CAMPBELL & BLACK, P.A.
LAWYERS

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POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

November 6, 1989

HAND-DELIVERED

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

Re: In the Matter of the Application of Texaco, Inc. for Approval of Salt Water Disposal, Lea County, New Mexico

Dear Mr. LeMay:

Enclosed in triplicate is the above-referenced application of Texaco, Inc. Texaco, Inc. respectfully requests that this matter be placed on the docket for the Examiner hearings scheduled on November 29, 1989.

Very truly yours,

WILLIAM F. CARR

WFC:mlh
Enclosures
cc w/enclosures: Oil Conservation Division Office
Post Office Box 1980
Hobbs, New Mexico 88240

Glenn Carter, Texaco, Inc.

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

RECEIVED
NOV - 6 1989
OIL CONSERVATION DIVISION

Case 9833

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Texaco Inc.

Address: P. O. Box 730, Hobbs, New Mexico 88240

Contact party: J. A. Head Phone: (505) 393-7191

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. Attached

* 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. Attached

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.). Attached

*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. Attached

IX. Describe the proposed stimulation program, if any. Attached

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

* 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. Attached

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. Attached

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: J. A. Head Title Area Manager

Signature: J A Head Date: November 1, 1989

* 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

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.

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
TEXACO INC.	N.M. "DM" STATE NCT-2			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	1980' FNL & 330' FWL	21	13-S	33-E

Schematic

Tabular Data

Surface Casing set @ 365'

Size 11 3/4" Cemented with 250 sx.

TOC surface feet determined by circulated

Hole size 15"

Intermediate Casing set @ 4103'

Size 8 5/8" Cemented with 865 sx.

TOC 1100 feet determined by calculated (45% fillup)

Hole size 10 5/8"

Long string set @ 9850'.

Size 5 1/2" Cemented with 750 sx.

TOC 5500 feet determined by calculated (75% fillup)

Hole size 7 7/8"

Total depth 9850' (PBTD 9803')

Injection interval

9734 feet to 9740 feet

(perforated ~~XXXXXXXXX~~, indicate which)

Tubing size 2 3/8" lined with internal plastic coating (material) set in a Baker Lok-set (brand and model) packer at 9680 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Bough C

2. Name of Field or Pool (if applicable) Lazy J Penn

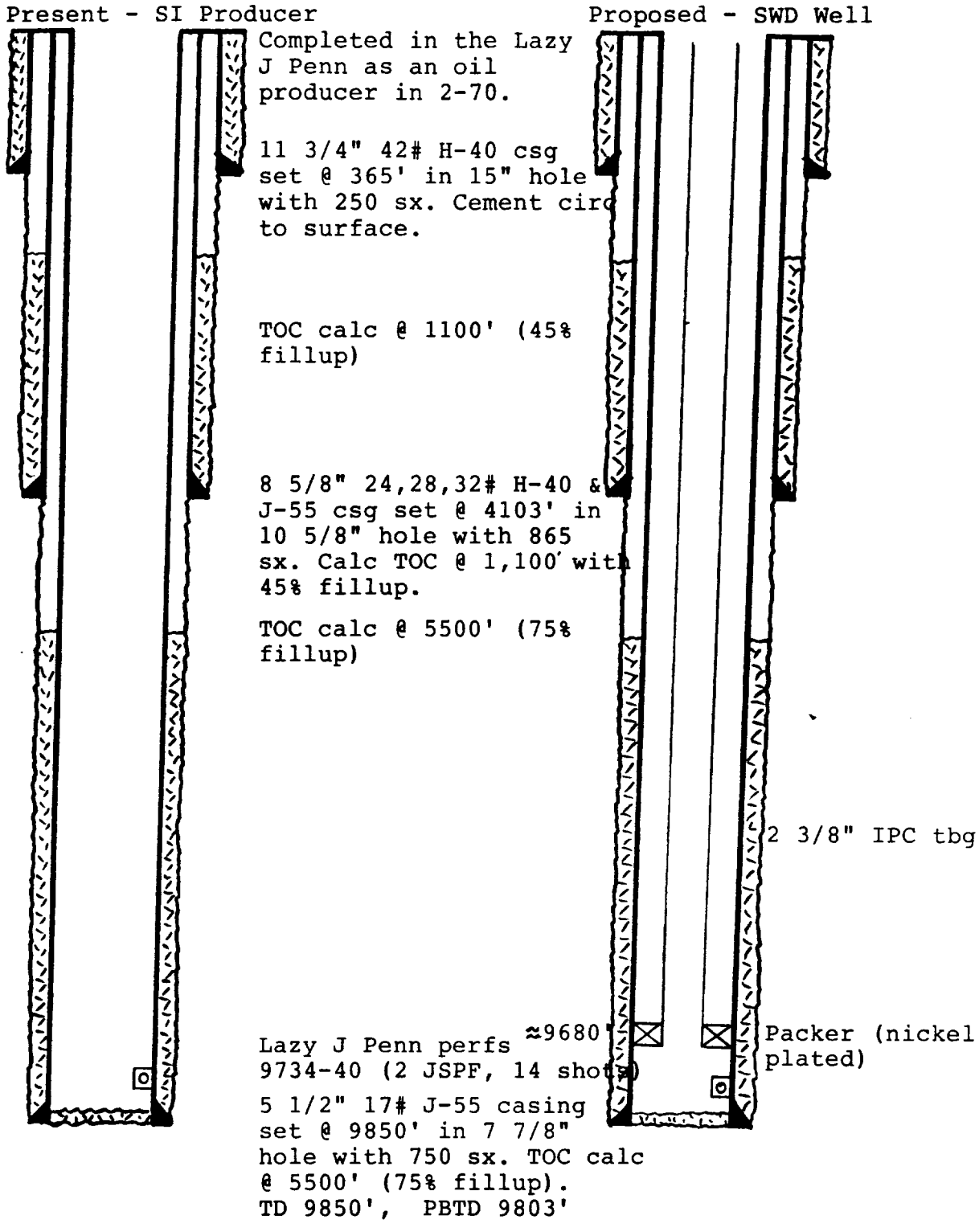
3. Is this a new well drilled for injection? /7 Yes /X No

