STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

3-19-93

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC
DHC
NSL
NSP
SWD X
WFX
PMX

Gentlemen:

I have examined the application for the:

Dancra Inc — Sawyer Deep #1-N — 19-9-38
Operator — Lease & Well No. — Unit — S-T-R

and my recommendations are as follows: (form Cactus Drlg. Corp. of TX. Sawyer Deep #1)

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed

OCD Hobbs

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

FORM C-108
Revised 7-1-81

30-025-21199

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: DAVCRO INC.

Address: 2124 Broadway , Lubbock, Texas 79401

Contact party: Michael L. Pierce Phone: 505-392-1915

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: Michael L. Pierce Title Agent

Signature: [signature] Date: 3-16-93

* 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.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

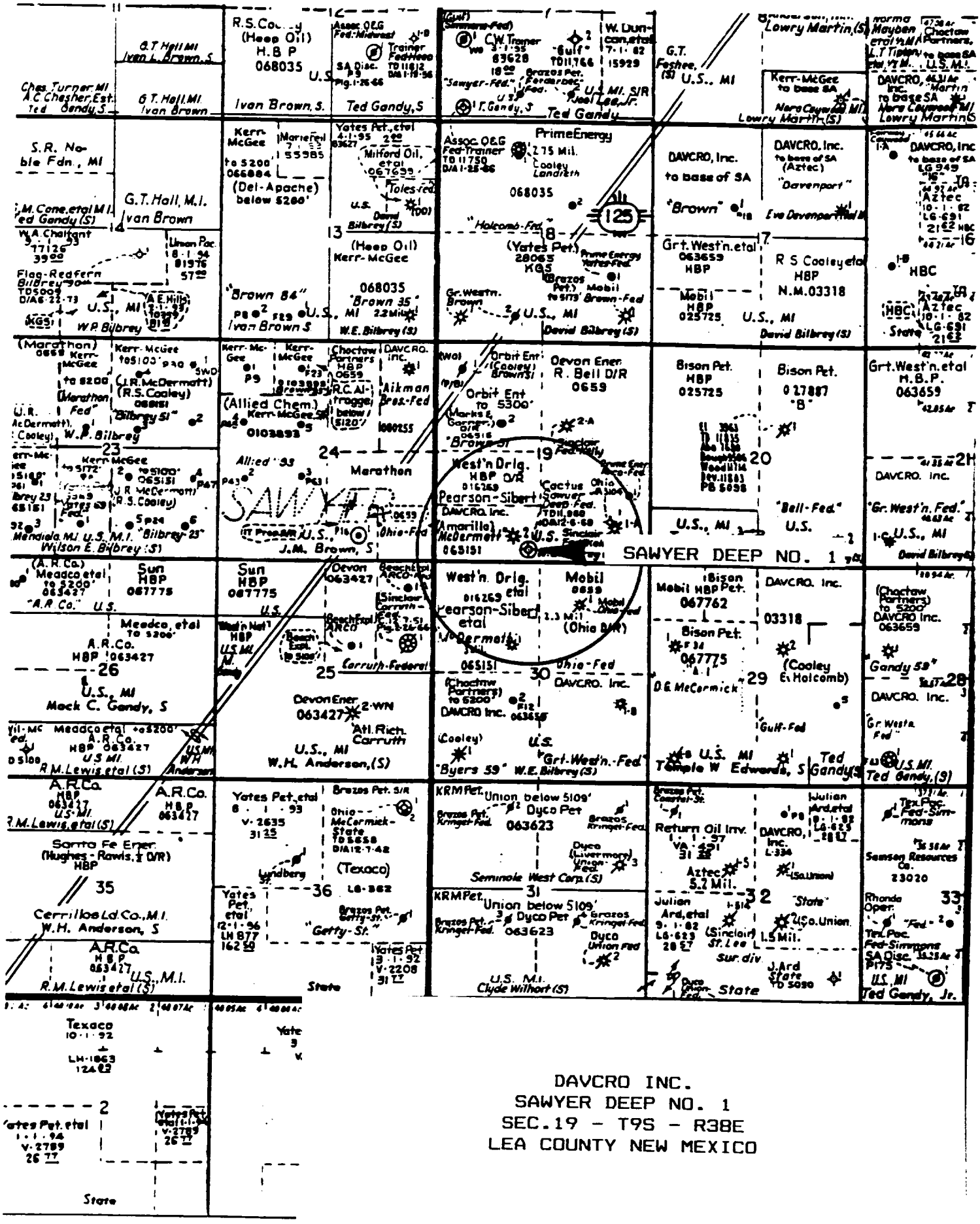
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

