March 17, 1982

SWD Good For only 18 Months

Oil Conservation Commission
ATTN: Mr. Roy Johnston
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Conoco 7 State "SWD" #1
C-108, 18 month permit

Dear Mr. Johnston,

In our conversation the other day, you discussed the possibility of granting us an 18 month permit to dispose of our produced water into the San Andres formation. If granted, this would give us ample time to complete our drilling program on Sections 7 and 8, T19S, R29E, and initiate our Queen-Grayburg water flood project. Our original intent was to dispose of our water into the San Andres formation on a temporary basis until we could get the above mentioned work completed.

Your help and consideration has been more than appreciated in this matter, and I look forward to hearing from you in the future.

Sincerely,

Bucky Burch

Bucky Burch

BB:sw

cc: W. A. Gressett

THRESHOLD DEVELOPMENT COMPANY

Fort Worth Club Tower Penthouse II, Suite A 777 Taylor Street Fort Worth, TX 76102 Telephone 817 332-9209

1 Year or More injection into S.A.

January 14, 1982

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: C-108 Application

Gentlemen,

Please find enclosed 1 original and 2 copies of our Form C-108. Also enclosed is an "Affidavit of Publication" and receipts showing that copies of our application have been sent to the surface owner of the land, and to each leasehold operator within one-half mile of the proposed SWD well.

Sincerely,

Bucky Burch

Bucky Burch

BB:sw

encl.

SANTA FE

1.) - will this SWD be re-entry in Stanley Jones well or Jay Conquest

2.) concern w/ cement in S.A. on Morrow & Atoka wells

Provisions from Bill

Record Pressure on Annulus every 6 months w/ OCD personal to witness

THRESHOLD DEVELOPMENT COMPANY
Fort Worth Club Tower Penthouse II, Suite A 777 Taylor Street Fort Worth, TX 76102 Telephone 817 332-9209

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

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Threshold Development Company

Address: Suite II-A 777 Taylor Street Fort Worth, Texas 76102

Contact party: Bucky Burch Phone: (817) 332-9209

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: Bucky Burch Title Area Manager

Signature: Bucky Burch Date: January 15, 1982

* 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.

WELL DATA

III.

WELL DATA

A. 1. Conoco 7 State "SWD" #1, located in Sec 7, T19S, R29E; 1650'FSL & 2310' FEL of Sec.

2. 8-5/8" surface csg will be set to a depth of 375'. Cement will be circulated to surface, 4½" production csg will be set @ 2700' in a 7-7/8" hole. Cement will be circulated to surface.

3. 2600' of 2-3/8" Eue 8rd 4.7# J55 plastic coated tbg will be used for the injection string.

4. A Baker 4½" Lok-Set pkr will be set @ ± 2600'.

B. 1. The injection formation will be the San Andres. The San Andres has no field name or pool designation in T19S,R29E, Eddy County.

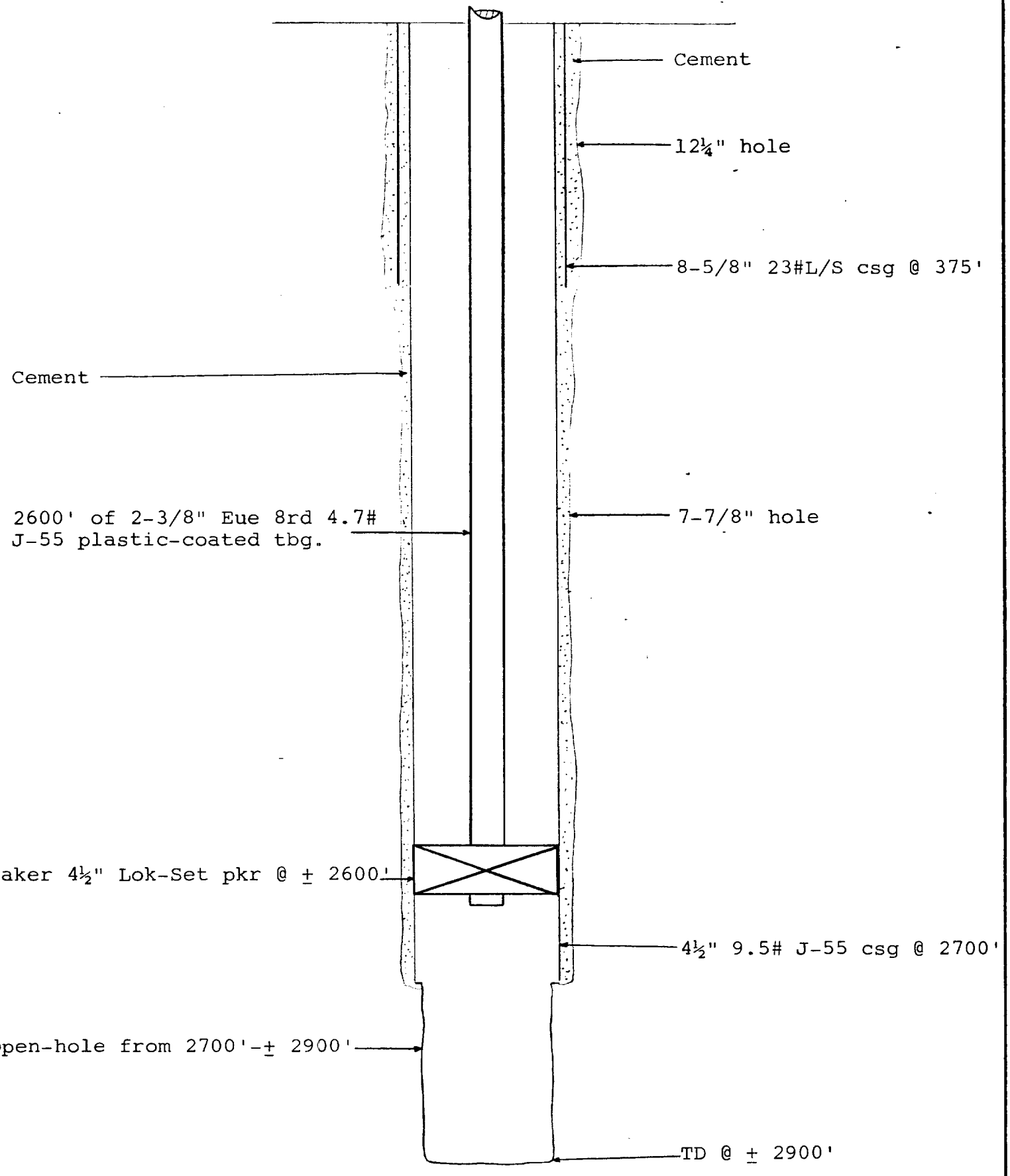
2. The injection interval will be from 2700' to ∓ 2900', 3-1/8" open hole.