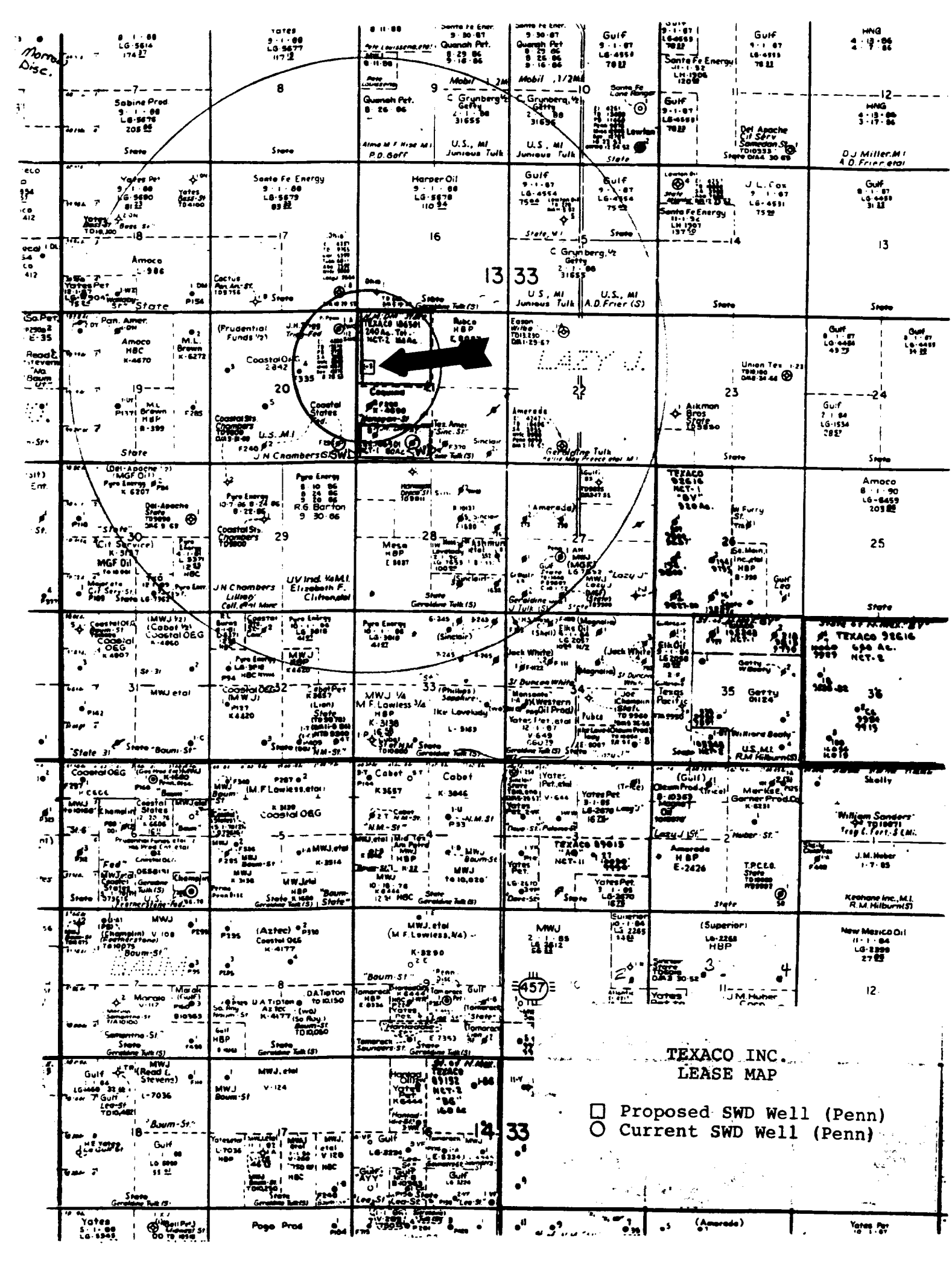
   If no, for what purpose was the well originally drilled? oil production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No. None.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. No other oil or gas zones are known to exist.

TEXACO INC.
N.M. "DM" STATE NCT-2 NO. 1
UNIT LETTER E, 1980' FNL & 330' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO




TEXACO INC.
LEASE MAP
Proposed SWD Well (Penn)
Current SWD Well (Penn)

ATTACHMENT TO FORM C-108

WELLS WITHIN 1/2 MILE RADIUS OF
TEXACO INC. N.M. "DM" STATE NCT-2 WELL NO. 1

GULF OIL CORPORATION
STATE B-10307 NO. 1
UNIT LETTER M, 660' FSL & 660' FWL
SECTION 16, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 365' in 15 1/2" hole with 574 sx. Cement circulated.

TD 660'

12-53 P&A

COASTAL OIL & GAS CORPORATION
BAUM SWD NO. 1
UNIT LETTER A, 660' FNL & 660' FEL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 385' in 15" hole with 450 sx. Cement circulated.
9 5/8" 29.3, 36# casing set at 4060' in 10" hole with 2150 sx. Cement circulated.
5 1/2" 15.5, 17# casing set at 9780' in 7 7/8" hole with 2162 sx. Cement circulated.
4 1/2" 13# liner set from 9345-13,347 in 7 7/8" hole with 1000 sx. Cement circulated.

