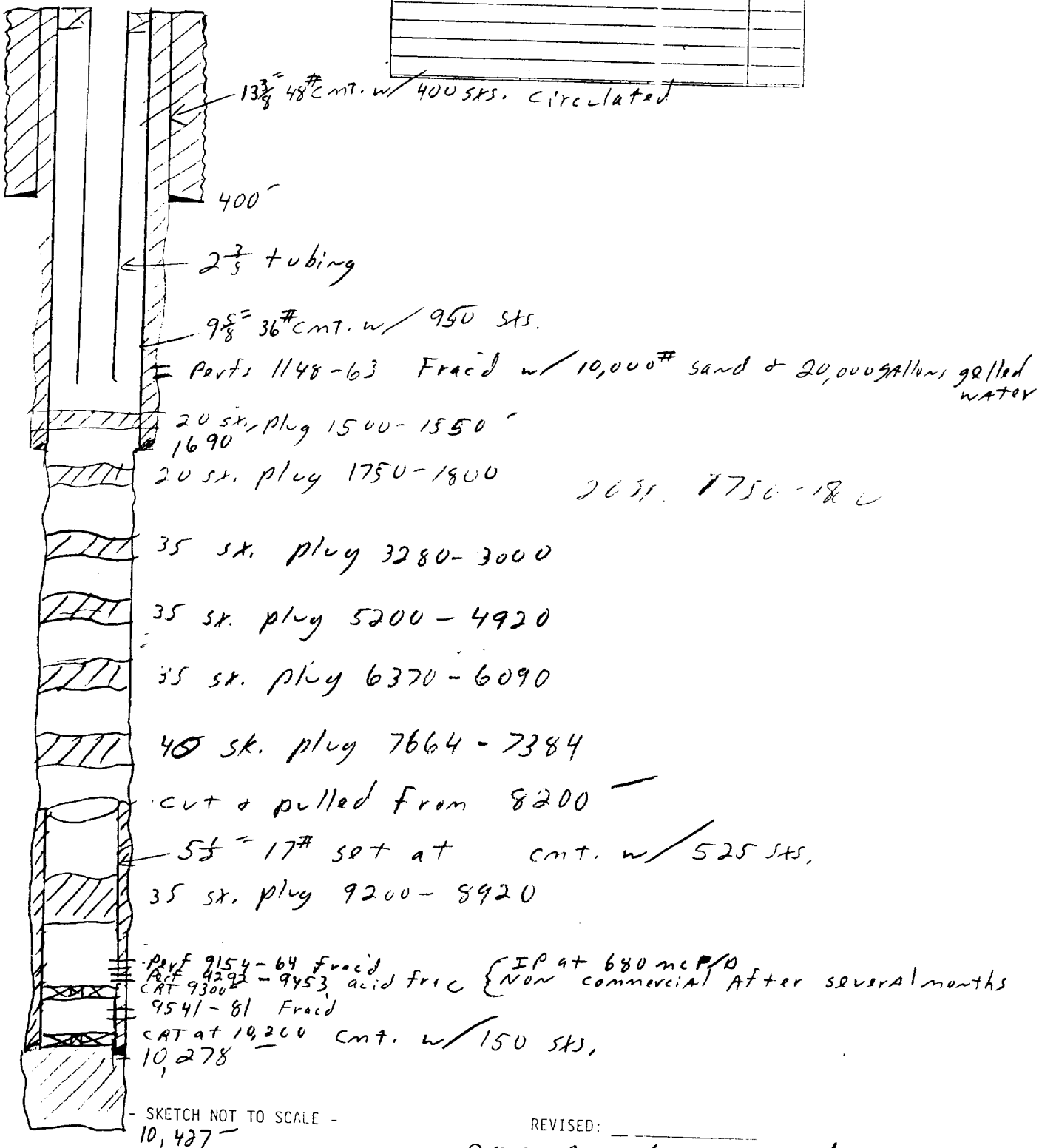
GL: 3545' ZERO: _____' AGL: _____'

KB: _____' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: SDX Resources, Inc. current "operator" Ralph Lowe original deep test operator as Berry Fed. #1

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SET



IP at 680 mcf/D Now commercial After several months

REVISED: _____

DST Record Attached.