3. The proposed SWD well is being drilled for injection purposes only!

4. There will be no other perforated intervals in this well.

5. The Grayburg is the next highest oil zone; and the Bone Springs is the next lowest oil zone.

Conoco 7 State "SWD" #1



V

This is a map that identifies all wells and leases within two miles of the proposed SWD well with a one-half mile radius circle drawn around same.

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

Please find attached a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection well. Also included are schematics of three plugged wells within the area of review illustrating all plugging details.

VI

Well: Conoco 7 State #1; Threshold Development Company
Loc'n: 12 mi SW/Loco Hills; Sec. 7, T19S, R29E, 660' FSL & 1980' FWL of Sec.

Spud: 2/12/80; Comp: 3/29/81, Elev: 3384'; TD: 11,610'; PBTD: 11,264'
Casing: 13-3/4" 400/550 sx; 8-5/8" 2690'/1120 sx; 5-1/2" 11,264'/ 1025 sx; DV tool 9462'.
Prod zone: (Morrow), T/Pay 11,796', Prod thru perfs 11,036-50'
Comp Info: Perf 11,036-50', A/2000 gals, 50,000 SCF N_2

Well: Conoco 7 State #2; Threshold Development Company
Loc'n: 12 mi SW/Loco Hills; Sec. 7, T19S, R29E, 1980' FSL & 541' FWL of Sec.

Spud: 3/5/81, Comp: 6/10/81, Elev: 3377'; TD: 3801', PBTD: 3792'
Casing: 8-5/8" 450'/300 sx; 4-1/2" 3792'/1065 sx
Prod zone: (Grayburg), T/2066', Prod thru perfs 2122-2216'
Comp Info: Perf 2032-54', A/2000 gals. Perf 2010-18', A/1000 gals, CIBP: 1999'; Perf 1942-78', A/2000 gals, Frac 17,500 gals & 24,000# sd; Perf 1854-68', A/2000 gals, Sqzd perfs 2032-54' & 2010-18' w/75 sx, 1942-78' w/267 sx, 1854-68' w/318 sx, Perf 2172-76', 2183-85', 2191-96', 2212-16', A/2000 gals, Frac w/14,000 gals, 30,000# sd; Perf 2122-26', 2129-31', 2141-43', 2145-49', A/2000 gals, Frac 14,000 gals, 30,000# sd.

Well: Conoco 7 State #3; Threshold Development Company
Loc'n: 12 mi SW/Loco Hills; Sec. 7, T19S, R29E, 1980' FNL & 542' FWL of Sec.

Spud: 3/21/81; Comp: 5/21/81; Elev: 3379'; TD: 3607'; PBTD: 3599'.
Casing: 8-5/8" 432'/400 sx; 4-1/2" 3599'/1250 sx
Prod zone: (Grayburg), T/2084', Prod thru 2142-2239'
Comp Info: Perf 3548-54', A/500 gals; Perf 3523-27' A/500 gals; CIBP: 3423 w/3 sx; Perf 2730-74', A/2000 gals; CIBP: 2700' w/3 sx; Perf 2202-04', 2206-09', 2213-16', 2235-39' A/2000 gals, Frac 14,000 gals, 30,000# sd; Perf 2142-44', 2148-52', 2170-72', A/1000 gals, Frac 14,000 gals, 30,000# sd.

Well: Conoco 7 State #10; Threshold Development Company
Loc'n: 12 mi SW/Loco Hills; Sec. 7, T19S, R29E, 1980' FNL & 1980' FWL of Sec.

Spud: 11/4/81; Comp: 1/6/82, Elev. 3377'; TD: 11,550'; PBTD:
Casing: 13-3/8" 377'/375 sx; 8-5/8" 3020'/780 sx; 5-1/2" 11,533'/785 sx
Prod zone: (Morrow) 11,138-48', 11,162-66'
Comp Info: Natural

Attached please find schematics of 3 plugged wells within the area of review.