8-53 Completed as oil producer in Baum Upper Penn through perforations at 9590-9718'.
3-67 P&A
1-69 Re-entered. Ran 4 1/2" liner. Cement circulated behind liner (sealed off perforations at 9590-9718). Convert to SWD into Devonian open hole from 13,347-13,572.
3-85 P&A

COASTAL OIL & GAS CORPORATION
FEDERAL "20" NO. 4
UNIT LETTER G, 2080' FNL & 2080' FEL
SECTION 20, Y-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 375' in 17 1/2" hole with 400 sx.
Cement circulated.
8 5/8" 24, 32# casing set at 4075' in 11" hole with 300 sx.
Top of cement calculated at 2500' (45% fillup).
5 1/2" 15.5, 17# casing set at 9854' in 7 7/8" hole with 200 sx.
Top of cement calculated at 8700' (75% fillup).

TD 9852' PBTD 9852'

1-69 Completed as an oil producer in Baum Upper Penn through perforations at 9713-9732.
11-83 Shut-in.

COASTAL OIL & GAS CORPORATION
FEDERAL "20" NO. 1
UNIT LETTER P, 660' FSL & 660' FEL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 387' in 17 1/2" hole with 375 sx.
Cement circulated to surface.
8 5/8" 24, 32# casing set at 4075' in 11" hole with 300 sx.
Top of cement calculated at 2500' (45% excess).
5 1/2" 15.5, 17# casing set at 9840' in 7 7/8" hole with 250 sx.
Top of cement calculated at 8400' (75% fillup).

TD 9840' PBTD 9840'

3-68 Completed as an oil producer in Baum Upper Penn through perforations at 9748-9800.
4-85 Converted to SWD into perforations 9748-9800.

TEXACO INC.
N.M. "DM" STATE NCT-2 NO. 1
UNIT LETTER E, 1980' FNL & 330' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 42# casing set at 365' in 15" hole with 250 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4103' in 10 5/8" hole with 865 sx. Top of cement calculated at 1100' (45% fillup).
5 1/2" 17# casing set at 9850' in 7 7/8" hole with 750 sx.
Top of cement calculated at 5500' (75% fillup).

TD 9850' PBTD 9803'

2-70 Completed as oil producer in Lazy J Penn through perforations 9734-9740.
2-86 Shut-in (0 BOPD, 174 BWPD).

COQUINA OIL CORPORATION
HANAGAN STATE NO. 1
UNIT LETTER K, 1650' FSL & 2310' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 23.8# casing set at 360' in 15" hole with 300 sx.
Cement circulated to surface.
8 5/8" 24, 32# casing set at 4030' in 11" hole with 450 sx.
Top of cement calculated at 2800' (45% fillup).
5 1/2" 15.5, 17# casing set at 9827' in 7 7/8" hole with 250 sx.
Top of cement calculated at 8400' (75% fillup).

TD 9828' PBTD 9773'

4-68 Completed as oil producer in Lazy J Penn through perforations 9719-9765.
9-74 P&A

COQUINA OIL CORPORATION
HANAGAN STATE NO. 2
UNIT LETTER L, 1980' FSL & 430' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 393' in 17 1/2" hole with 375 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4199' in 11" hole with 500 sx.
Top of cement calculated at 2850' (45% fillup).
5 1/2" 17# casing set at 9810' in 7 7/8" hole with 450 sx.
Top of cement calculated at 7250' (75% fillup).

TD 9810' PBTD 9806'

11-69 Completed as oil producer in Lazy J Penn through perforations at 9718-9734.
9-74 P&A

TEXACO INC.
N.M. "DM" STATE NCT-1 NO. 2
UNIT LETTER M, 990' FSL & 660' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 42# casing set at 363' in 15" hole with 250 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4146' in 11" hole with 865 sx.
Top of cement calculated at 1040' (45% fillup).
5 1/2" 17# casing set at 9900' in 7 7/8" hole with 765 sx.
Top of cement calculated at 5500' (75% fillup).

TD 9900' PBTD 9847'

5-70 Completed as oil producer in Lazy J Penn through perforations at 9737-9752.
9-76 P&A

TEXACO INC.
LAZY J PENN SWD WELL
N.M. "DM" STATE NCT-1 NO. 1
UNIT LETTER N, 660' FSL & 1980' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 23.72# casing set at 364' in 15" hole with 300 sx.
Cement circulated to surface.
8 5/8" 24# casing set at 4150' in 10 5/8" hole with 650 sx.
Top of cement calculated at 2000'.
4 1/2" 11.60# casing set at 9899' in 7 7/8" hole with 1100 sx.
Top of cement calculated at 3400'.

TD 9900' PBTD 9867'

12-67 Completed as oil producer in Lazy J Penn through perforations at 9742-9792'.
9-75 Converted to SWD into perforations 9742-9792'.
9-89 Shut-in.

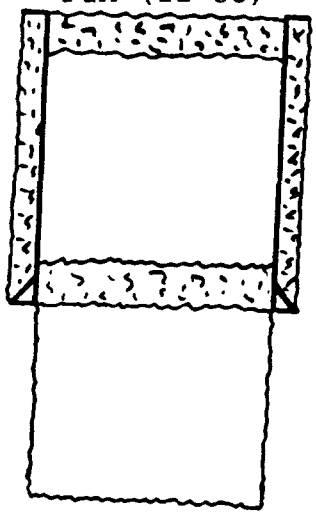
GULF OIL CORPORATION
STATE B - 10307 No. 1
UNIT LETTER M, 660' FS & WL
SECTION 16, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

P&A (12-53)

Spot 17 sx cement plug from 25' to surface.

Drilled and abandoned in 12-53.

Spot 17 sx cement plug from 340-365'.