Baker Petrolite

BAKER HUGHES

WATER ANALYSIS REPORT

422 West Main Street
Artesia, NM 88210-2041 USA
Phone: (505) 746-3588
Fax: (505) 746-3580

Reply to:
P.O. Box 1140
Artesia, NM 88211-1140 USA

Company : SDX Resources
Address : 204 N. 7th Artesia
Lease : Berry
Well : WaterTank
Sample Pt. : Incoming Line

Date : 4/3/00
Date Sampled : 4/3/00
Analysis No. : 001

	ANALYSIS		mg/L		* meq/L
1.	pH	7.3			
2.	H2S	Pos.			
3.	Specific Gravity	1.185			
4.	Total Dissolved Solids		239250.8		
5.	Suspended Solids		0.0		
6.	Dissolved Oxygen		0.0		
7.	Dissolved CO2		250		
8.	Oil In Water		0.0		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	415.0	HCO3	6.8
12.	Chloride	Cl	142710.0	Cl	4025.7
13.	Sulfate	SO4	3125.0	SO4	65.1
14.	Calcium	Ca	1900.0	Ca	94.8
15.	Magnesium	Mg	1034.5	Mg	85.1
16.	Sodium (calculated)	Na	90066.3	Na	3917.6
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		9004.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

```
+-------+                          +-------+
|    95| *Ca <----- *HCO3         |      7|
|------|    /------->             |-------|
|    85| *Mg -----> *SO4          |     65|
|------|      <---------/         |-------|
|  3918| *Na -----> *Cl           |   4026|
+-------+                          +-------+
```

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	6.8	551
CaSO4	68.1	65.1	4429
CaCl2	55.5	22.9	1272
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	85.1	4052
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3917.6	228946

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

REMARKS:

Baker Petrolite

Respectfully submitted,
R.Allison

XI

ATTACHMENT D
OFFSET OPERATORS

Oxy USA
PO Box 50250
Midland, TX 79710

Yates Petroleum
PO Box 327
Artesia, NM 88211-0327

Devon Energy Corp
20 N Broadway, Ste 1500
Oklahoma City, OK 73102-8260

Southwestern Energy Production Co
2350 N. Sam Houston Pkwy E #300
Houston, TX 77032

Altura Energy, LTD
PO Box 4294
Houston, TX 77210-4292

Warren Hanson
R 342 S. Haldeman Rd
Artesia, NM 88210

Steve Sell
PO Box 5061
Midland, TX 79704

Pure Energy Group, Inc.
700 N. St. Mary's St, Ste 1925
San Antonio, TX 78205

Conoco
10 Desta Dr, Ste 100W
Midland, TX 79705-4500

Gas Well Services Inc.
26 E Compress Rd
Artesia, NM 88210

SDX RESOURCES, INC.
P.O. BOX 5061
MIDLAND, TEXAS 79704
(915) 685-1761

May 26, 2000

Re: Application for Authority to Inject
Sec. 23, T17S, R27E
Eddy Co., NM

Gentlemen:

Enclosed is a copy of Form C-108 (Application for Authority to Inject) for the following well operated by SDX Resources Inc.

Woden Federal #1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FEL
Eddy Co., NM

Should you have any questions, please contact us at the letterhead address or call 915/685-1761. Thank you for your consideration in this matter.

Sincerely,

Chuck Morgan
Engineer

CM:bja

enclosure

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

SDX Resources, Inc., located at 511 W. Ohio St., Ste 601, Midland, TX 79702, mailing address PO Box 5061, Midland, TX 79704, Contact: Chuck Morgan 915/685-1761 is seeking administrative approval from the New Mexico Oil Conservation Division to complete the Woden Federal #1 located in Section 23, T17S, R27E,660' FNL & 1650' FEL in Eddy Co., New Mexico as an injection well. The proposed injection zone is the Penn formation thru open hole from 7850'-8938'. SDX Resources, Inc. intends to inject a maximum of 2000 barrels of produced formation water per day at a maximum injection pressure of 1570#.

Interested parties must file objections or request for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, New Mexico 87505 within 15 days of this notice.

This legal ad will run in the "Artesia Daily Press" .

E