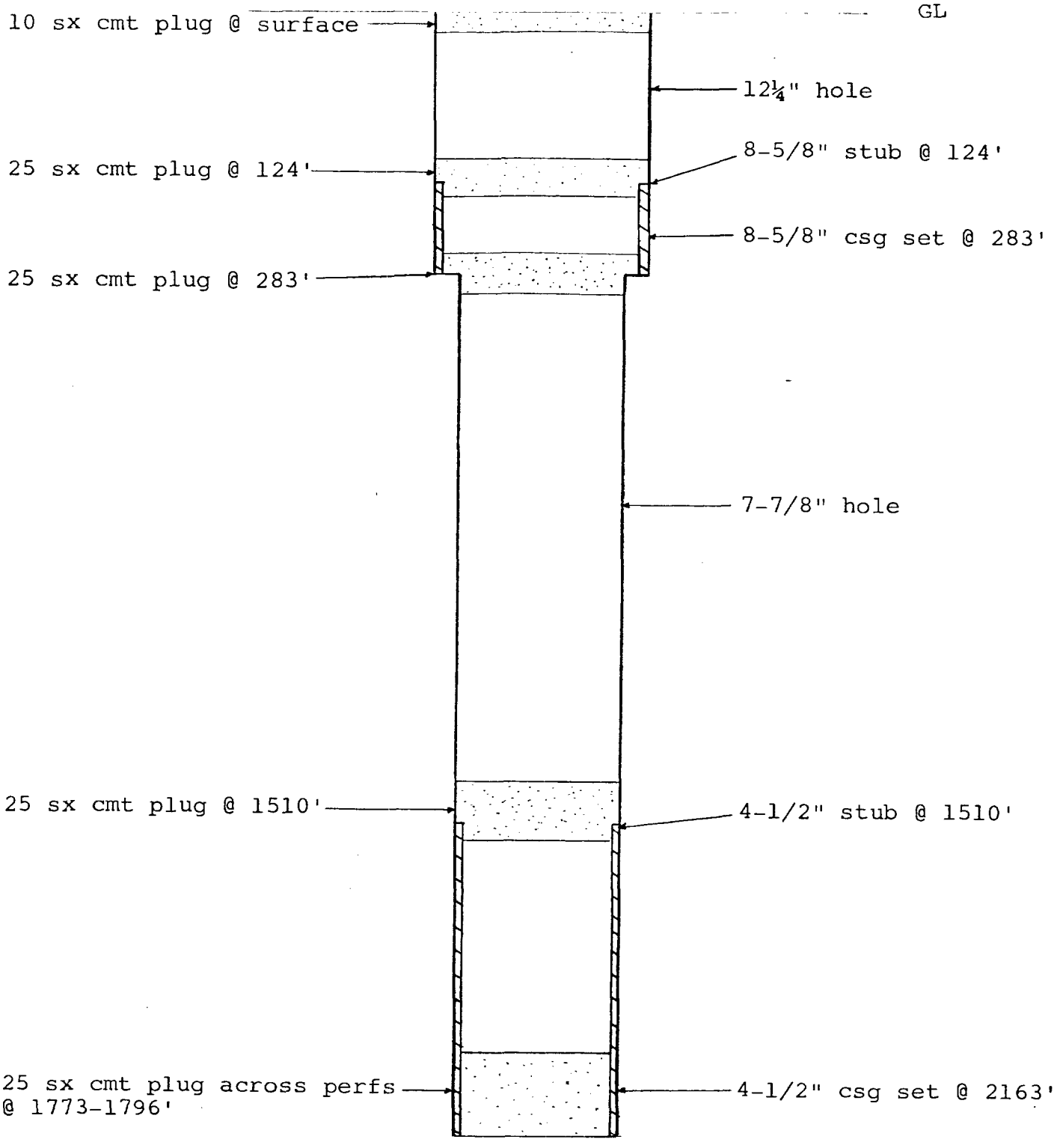
FDDY COUNTY NEW MEXICO E/TURKEY TRACK FLD.

Well: JOHN A. YATES #1 Elizabeth Dundas Result: OIL

Loc'n: 25 mi NE/Carlsbad; Sec 7-19S-29E, 660' FSL 330' FWL Sec

Spud: 8-10-61, Comp: 10-1-61, Elev: 3378' DF, TD: 2225
Casing: 4 1/2" 2163/125 sx
Prod Zone: T Pay 1773, Prod thru perfs 1773-96, & 2092-96
IPF: 46 BOPD thru 1/2" ch, Grav & GOR not reported, TP 25#, CP 200#
Comp Trtmt: A/1,500 gals, Frac w/640 bbls oil
Tops: (EL) Queen 1701, Grayb. 2070