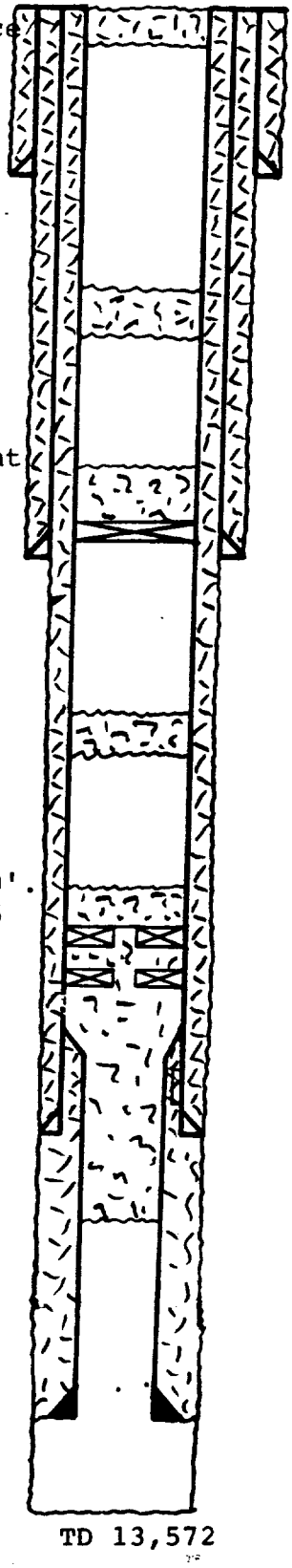


13 3/8" 48# casing set @ 365' in 15 1/2" hole with 574 sx. Cement circulated to surface.

TD 660'

COASTAL OIL & GAS CORPORATION
BAUM SWD NO. 1
UNIT LETTER A, 660' FN & EL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

P&A (3-85)



Spot 10 sx cement plug @ surface.

Spot 20 sx cement plug from 1587-1767'.

Set CIBP @ 3790'. Spot 25 sx cmt plug from 3564-3790'.

Spot 20 sx cement plug from 6645-6825'.

3-85 Set cement retainer @ 9220'. Squeeze below retainer with 125 sx cement (calc. bottom of cmt @ 10,900'). Spot 30 sx cement plug on top of retainer (top @ 8949').

Originally completed in Lazy J Penn as an oil producer in 8-5-1-69 converted to SWD into Devonian.

13 3/8" 48# casing set @ 385' in 15" hole with 450 sx-cmt circulated to surface.

9 5/8" 29.3, 36# casing set @ 4060' in 10" hole with 2150 sx. Cement circulated to surface.

Baker F-1 Permanent Packer set @ 9250'.

Lazy J Penn perfs @ 9590-9718 (8-53)

5 1/2", 15.5, 17#, casing set @ 9780' in 7 7/8" hole with 2162 sx. Cement circulated to surfac

4 1/2" 13# liner set from 9345-13,347' in 7 7/8" hole with 1,000 sx-cement circulated 1-69 converted to SWD into Devonian open hole 13,347-13,572.

COQUINA OIL CORPORATION
HANAGAN STATE NO. 1
UNIT LETTER K, 1650' FSL & 2310' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

Spotted 15 sx cement plug @ surface P&A (9-74)

Completed in Lazy J Penn as an oil producer in 4-68.

Spotted 40 sx cement plug at 343-443'.

360'

11 3/4" 23.8# csg set @ 360' in 15" hole with 300 sx. Cement circulated to surface.

Cut and pulled 8 5/8" casing @ 1119'. Spotted 35 sx cement plug @ 1019-1119'.

TOC calc @ 2800'.

4030'

Spotted 40 sx cement plug @ 4080-4180'.

8 5/8" 24,32# csg set @ 4030' in 11" hole with 450 sx. Calc TOC @ 2800' (45% fillup)

Spotted 35 sx cement plug @ 5360-5460'.

Cut and pulled 5 1/2" casing @ 7492'. Spotted 35 sx cement plug from 7376-7476'.

TOC calc. @ 8400' (75% fillup)

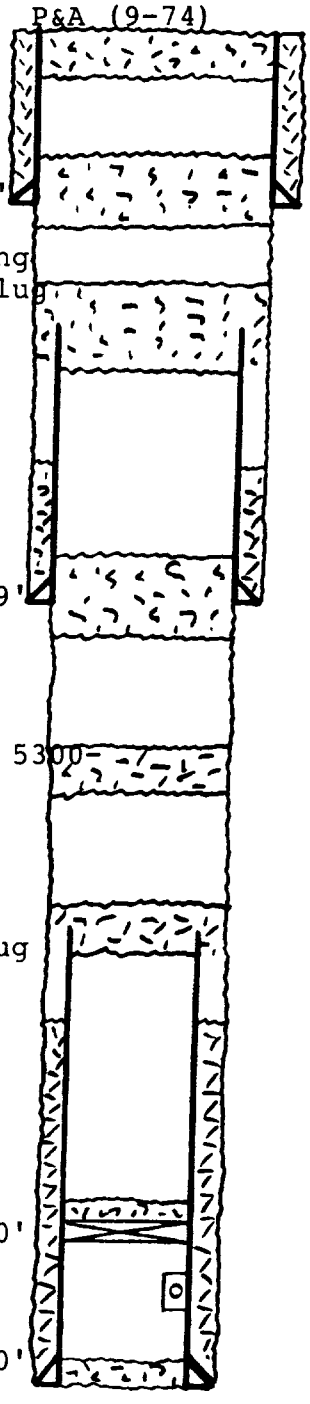
CIBP Set @ 9697'. Dumped 35' cement on top.

Lazy J Penn perfs @ 9719-65 (Total 18 shots)

9827'

5 1/2" 15.5,17# csg set @ 9827' in 7 7/8" hole with 250 sx. Calc TOC @ 8400' (75% fillup) TD 9828 PBTD 9773'.

COQUINA OIL CORPORATION
HANAGAN STATE NO. 2
UNIT LETTER L, 1980' FSL & 430' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO



Spotted 15 sx cement plug @ surface.

Spotted 75 sx cement plug from 334-434'

Cut off and pulled 8 5/8" casing @ 800'. Spotted 50 sx cement plug from 737-837'.