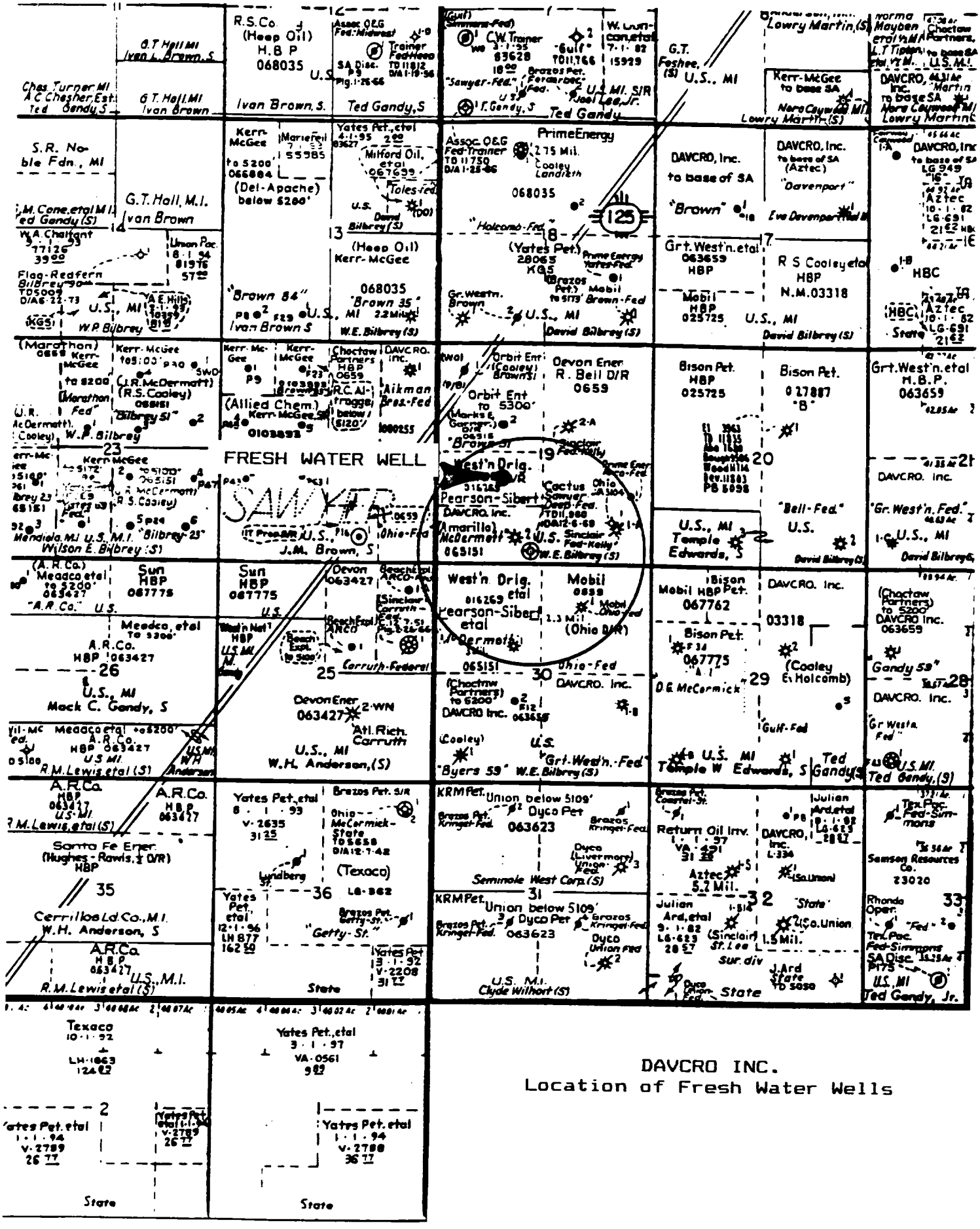
(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.