Elizabeth Dundas #1
P & A 1/14/67



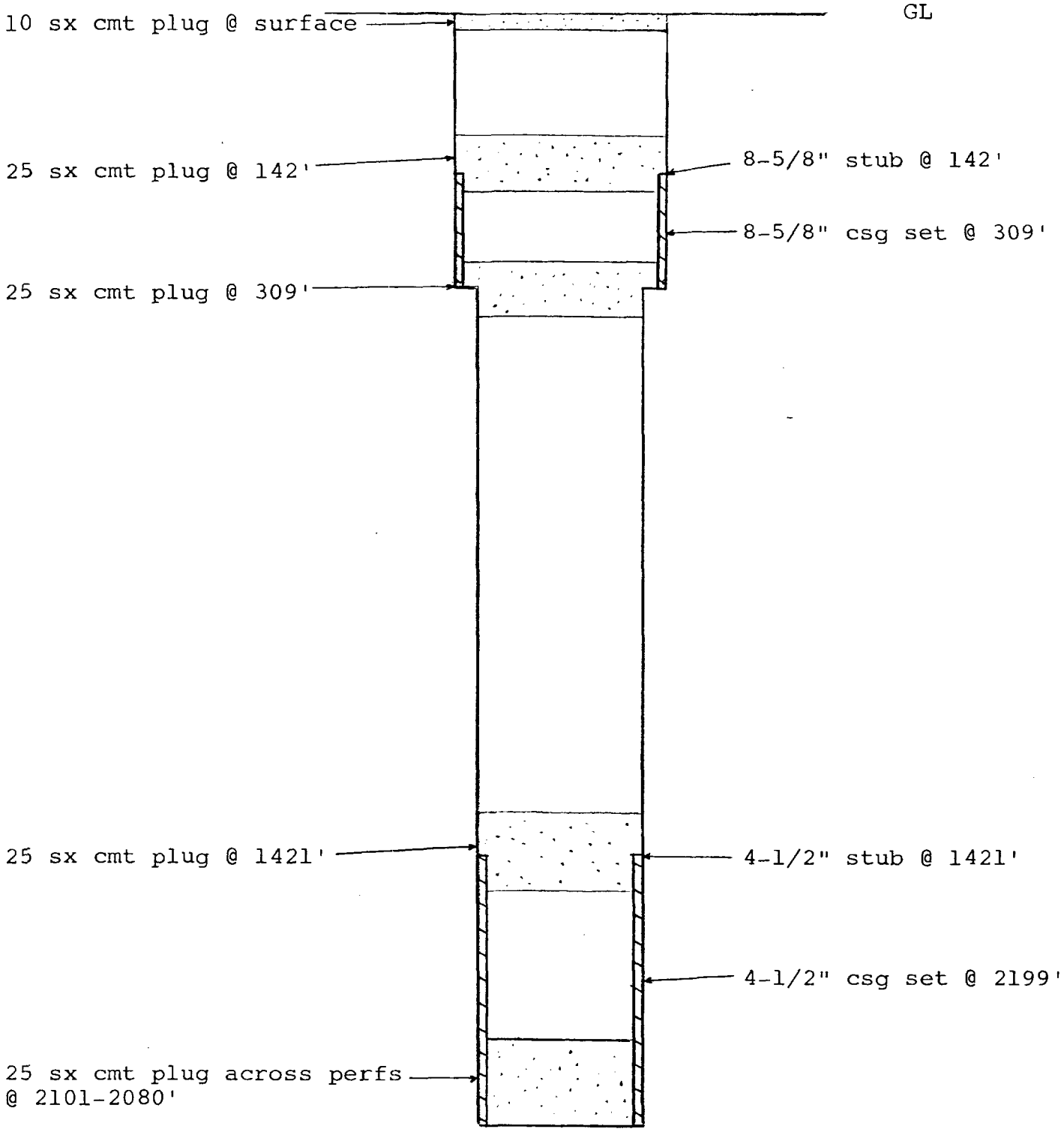
EDDY COUNTY NEW MEXICO E/MILLMAN FLD

Well: JOHN A. YATES #2 Elizabeth Dundas Result: OIL
Loc'n: Sec 7-19S-29E, 990' FSL 1650' FWL Sec

Spud: 12-30-61;, Comp: 4-15-62, Elev: 3382' DF, TD: 2348'
Casing: 8-5/8" 309/750 sx, 4-1/2" 2200/100 sx
Prod Zone: T/Pay 2080, Prod thru perfs 2080-2101
IPF: 20 BOPD + 100 BWPD, Grav & GOR not reported
Comp Info: Frac w/30,000 gals
Tops: Not reported.

Date: 5-9-62 Card No.: 9 NM gr

Elizabeth Dundas #2
P & A 12/28/66



STANLEY L. JONES #7 Continental-State

EDDY COUNTY NEW MEXICO WILDCAT

Well: STANLEY L. JONES #7 Continental-State Result: D&A

Loc: 2 mi W Turkey-Track Fld, Sec 7-19S-29E, 1650' FSL 2310' FEL of Sec.

Spud: 4-8-52; Comp: 12-31-52; Elev: 3378'; TD 2837' lime

Casing: 10" 243'/60 sx, 8 5/8" 2000'/set

Prod. Zone: None

IP: None

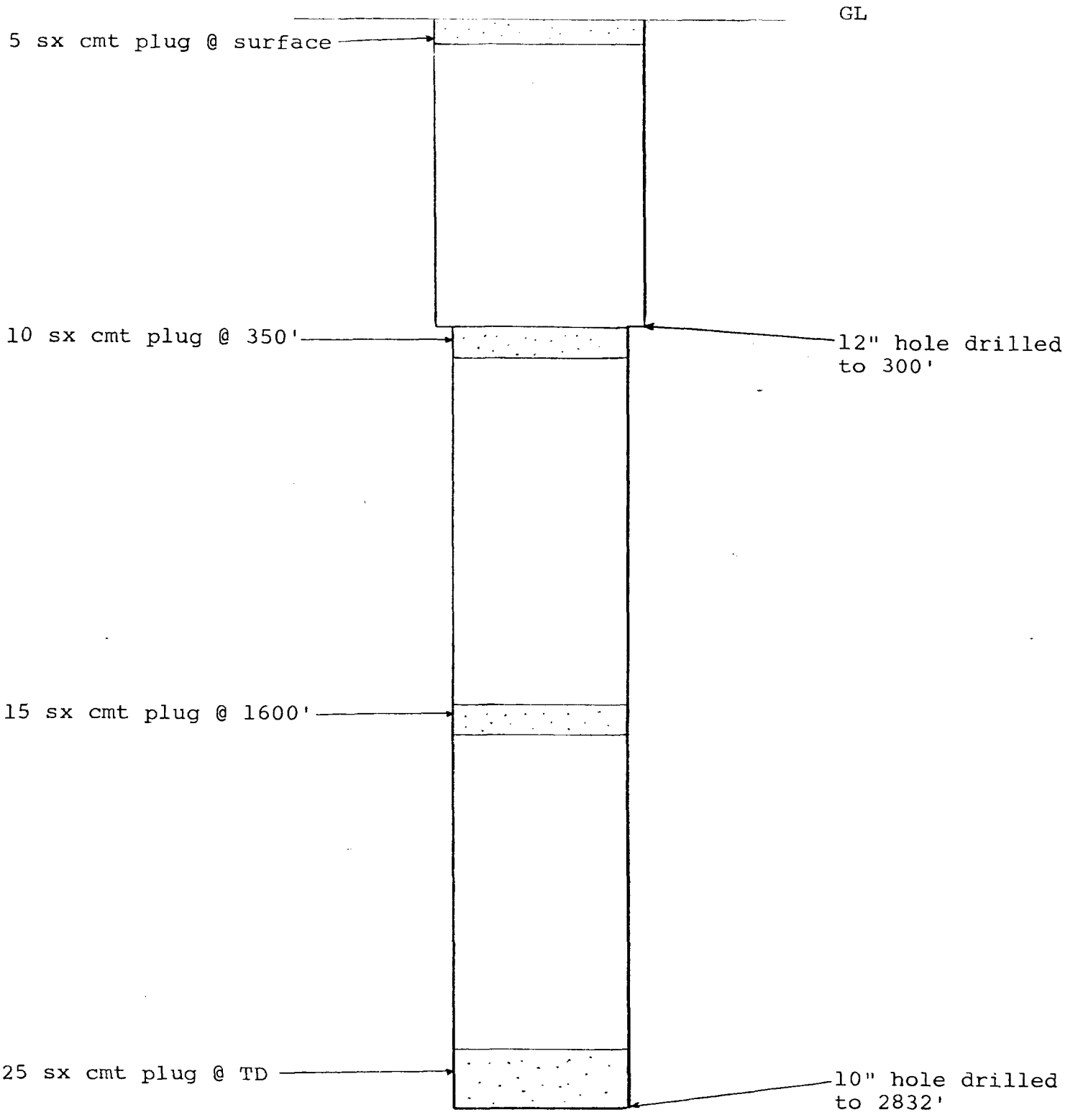
Comp. Info: None

Tops: Salt 430', B/Salt 675', Yates 880', Red Sand 1833', San Andres 2751'

T. Rule

Date: 3-10-53 Card No: 2 jbw

Stanley L. Jones #7
P & A 4/24/60



VII

Please find attached data on the proposed SWD operation and two water analyses, one from the Grayburg formation and the other from the San Andres.