Spotted 40 sx cement plug from 4140-4240'.

Spotted 35 sx cement plug from 5300-5400'.

Cut and pulled 5 1/2" casing @ 6590'. Spotted 35 sx cement plug from 6490-6590'.

CIBP set @ 9600'. Dumped 35' cmt on top of CIBP.

Completed in Lazy J Penn as an oil producer in 11-69.

13 3/8" 48# csg set @ 393' in 17 1/2" hole with 375 sx. Cement circulated to surface.

TOC calc @ 2850'.

8 5/8" 24,28,32# csg set @ 4199 in 11" hole with 500 sx. Calc TOC @ 2850' (45% fillup)

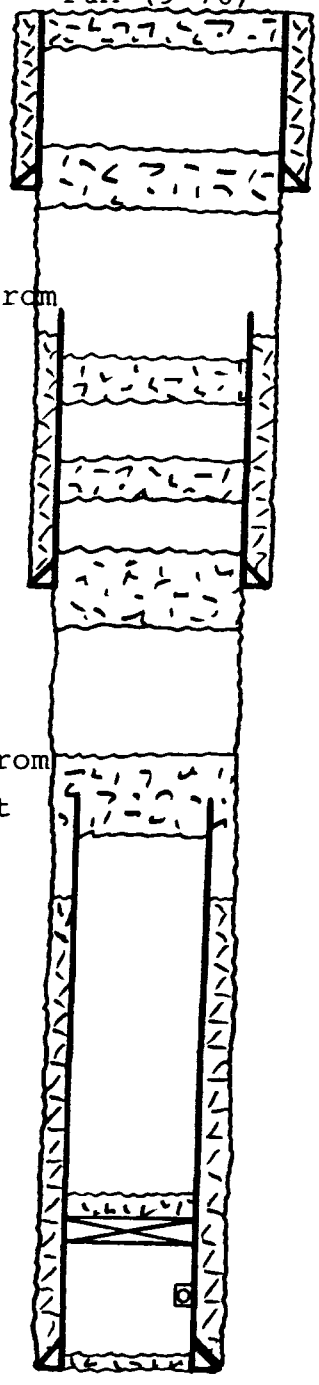
TOC calc @ 7250' (75% fillup)

Lazy J Penn perfs @ 9718-34 (total 34 holes)

5 1/2" 17# csg set @ 9810' in 7 7/8" hole with 450 sx. TOC calc @ 7250'. (75% fillup)
TD 9810', PBTD 9806'

TEXACO INC.
N.M. "DM" STATE NCT-1 NO. 2
UNIT LETTER M, 990' FSL & 660' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

P&A (9-76)



Spot 20' (10 sx) cement plug from 20'to surface.

Spot 100' (70 sx) cement plug from 300-400'.

Cut and pulled 8 5/8" casing from 877'.

Spot 100' (40 sx) cement plug from 1667-1767'.

Spot 100' (40 sx) cement plug from 2318-2418'.

Spot 100' (40 sx) cement plug from 4095-4195'.

Cut and pulled 5 1/2" casing from 5384'. Spot 100' (40 sx) cement plug from 5320-5420'.

Set CIBP @ 9650'. Spot 35' cement plug on top of CIBP.

Completed in Lazy J Penn as an oil producer in 5-70.

11 3/4" 42# H-40 csg set @ 363 in 15" hole with 250 sx.Cement circulated to surface.

8 5/8" 24,28,32# csg set @ 4146' in 11" hole with 865 sx. TOC calc @ 1,040' (45% excess)

TOC calc @ 5500' (75% fillup)

Lazy J Penn perfs @ 9737-52.

5 1/2" 17# csg set @ 9900' in 7 7/8" hole with 765 sx. Calc TOC @ 5500 (75% fillup). TD 9900'. PBTD 9847'.

ATTACHMENT TO FORM C-108

PART VII.