SAWYER
SAWYER DEEP NO. 1
DAVCRO INC.
SAWYER DEEP NO. 1
SEC. 19 - T9S - R38E
LEA COUNTY NEW MEXICO


FRESH WATER WELL
SAMPLE
DAVCRO INC.
Location of Fresh Water Wells

FORM C – 108 cont.

Part III. A

1.) Sawyer Deep No. 1
330' FSL and 2310' FWL
Sec. 19 - T9S - R38E
Unit N
Lea County, New Mexico

2.) 17 1/2" hole size w/ 13 3/8" csg set at 391' w/ 375 sxs cmt. Cement circulated.
11" hole size w/ 8 5/8" csg set at 5120' w/ 400 sxs cmt. TOC at 4160' (50% efficiency)
7 7/8" hole drilled to 11960'. No csg set.

3.) Propose to run approximately 5050' of 2 7/8" plastic lined tubing.

4.) Propose to use a Tension Packer as a seal, and load the casing annulus with inhibited fluid.

Part III. B

1.) The injection formation is the lower San Andres, and the well is located in the Sawyer San Andres Field.

2.) The injection interval will be open hole from 5120 to approximately 5600'. The open hole section includes the only the San Andres section.

3.) This well was originally drilled as an oil well by Cactus Drilling Corporation of Texas, and was D&A.

4.) This well was not perforated.

5.) There is no deeper oil production in the area. The San Andres is productive in offset wells in the P1 and P2 zones. The injection interval is the P3 and remainder of the San Andres, and is not productive in this area.

Part VII.

1.) Proposed average daily injection will be 500 bbls/ day. Maximum will be 1000 bbls./ day.

2.) The system will be open.

3.) The average injection pressure will be 0(Vacuum). The maximum will not exceed the limits set forth by the OCD.

4.) The source of the water will be from DAVCRO Inc. operated leases, and from San Andres production in the surrounding area.

5.) The San Andres is productive within one mile of the Sawyer Deep No. 1 well.

Part VIII

The injection interval is the Lower San Andres Formation, and is composed of Anhydrite and porous Dolomite. The top of the San Andres is at approximately 4195(-231), and the base at approximately 5605(-1641), with a thickness of 1400'. This entire area is overlain by the Quaternary Alluvium and Caliche. The Ogalalla at 150' to 300' below surface is the major source of fresh water in the area. There are no fresh water zones below the San Andres.

Part IX

The disposal interval will be treated with a 5000 to 7500 gallon acid job.

Part X

The logs were previously submitted by Cactus Drilling Corporation of Texas.

Part XI

There is one active fresh water well within one mile of the Sawyer Deep No. 1 location. The chemical analysis for this well is attached.

Part XII

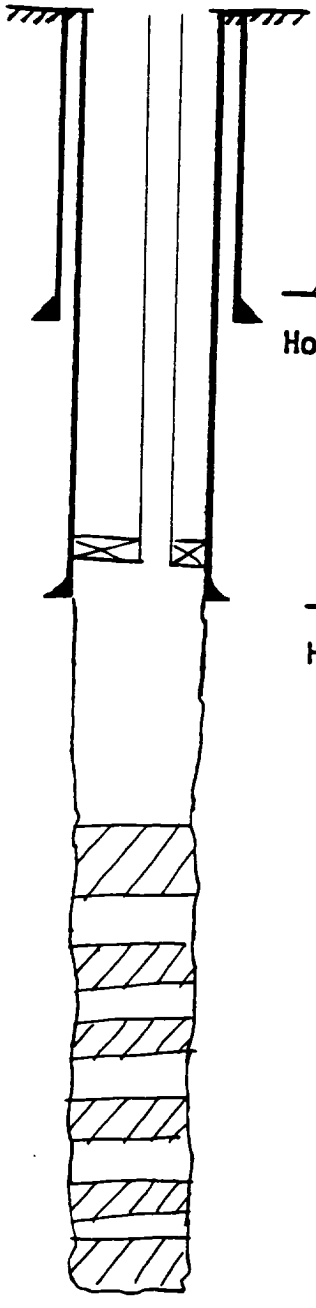
We have examined all available geologic and engineering data, and find no evidence of open faults or any other hydrologic connection between the disposal interval and any underground source of drinking water.