VII

(1) Proposed average and maximum daily rates and volumes of fluids to be injected are as follows:

Avg. daily rate	:	1.5 BPM
Avg. daily volume	:	500 BPD
Max. daily rate	:	2 BPM
Max. daily volume	:	700 BPD

(2) This SWD will be a closed system using lease gas as a blanket.

(3) Proposed average and maximum injection pressures are as follows:

Max.	:	500 psi
Avg.	:	375 psi

(4) The source of water that will be disposed of is from the Grayburg formation. This water is being produced by the following wells: Conoco 7 State #2, #3, #4, & #6 on Sec. 7, T19S, R29E, Eddy County, New Mexico. Please find attached water analysis from the Conoco 7 State #3.

(5) Please find attached a chemical analysis of the disposal zone formation water. (San Andres)

BAKER OIL TREATING
A Baker Oil Tools Company

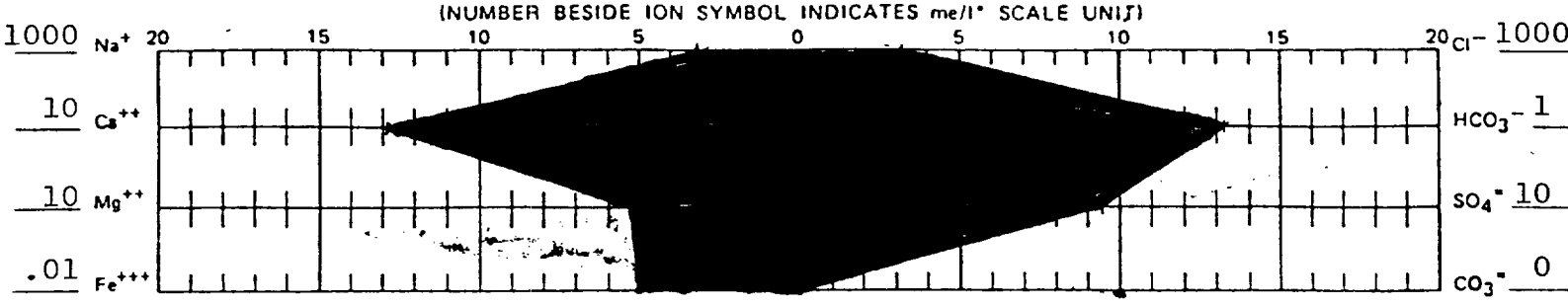
RECEIVED
SEP 1 1 1981
Threshold Development Co.

WATER ANALYSIS REPORT

COMPANY				ANALYSIS NUMBER
Threshold				1011
COMPANY ADDRESS				DATE
				8/26/81
FIELD		COUNTY OR PARISH		STATE
Undes. E. Millman		Eddy		N.M.
LEASE OR UNIT	WELL(S) NAME OR NO	WATER SOURCE (FORMATION)		
Conoco 7 State	#3	Grayburg		
DEPTH, FT. / BHT, °F	SAMPLE SOURCE	TEMP. °F	WATER, BBL/DAY / OIL BBL DAY	GAS, MMCF/DAY
DATE SAMPLED	TYPE OF WATER			
8/21/81	☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL			

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l* SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	180	
Calcium, Ca^{++}	128	2560
Magnesium, Mg^{++}	52	634.4
Iron (Total) Fe^{+++}	0.05	0.9
Barium, Ba^{++}	--	--
Sodium, Na^{+}(calc.)	3083.91	70929.7
ANIONS		
Chloride, Cl^{-}	3154.93	112000
Sulfate, $SO_4^{=}$	95.83	4600
Carbonate, $CO_3^{=}$	0	0
Bicarbonate, HCO_3^{-}	13.2	805
Hydroxyl, OH^{-}	0	0
Sulfide, $S^{=}$	--	--

TOTAL SOLIDS (QUANTITATIVE) 191530

DISSOLVED GASES

Hydrogen Sulfide, H_2S	--	mg/l*
Carbon Dioxide, CO_2	--	mg/l*
Oxygen, O_2	--	mg/l*

PHYSICAL PROPERTIES

pH	6.55	
Specific Gravity		
Total Dissolved Solids (calc.)	191530	mg/l*
Stability Index @ °C		
@ 20 °C	+0.45	
$CaSO_4$ Solubility @ °C		me/l*
@ 20 °C	95.6	me/l*
Max. $CaSO_4$ Possible (calc.)		me/l*
Max. $CaSO_4$ Possible (calc.)	95.8	me/l*
Residual Hydrocarbons		ppm(Vol/Vol)
Residual Hydrocarbons		ppm(Vol/Vol

REMARKS AND RECOMMENDATIONS:

@ 20 C Slight carbonate scaling is indicated.
Slight sulfate scaling is indicated.

*NOTE: me/l and mg/l are commonl used interchangeably for epm and ppr respectively. Where epm and ppm ar used, corrections should be made fo specific gravity.