1. The average injection rate will be 250 BWPD with a maximum injection rate of 1,000 BWPD.

2. The system will be closed.

3. The average injection pressure will be 0 (zero) psi with the maximum injection pressure of 150 psi.

4. The source of the injected water is the Lazy J Penn.

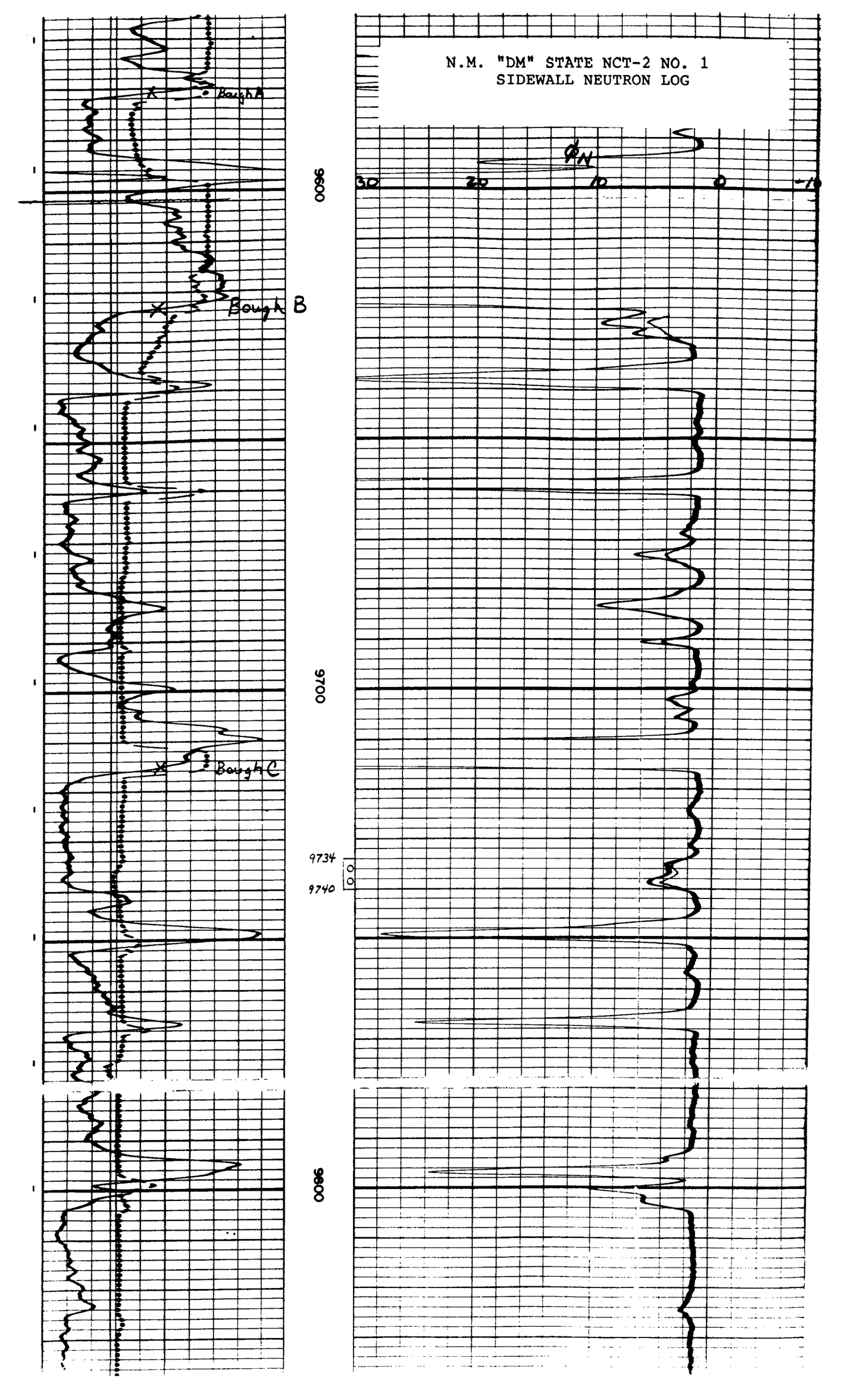
5. Not applicable, as Lazy J Penn water will be re-injected into the Lazy J Penn.

PART VIII. Injection is proposed into the Permo Penn (Bough C) at 9734-40. The proposed injection zone is correlative to the injection zone in Texaco's Lazy J SWD well located approximately one-half mile southeast of the proposed SWD well. The lithology of the Permo Penn consists of phylloid algal limestone interbedded with dense limestone and thin shales. The Bough C is 80' thick in the subject well.

The Ogallala is the only source of drinking water in the area. The base of the Ogallala is at approximately 240', as per the State Engineers Office. There are no other known sources of drinking water above or below the proposed injection zone.

PART IX. The injection perforations 9734-9740 will be acidized with 1500 gallons of 20% NEFE acid.

PART XII. Texaco Inc. has examined available geologic and engineering data and found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.


N.M. "DM" STATE NCT-2 NO. 1
SIDEWALL NEUTRON LOG
ϕ_N
30
20
10
0
-10
9600
9700
9734
9740
9800
Bough A
Bough B
Bough C

FRESH
WATER ANALYSIS REPORT

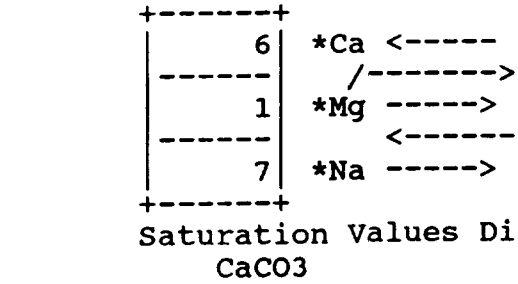
Company : Texaco
Address : Hobbs, NM
Lease : Saunders Field
Well : Windmill
Sample Pt. : SE/4-SW/4-S22-T13S-R

Date : 10-20-89
Date Sampled : 10-13-89
Analysis No. : 5

	ANALYSIS		mg/L		* meq/L
1.	pH	7.8			
2.	H2S	NR			
3.	Specific Gravity	1.001			
4.	Total Dissolved Solids		951.4		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	329.0	HCO3	5.4
12.	Chloride	Cl	254.0	Cl	7.2
13.	Sulfate	SO4	75.0	SO4	1.6
14.	Calcium	Ca	128.0	Ca	6.4
15.	Magnesium	Mg	14.7	Mg	1.2
16.	Sodium (calculated)	Na	150.0	Na	6.5
17.	Iron	Fe	0.8		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		380.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter



Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	5.4	437
CaSO4	68.1	1.0	68
CaCl2	55.5		
Mg(HCO3)2	73.2		
MgSO4	60.2	0.6	34
MgCl2	47.6	0.6	30
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	6.5	381

REMARKS: Resistivity: 15.4 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

FRESH

WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-13-89
Lease	: Saunders Field	Analysis No.	: 4
Well	: Windmill		
Sample Pt.	: NE/4-SW/4-S21-T13S-R		

	ANALYSIS		mg/L		* meq/L
1.	pH	8.2			
2.	H2S	NR			
3.	Specific Gravity	1.002			
4.	Total Dissolved Solids		813.7		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	183.0	HCO3	3.0
12.	Chloride	Cl	255.0	Cl	7.2
13.	Sulfate	SO4	125.0	SO4	2.6
14.	Calcium	Ca	104.0	Ca	5.2
15.	Magnesium	Mg	31.6	Mg	2.6
16.	Sodium (calculated)	Na	115.0	Na	5.0
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		390.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

5	*Ca <----- *HCO3	3
	/------->	
3	*Mg -----> *SO4	3
	<---------/	
5	*Na -----> *Cl	7

Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	3.0	243
CaSO4	68.1	2.2	149
CaCl2	55.5		
Mg(HCO3)2	73.2		
MgSO4	60.2	0.4	25
MgCl2	47.6	2.2	104
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	5.0	292

REMARKS: Resistivity: 14.7 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

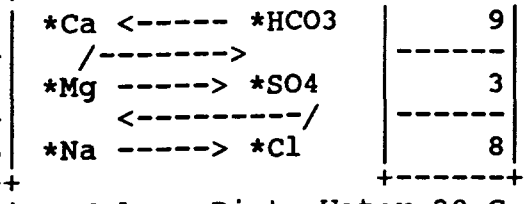
FRESH
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-13-89
Lease	: Saunders Field	Analysis No.	: 3
Well	: Windmill		
Sample Pt.	: SE/4-SW/4-S20-T13S-R		

	ANALYSIS		mg/L		* meq/L
1.	pH	8.2			
2.	H2S	NR			
3.	Specific Gravity	1.005			
4.	Total Dissolved Solids		1415.6		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	549.0	HCO3	9.0
12.	Chloride	Cl	278.0	Cl	7.8
13.	Sulfate	SO4	125.0	SO4	2.6
14.	Calcium	Ca	160.0	Ca	8.0
15.	Magnesium	Mg	-43.6	Mg	-3.6
16.	Sodium (calculated)	Na	345.9	Na	15.0
17.	Iron	Fe	1.3		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		220.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter



Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	8.0	647
CaSO4	68.1		
CaCl2	55.5		
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6		
NaHCO3	84.0	1.0	85
Na2SO4	71.0	2.6	185
NaCl	58.4	7.8	458

REMARKS: Resistivity: 11.7 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

FRESH
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-13-89
Lease	: Saunders Field	Analysis No.	: 2
Well	: Windmill		
Sample Pt.	: NW/4-NE/4-S8-T13S-R3		

	ANALYSIS		mg/L		* meq/L
1.	pH	8.2			
2.	H2S	NR			
3.	Specific Gravity	1.005			
4.	Total Dissolved Solids		676.5		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	157.0	HCO3	2.6
12.	Chloride	Cl	185.0	Cl	5.2
13.	Sulfate	SO4	125.0	SO4	2.6
14.	Calcium	Ca	120.0	Ca	6.0
15.	Magnesium	Mg	14.7	Mg	1.2
16.	Sodium (calculated)	Na	73.6	Na	3.2
17.	Iron	Fe	1.3		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		360.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

6	*Ca <----- *HCO3	3
	/------->	
1	*Mg -----> *SO4	3
	<---------/	
3	*Na -----> *Cl	5

Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	2.6	209
CaSO4	68.1	2.6	177
CaCl2	55.5	0.8	45
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	1.2	57
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3.2	187

REMARKS: Resistivity: 13.5 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

LAZY J PENN PRODUCED
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-19-89
Lease	: NM BY St. NCT-2	Analysis No.	: 1
Well	: #1		
Sample Pt.	: Wellhead		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.7			
2.	H2S	7.0			
3.	Specific Gravity	1.040			
4.	Total Dissolved Solids		72059.1		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	573.4	HCO3	9.4
12.	Chloride	Cl	40513.0	Cl	1142.8
13.	Sulfate	SO4	3125.0	SO4	65.1
14.	Calcium	Ca	3000.0	Ca	149.7
15.	Magnesium	Mg	-338.0	Mg	-27.8
16.	Sodium (calculated)	Na	25183.4	Na	1095.4
17.	Iron	Fe	2.3		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		6100.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

150	*Ca <----- *HCO3	9
	/------->	
-28	*Mg -----> *SO4	65
	<----------/	
1095	*Na -----> *Cl	1143

Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	9.4	762
CaSO4	68.1	65.1	4429
CaCl2	55.5	75.2	4174
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6		
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	1067.6	62390

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

OFFSET OPERATORS REPORT

COVERING

VARIOUS LANDS IN T-13-S, R-33-E

LEA COUNTY, NEW MEXICO

AS OF: 10-26-89

OWNER	MIN INT	NET ACRES	LESSEE/OPERATOR	EXP DATE

NOTE: THE FOLLOWING LANDS ARE CONTIGUOUS WITH THE NW/4 OF SECTION 21, T-13-S, R-33E, LEA COUNTY, NEW MEXICO.

SE/4 OF SECTION 17, T-13-S, R-33-3

State of New Mexico
State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504

Full

STATE LEASE V-2853 — 2-1-94
Yates Petroleum Co. 40.0%
ABO Petroleum Corp. 20.0%
Myco Industries, Inc. 20.0%
Yates Drilling Co. 20.0%
105 South Fourth St.
Artesia, NM 88210

ALL OF SECTION 16, T-13-S, R-33-E

State of New Mexico
State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504

Full

STATE LEASE V-2852 — 2-1-94
Yates Petroleum Co. 40.0%
ABO Petroleum Corp. 20.0%
Myco Industries, Inc. 20.0%
Yates Drilling Co. 20.0%
105 South Fourth St.
Artesia, NM 88210

NE/4 OF SECTION 21, T-13-S, R-33-E

State of New Mexico
State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504

Full

STATE LEASE E-9087 — H. B. P.
Kaiser-Francis Oil Co.
P. O. Box 21468
Tulsa, OK 74121-1468

N/2 SW/4 & SE/4 OF SECTION 21, T-13-S, R-33-E

State of New Mexico
State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504

Full

-- — OPEN

E/2 OF SECTION 20, T-13-S, R-33-E

United States of America
Bureau of Land Management
New Mexico State Office
P. O. Box 1449
Santa Fe, New Mexico 87504

Full

FEDERAL LEASE NM-2842-A — H. B. P.
Cairn Energy USA, Inc. 50%
8235 Douglas Avenue
Suite 1221
Dallas, TX 75225
(214) 369-0316

Coastal Oil & Gas Co. 50%
9 Greenway Plaza
Houston, TX 77046
(713) 577-1400

NOTE: Federal Abstract Co. of Santa Fe, New Mexico provided the above leasehold ownership (Operating Rights) for Federal Lease NM-2842-A.
(Note continued next page)

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

RECEIVED
NOV - 6 1989
OIL CONSERVATION DIVISION

Case 9833

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Texaco Inc.