Sec 19-T9S-R38E

OPERATOR			DATE
DAVCRO INC (Formerly Cactus Drilling Corporation of Texas)			March 15, 1993
LEASE	WELL No.	LOCATION	
Sawyer Deep	1	Unit N	sec 19 - T9S - R38E

330' FSL & 2310' FWL

Proposed Configuration



13 3/8" casing set at 391' with 375 sx of _____ cement
Hole size 17½" CIRCULATED

2 7/8 plastic lined tubing & packer
Seat @ ± 5050'

8 5/8" casing set at 5120' with 400 sx of _____ cement
Hole size 11" TOC @ 4160' @ 50% efficiency

OH Injection Interval 5120 - 5600
(Lower San Andres)

25 sx plug @ 5600'

25 sx plug @ 7600'

25 sx plug @ 9500'

25 sx plug @ 11200'

25 sx plug @ 11500'

Total Depth 11960' Hole size 7 7/8"

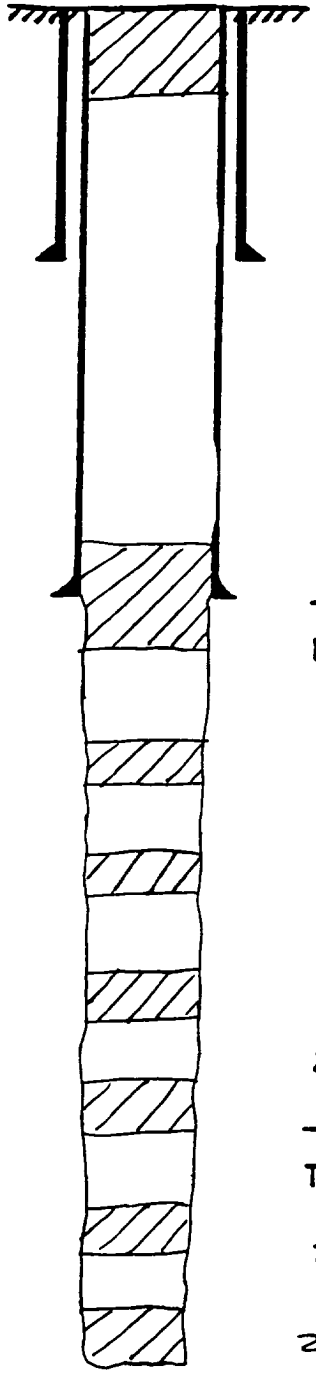
25 sx plug @ TD

Sec 19-T9S-R38E

OPERATOR		DATE
Cactus Drilling Corporation of Texas		March 15, 1993
LEASE	WELL No.	LOCATION
Sawyer Deep	1	Unit N Sec 19-T9S-38E

330' FSL & 2310' FWL

STATUS: D+A



25 sx plug @ surface

13 3/8" casing set at 391' with 375 sx of _____ cement

Hole size 17½" CIRCULATED

8 5/8" casing set at 5120' with 400 sx of _____ cement

Hole size 11" TOC @ 4160' 50% EFFICIENCY

25 sx plug @ 5100' 50% in + out of 8 5/8" csg

25 sx plug @ 5600'

25 sx plug @ 7600'

25 sx plug @ 9500'

25 sx plug @ 11200'

_____" casing set at _____' with _____ sx of _____ cemen

Total Depth 11960' Hole size 7 7/8"