MAGNA REPRESENTATIVE	ADDRESS	TELEPHONE
Joe Miller		OFF RES
ANALYZED BY:	DATE	DISTRIBUTION
M. Pitts	8/25/81	

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

COMPANY	SOURCE
Ray Westall	Denton Federal Well 1 Sample point: Bleeder

Submitted by: Hughes, J.
Sampled by: Hughes, J.
Distribution Center: Midland

Sample date: 8/20/80
Analysis Date: 8/26/80
Analysis No.: 3723

SAMPLE ANALYSIS

Appearance: Clear
Color: Colorless
Sp. Conductivity: 220000 micromhos/cm
Chem. Treatment: N/A
pH: 8.7
H2S (Qualitative): Pos.

constituent **	ppm	meq/l	method	comments
Sodium (Na+)	52500	2280	icp	
Potassium (K+)	805.	21.	icp	
Lithium (Li+)	21.	3.	icp	
Calcium (Ca++)	4500	225.	icp	
Magnesium (Mg++)	1810	149.	icp	
Barium (Ba++)	<1.	-	icp	
Strontium (Sr++)	<4.	-	icp	
Aluminum (Al+++)	<1.	-	icp	
Silver (Ag+)	<0.2	-	icp	
Arsenic (As+++)	<5.	-	icp	
Chromium (Cr+++)	<0.6	-	icp	
Copper (Cu++)	<0.1	-	icp	
Iron (Fe++)	<0.2	-	icp	
Mercury (Hg++)	<2.	-	icp	
Lead (Pb++)	<3.	-	icp	
Antimony (Sb+++)	<20	-	icp	
Tin (Sn++)	<6.	-	icp	
Titanium (Ti++++)	<0.1	-	icp	
Zinc (Zn++)	<0.4	-	icp	
Boron (B) ***	22.0	6.1	icp	
Phosphate (PO4---)	<5.	-	icp	
Chloride (Cl-)	95100	2680	titr	
Sulfate (SO4--)	3360	70.0	turb	
Bicarbonate (HCO3-)	830.	14.	titr	
Carbonate (CO3--)	<1.	-	titr	
Silica (SiO2)	<1.	-	icp	

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Analysis No. 3723

NOTES TO ANALYSIS

Ion Balance

Sum of cations:	2680 meq/l	Standard deviation:	47.0 meq/l
Sum of anions:	2770 meq/l	Standard deviation:	53.7 meq/l

*TDS Balance

Measured:	160000 ppm	Standard deviation:	8210 ppm
Calculated:	159000 ppm	Standard deviation:	2190 ppm

# indicates that the amount of this component has changed in a statistically significant way since the last analysis
N/A= not available
meq/l= milliequivalents per liter
ppm and milligrams per liter used interchangeably
icp= inductively coupled plasma emission
titr= titration; turb= turbidimetric
TDS by gravimetric determination
Specific Conductivity by Wheatstone Bridge

* Total Dissolved Solids
** Valency given is arbitrarily chosen and is not necessarily the true valency unless indicated in the column for comments
*** TDS boron is given as ppm elemental boron, but for the purposes of an ion balance, boron is converted to BO3---

The various parameters in the above results can be usefully interpreted using the guidelines below:

1) pH value is an indication of the acidity or basicity of a brine. pH measurements provide critical information about a) the solubility of sparingly soluble compounds, b) the carbonate scaling tendency, c) iron oxidation state and d) caution needed in using some external chemical treatments.

2) Specific conductivity: this gives an approximate indication of the total amount of inorganic dissolved solids in the water sample. A simple guideline is that 10,000 micromhos/cm is equivalent to 100 meq/l of dissolved solids. However, this relationship is valid only in solutions with specific conductivities less than approximately 50,000 micromhos/cm.

3) Concentration of various ionic species: the concentrations of various ionic species give information about a) thermodynamic characteristics of the brine, b) scaling tendency of the water, and c) enthalpy of the water.

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

Analysis No. 3723

HISTORY OF FIELD WATER COMPOSITIONAL DATA

Tretolite is using a new data management system to help the operator in managing his waters in the field. This system is based on a comparison of water-analytical data between this newly and any previously analyzed sample.

Our computer record indicates that no analytical data on waters collected from this well or field have been previously added to our computer file. As more data become available and as our automated data evaluation system indicates any water-related problems in your field, the technical personnel of Tretolite will contact you immediately.

SCALE TENDENCIES OF THE ANALYZED BRINE

In the following paragraphs, the scale tendencies of the brine are analyzed by utilizing some basic thermodynamic correlations. These scale tendency considerations are different from the commonly applied Stiff-Davis Diagrams and calculation methods because those methods are not based on the critical thermodynamic conditions encountered in the field.

CaSO4

The calcium and sulfate ion concentrations of the brine as reported in this analysis indicate a potential for calcium sulfate precipitation even at 76 deg-F. The solubility of calcium sulfate decreases with increasing temperature and as a result, there is a high probability that calcium sulfate has precipitated if this brine had been produced at any temperature above 76 deg-F.

It has to be remembered that CASO4 scale tendency decreases with increasing pressure. This means, if the system pressure is higher than the water vapor saturation pressure, calcium sulfate scale would form at a temperature higher than reported.

BaSO4

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

Analysis No. 3723

The barium and sulfate ion concentrations of the brine as reported in this analysis indicate a definite potential for barium sulfate precipitation at 76 deg-F. This indicates that barium sulfate precipitation has already occurred somewhere in this system before the wellbore brine is brought to the ambient conditions.

However, the maximum amount of BaSO4 that can be precipitated is 2.209 Mg/liter of the brine.

SrSO4

The strontium and sulfate ion concentrations of the brine as reported in this analysis indicate that there is no danger of strontium sulfate precipitation.

CaCO3

At 76 deg-F, the stability index is (+): implies scaling tendency.

The precise calcium carbonate scaling tendency of the brine cannot immediately be determined without the required information on temperature, pressure, pH and partial pressure of carbon dioxide above the brine. The Stiff-Davis Stability Index gives only a crude approximation of the CaCO3 scale tendencies. This stability index is given for the sake of completeness.

QUANTITATIVE INFORMATION ON ALL SCALE TENDENCIES

Quantitative information can be extracted on all scaling tendencies of this brine if the temperature and pressure conditions of the brine are available. The most complicated calculations have to be performed on the CaCO3 scale tendencies. The other scale tendencies are easier to determine.

VIII

Attached is the appropriate data on the injection zone which includes lithology, geological name, thickness, and depth. Also, included is data on the only known source of drinking water within the immediate area.

VIII

The geological name of the injection zone is the San Andres. Its basic lithology is dolomitic, buff tan in color with inclusions of anhydrite and pure dolomite. Based on logs from a nearby well, the San Andres formation is approximately 1140' thick. The interval that we plan to inject into is from 2700'(+684)-2900'(+484).

The only underground sources of drinking water within Sec. 7, T19S, R29E, where the proposed SWD will be located, is the Pre-Rustler Sand. Its depth varies from 150'-200' from surface.