25 sx plug @ 11500

25 sx plug @ TD

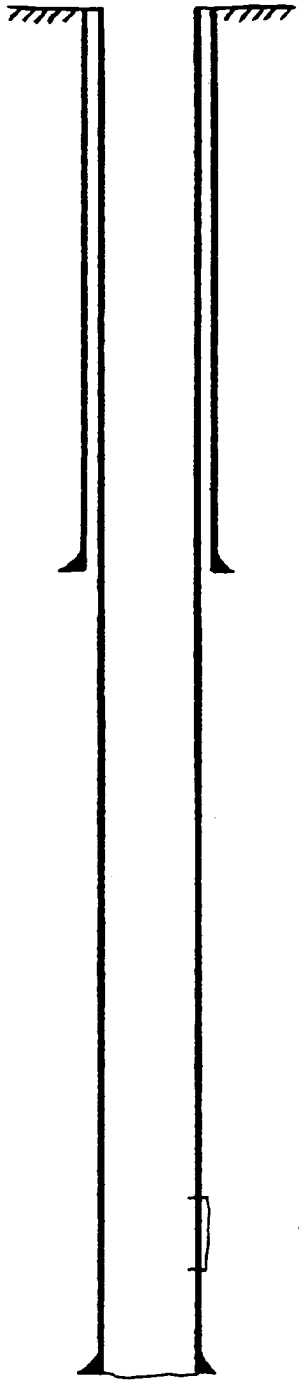
Sec 19 - T9S - R38E

OPERATOR		DATE
Prime Operating Company		March 15 1993
LEASE	**WELL No.**	**LOCATION**
Arco 19 Federal	1	Unit I Sec 19 - T9S - R38E

1650' FSL + 500' FEL

STATUS: Active Producer

Sawyer Spr Andres



8 5/8" casing set at 417' with 250 sx of _____ cement

Hole size 11" Circulated

Perforations: 4908 – 5001

4 1/2" casing set at 5060' with 225 sx of _____ cement

Total Depth 5065' Hole size 7 7/8" TOC 4457'

50% Efficiency

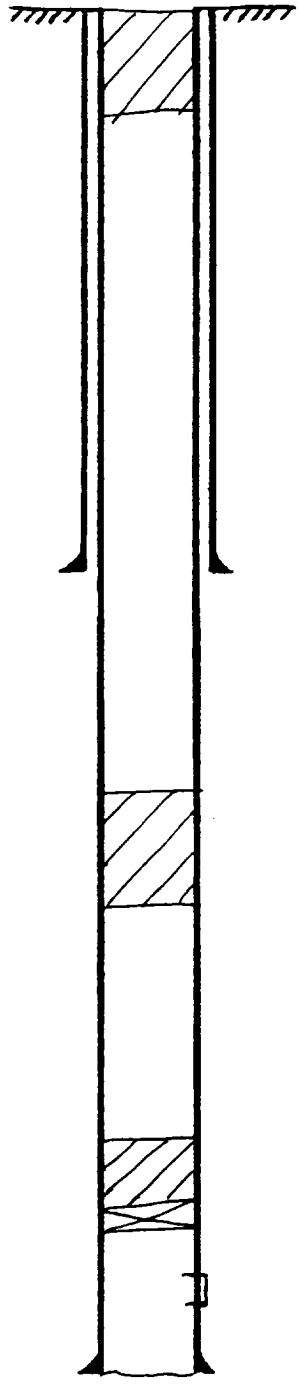
Sec 19-T9S-R38E

OPERATOR		DATE
Atlantic Richfield Company		March 15 1993
LEASE	WELL No.	LOCATION
Kelly "A" Federal	1	Unit P Sec 19-T9S-R38E

890' FSL and 890' FEL

Status: P+A Sawyer Sm Andres

8-27-70



9 5/8 " casing set at 392 ' with 175 sx of _____ cement

Hole size 12 1/4 " Circulated

20 sx plug @ 2220-2400

CIBP @ 4970' + 20 sx plug

perforations 4916-47, 4955-89

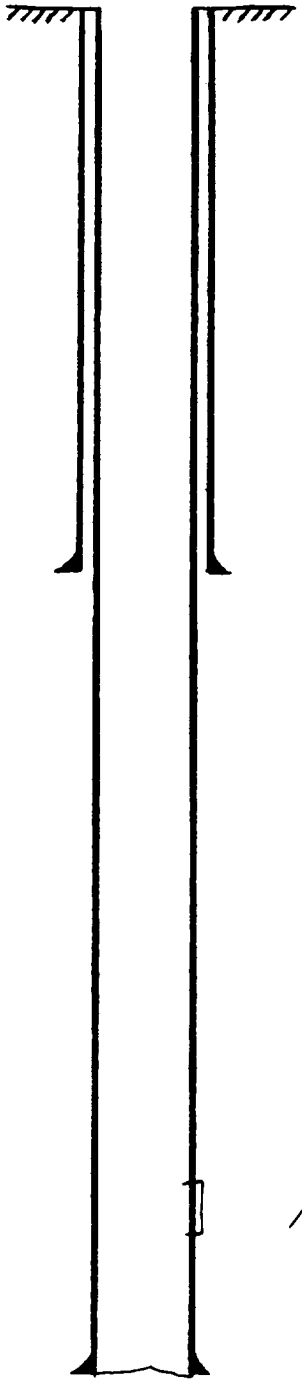
5 1/2 " casing set at 5039 ' with 1600 sx of _____ cement

Total Depth 5040 ' Hole size 7 7/8 " CIRCULATED

Sec 19-T9S-R38E

OPERATOR		DATE
DAUCRO Inc.		MARCH 15 1993
LEASE	WELL No.	LOCATION
McDermott Federal	2	Unit N Sec 19-T9S-R38E

1980' FWL + 660' FSL
STATUS: ACTIVE PRODUCER
SAWYER SAN ANDRES



8 5/8" casing set at 401' with 300 sx of _____ cement
Hole size 12 1/4" CIRCULATED

perforations: 4940-58
4970-96

4 1/2" casing set at 5008' with 400 sx of _____ cement
Total Depth 5008' Hole size 7 7/8" TOC 3937
50% Efficiency

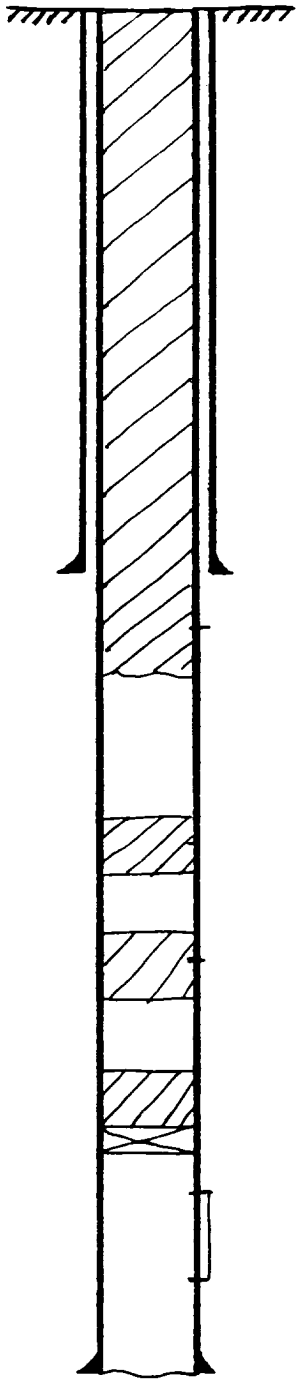
Sec 30 - T9S - R38E

OPERATOR		DATE
Mobil Producing Tx and NM Inc		March 15- 1993
LEASE	**WELL No.**	**LOCATION**
OHIO Federal	1	Unit B sec 30 - T9S - R38E

990' FNL and 1650' FEL

STATUS: P+A Sawyer San Andres

1-4-85



8 5/8 " casing set at 361 ' with 175 sx of _____ cement

Hole size 12 1/4 " (ASSUME 12 1/4") CIRCULATED

perf 410' circ hole, sqz w/ 105 sxs cmt, cmt circulated to surface

TAgged @ 2238'. spot 15 sxs @ 2180' Tagged @ 2076'

perf 2200' & sqz w/ 25 sxs 50% in & out of 4 1/2" csg

Perf 2500' sqz w/ 25 sxs 50% in & out of 4 1/2" csg. TAgged @ 2380'

SET CIBP + 5 sxs cmt @ 4850 - 4790

perforatims 4897-99, 4902-13, 4922-29, 4938-46 4968-72'