X

The proposed SWD well will not be drilled until we receive approval from the Commission to inject. As a result, there are no well logs available. However, the logs enclosed are from a nearby well that we recently drilled and its location is approximately 1200' SW from the proposed SWD well. We would like to submit these for your consideration.

IX

We plan to stimulate the injection zone of the proposed SWD with 5000 gals 15% NEA or MCA.

WELL FILE

Schlumberger

SIMULTANEOUS

DUAL LATEROLOG MICRO-SFL

COMPANY THRESHOLD DEVELOPMENT COMPANY

Tops

WELL CONOCO "7" STATE #1

FIELD UNDESIGNATED (MORROW)

COUNTY EDDY STATE NEW MEXICO

COUNTY EDDY
FIELD UNDESIGNATED (MORROW)
LOCATION CONOCO "7" STATE #1
WELL
COMPANY THRESHOLD DEVEL. CO.

LOCATION 660' FSL & 1980' FWL

API SERIAL NO.	SEC.	TWP	RANGE
	7	19-S	29-E

Other Services: CNL-FDC

Permanent Datum: G.L. ; Elev.: 3383.7
Log Measured From K.B. 17.3 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 3401
D.F. 3400
G.L. 3383.7

Date	2-19-80	3-29-80		
Run No.	ONE	TWO		
Depth—Driller	2690	11610		
Depth—Logger (Schl.)	2683	11608		
Btm. Lg Interval	2675	11607		
Top Lg Interval	SURF	2685		
Casing—Driller	13 3/8@400	8 5/8@ 2690	@	@
Casing—Logger	400	2685		
Bit Size	11	7 7/8		
Type Fluid in Hole	BRINE	DRISPAC		
Dens / Visc.	10.1 / 23	10.1 / 31	/	/
pH / Fluid Loss	7 / ml	10 / 15 ml	/ ml	/ m
Source of Sample	PIT	MUD PIT		
Rm @ Meas. Temp.	.048 @69 °F	.083@ 60 °F	@ °F	@
Rmf @ Meas. Temp.	.048 @69 °F	.80 @ 60 °F	@ °F	@
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F	@
Source: Rmf / Rmc	M /	M /	/	/
Rm @ BHT	.042 @80 °F	.030@ 176°F	@ °F	@
TIME Circulation Stopped	0100	2000 3-28		
TIME Logger on Bottom	0330	1130 3-29		
Max. Rec. Temp.	80 °F	176 °F	°F	
Equip. Location	8067 HOBBS	8075 HOBBS	/	/
Recorded By	SEVOUGIAN	SEVOUGIAN		
Witnessed By	ANDERSON	PACE		

WELL FILE

Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY THRESHOLD DEVELOPMENT COMPANY

Marked Tops

WELL CONOCO "7" STATE #1

FIELD UNDESIGNATED (MORROW)

COUNTY EDDY STATE NEW MEXICO

COUNTY EDDY
FIELD UNDESIGNATED (MORROW)
LOCATION CONOCO "7" STATE #1
WELL
COMPANY THRESHOLD DEVEL. CO.

LOCATION 660' FSL & 1980' FWL

API SERIAL NO.	SEC.	TWP.	RANGE
	7	19-S	29-E

Other Services: DLL

Permanent Datum: G.L. ; Elev.: 3383.7
Log Measured From K.B. 17.3 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B.
D.F.
G.L. 3383.

Date	3-29-80	B/SALT		(+2702
Run No.	ONE	T/YATES		(+2487
Depth—Driller	11610		1224	(+2177
Depth—Logger	11610			(+1559
Btm Log Interval	11609	T/KAYBOB		(+1295
Top Log Interval	SURF			(+ 791.
Casng—Driller	8 5/8 @ 2690	T/BONE SPRING @	@	(-1549@
Casng—Logger	2685			(-3343
Bit Size	7 7/8			(-4059
Type Fluid in Hole	DRISPAC			(-5097
Dens. / Visc.	10.1 / 31			(-5495
pH / Fluid Loss	10 / 15 ml		ml	(-6213
Source of Sample	MUD PIT			(-6463
Rm @ Meas. Temp.	.083 @ 60 °F	T/STRAWN @ °F	@ °F	(-6661@
Rmf @ Meas. Temp.	.080 @ 60 °F	T/ATOKA @ °F	@ °F	(-6971@
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F	(-7179@
Source: Rmf / Rmc	M			(-7395
Rm @ BHT	.030 @ 176 °F	T/MORROW @ °F	@ °F	(-7711@
TIME Circulation Stopped	2000 3-28	T/MORROW CLASTICS		(-7834
TIME Logger on Bottom	0430 3-29			(-7940
Max. Rec. Temp.	176 °F	T/CHESTER °F	°F	(-8155
Equip. / Location	8075 / HOBBS			
Recorded By	SEVOUGIAN			
Witnessed By				

XI

Attached is a chemical analysis of fresh water taken from two fresh water wells that are within two miles of the proposed SWD well. Also attached is a map showing their location.

1342-A

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Threshold Development Co.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W81-1143

To Threshold Development Corporation

777 Taylor Street, Suite #II-A

Fort Worth Club Tower Building

Fort Worth Texas ATTN: Bucky Burch

Date 12-16-81

Submitted by _____ Date Rec. 12-16-81

Well No. As Marked Depth _____ Formation _____

County _____ Field _____ Source _____

	Water Supply Well Sec.7,T19S,R29E	Windmill Sec.13,T19S,R28E.		
Resistivity	1.80 @ 74°F.	1.76 @ 74°F.		
Specific Gravity	1.004	1.004		
pH	7.0	7.0		
Calcium (Ca)	425	350		*MPL
Magnesium (Mg)	105	90		
Chlorides (Cl)	1,500	1,600		
Sulfates (SO_4)	950	1,000		
Bicarbonates (HCO_3)	145	160		
Soluble Iron (Fe)	Nil	Nil		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

cc:

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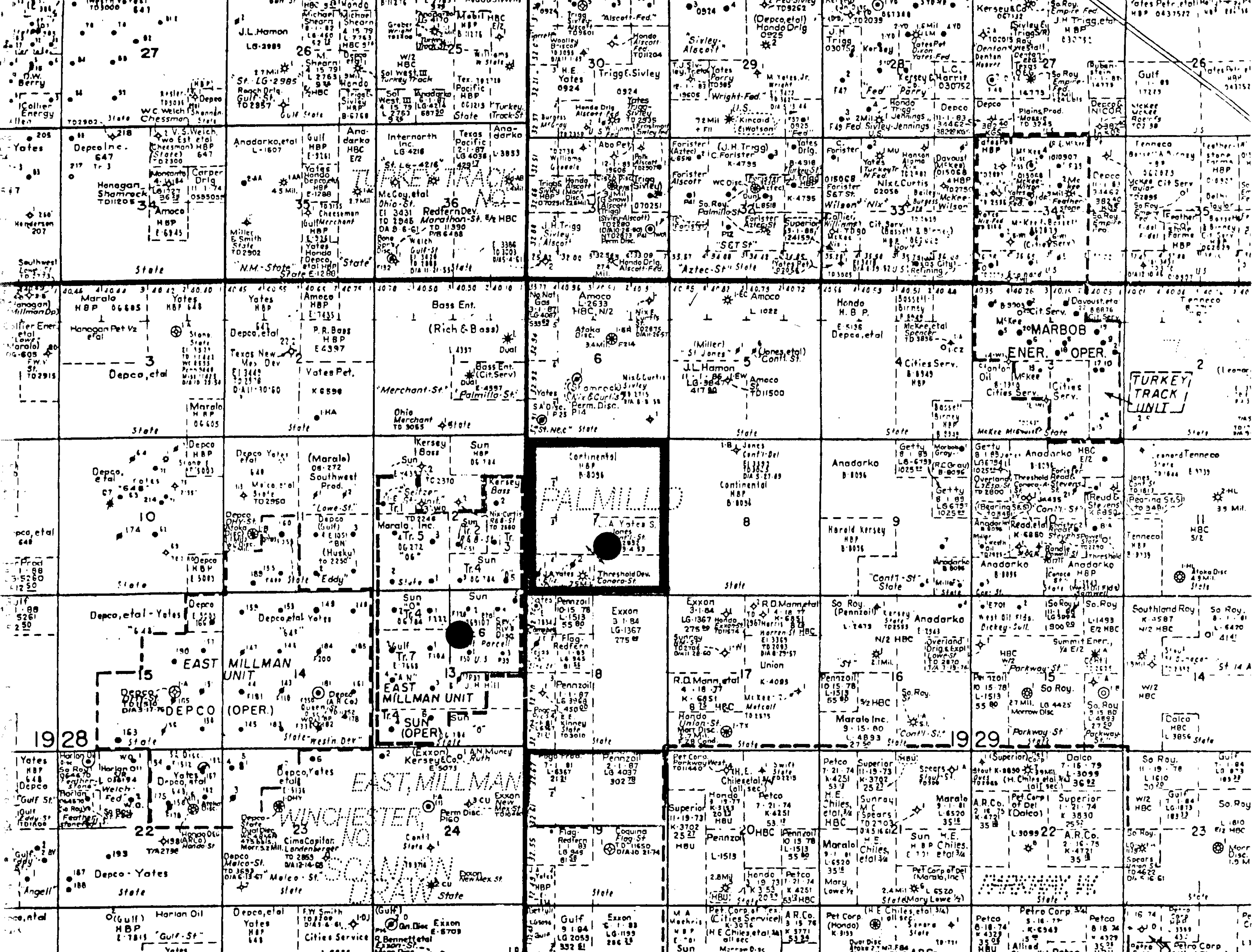

EAST MILLMAN UNIT
DEPCO (OPER.)
EAST MILLMAN UNIT
SUN (OPER)
PALMILLO
MARBOB ENER. OPER.
TURKEY TRACK UNIT
TURKEY TRACK NO
EAST MILLMAN
WINCHESTER NO
SCANLON DRAW

XII

After careful examination of available geological and engineering data, which includes our own well logs and mud logs from wells that we have drilled in Sec. 7, T19S, R29E, we find no evidence of open faults or any other hydrological connection between disposal zone and any underground source of drinking water.

Affidavit of Publication

No. 9375

STATE OF NEW MEXICO,
County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Business Manager of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for 2 consecutive days weeks on the same day as follows:

First Publication January 11, 1982

Second Publication January 12, 1982

Third Publication

Fourth Publication

and that payment therefore in the amount of $

has been made.

Subscribed and sworn to before me this 12th day of January, 19 82

Notary Public, Eddy County, New Mexico

My Commission expires

OFFICIAL SEAL
Signature: Barbara Ann Boans
BARBARA ANN BOANS
NOTARY PUBLIC - NEW MEXICO
NOTARY BOND FILED WITH SECRETARY OF STATE
My Commission Expires 9-10-85

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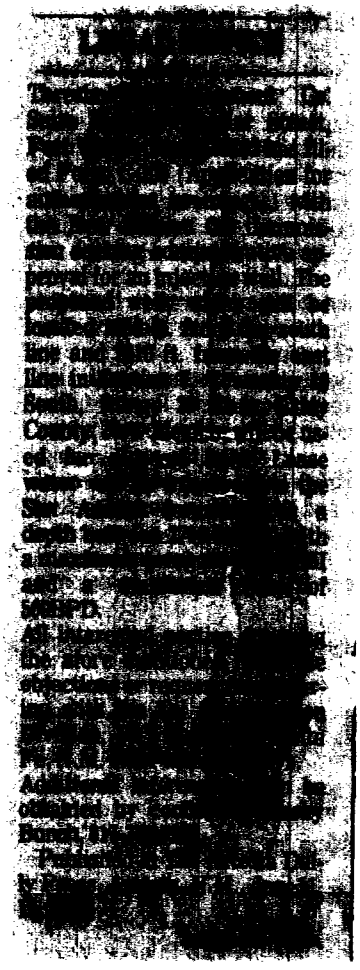

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ARTESIA, NM 88210
ATTN: JOANIE FUNK

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OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
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