4 1/2 " casing set at 5044 ' with 240 sx of _____ cement

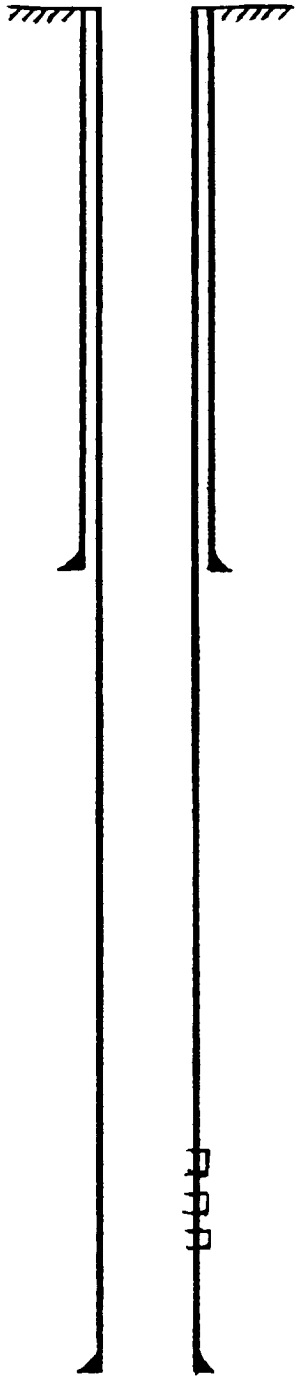
Total Depth 5044 ' Hole size 7 7/8 " (ASSUME 7 7/8) TOC @ 4401

50% efficiency

Sec 30-T9S-R38E

OPERATOR			DATE
DAVCRO Inc			MARCH 15, 1993
LEASE	WELL No.	LOCATION	
MCDERMOTT Federal	1	Unit F 1980'FNL + 1980' FWL SEC 30-T9S-R38E	

STATUS: Acting Producer
Sawyer San Andres



8 5/8 " casing set at 380 ' with 350 sx of _____ cement
Hole size 12 1/4 " Circulated

perforations 4931-36
4952-78
4986-96

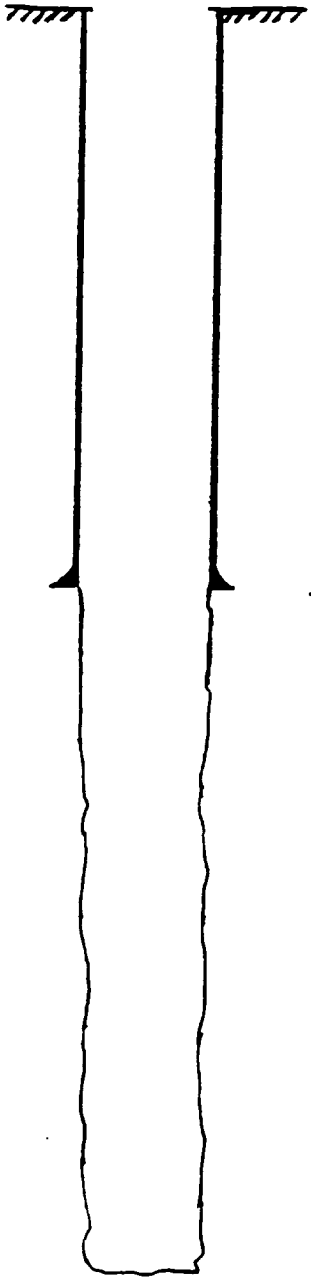
4 1/2 " casing set at 5010 ' with 400 sx of _____ cement
Total Depth 5010 ' Hole size 7 7/8 " TOC @ 3939
50% Efficiency

Sec 19-T9S-R38E

OPERATOR		DATE
THE OHIO OIL COMPANY		MARCH 15, 1993
LEASE Federal Kelly A	**WELL NO.** 1	**LOCATION** Unit P sec 19-T9S-R38E

990' FSL & 990 FEL

Status: D+A



9 5/8" casing set at 366' with ? sx of _____ cement

Hole size _____" No mention in file of number of sxs cmt but the plan was to Circulate.

Lost hole @ 3104. Plug + Abandon

No plugging detail on file

Total Depth 3104' Hole size 7 7/8"

HALLIBURTON SERVICES
HOBBS, NEW MEXICO

To DAVIS

Sample Number 104

*Milligrams per liter

Submitted by

Date Received 3-18-93

Well No. McDERMOTT #2 *

Depth

Formation

County

Field

Source Active Windmill

* NORTH WEST of WELL

Resistivity.....			
Specific Gr.....			
pH.....			
Calcium*..... Ca			
Magnesium*..... Mg			
Chlorides*..... Cl	105 mpl		
Sulfates*..... SO_4			
Bicarbonates*.... HCO_3			
Soluble Iron*.... Fe			

J. LEBLANC