Address: P. O. Box 730, Hobbs, New Mexico 88240

Contact party: J. A. Head Phone: (505) 393-7191

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. Attached

* 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. Attached

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.). Attached

*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. Attached

IX. Describe the proposed stimulation program, if any. Attached

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

* 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. Attached

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. Attached

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: J. A. Head Title Area Manager

Signature: J A Head Date: November 1, 1989

* 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

II. 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.

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
TEXACO INC.	N.M. "DM" STATE NCT-2			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	1980' FNL & 330' FWL	21	13-S	33-E

Schematic

Tabular Data

Surface Casing set @ 365'

Size 11 3/4" Cemented with 250 sx.

TOC surface feet determined by circulated

Hole size 15"

Intermediate Casing set @ 4103'

Size 8 5/8" Cemented with 865 sx.

TOC 1100 feet determined by calculated (45% fillup)

Hole size 10 5/8"

Long string set @ 9850'.

Size 5 1/2" Cemented with 750 sx.

TOC 5500 feet determined by calculated (75% fillup)

Hole size 7 7/8"

Total depth 9850' (PBTD 9803')

Injection interval

9734 feet to 9740 feet

(perforated ~~XXXXXXXXXX~~, indicate which)

Tubing size 2 3/8" lined with internal plastic coating (material) set in a

Baker Lok-set (brand and model) packer at 9680 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Bough C

2. Name of Field or Pool (if applicable) Lazy J Penn

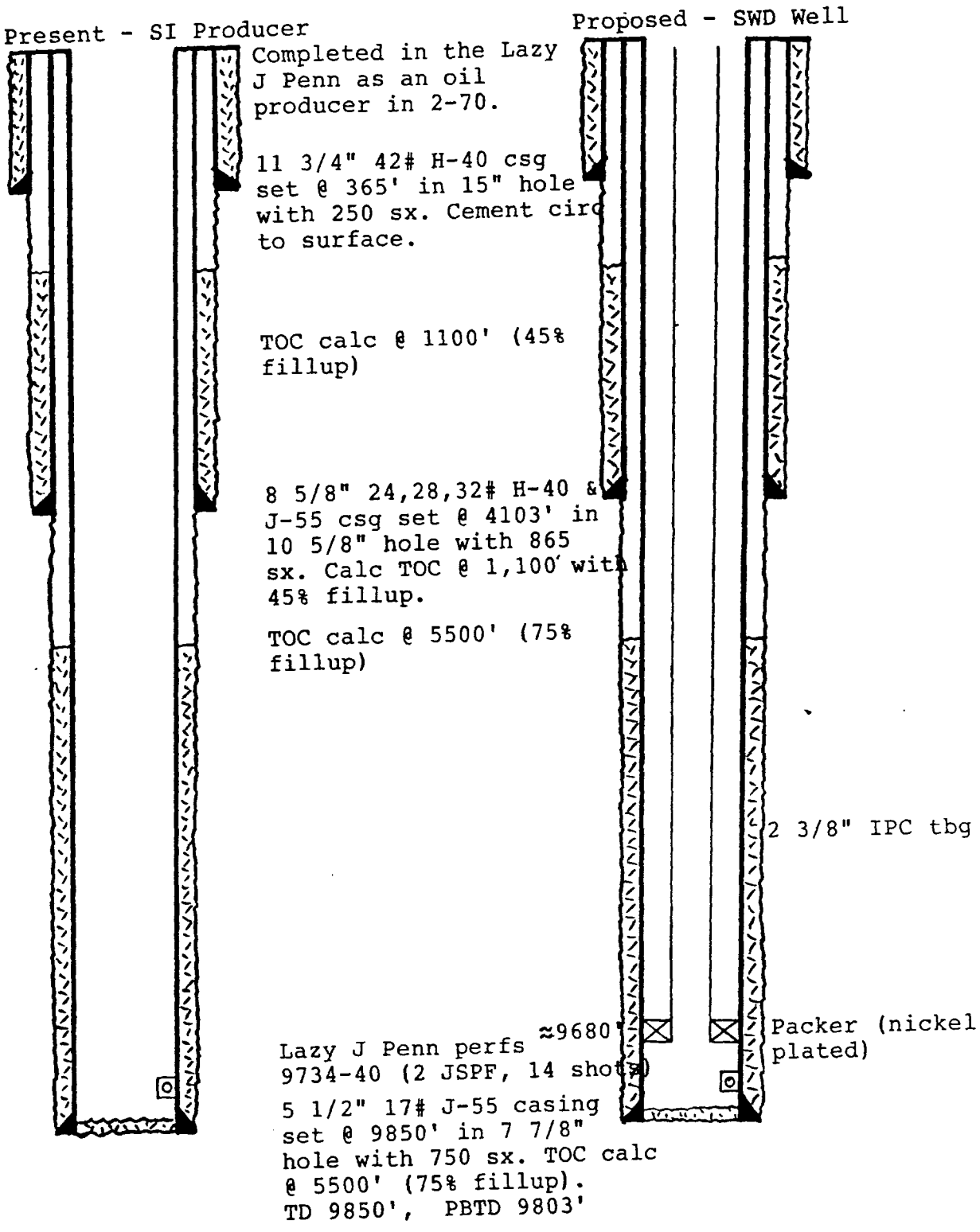
3. Is this a new well drilled for injection? [ ] Yes [X] No

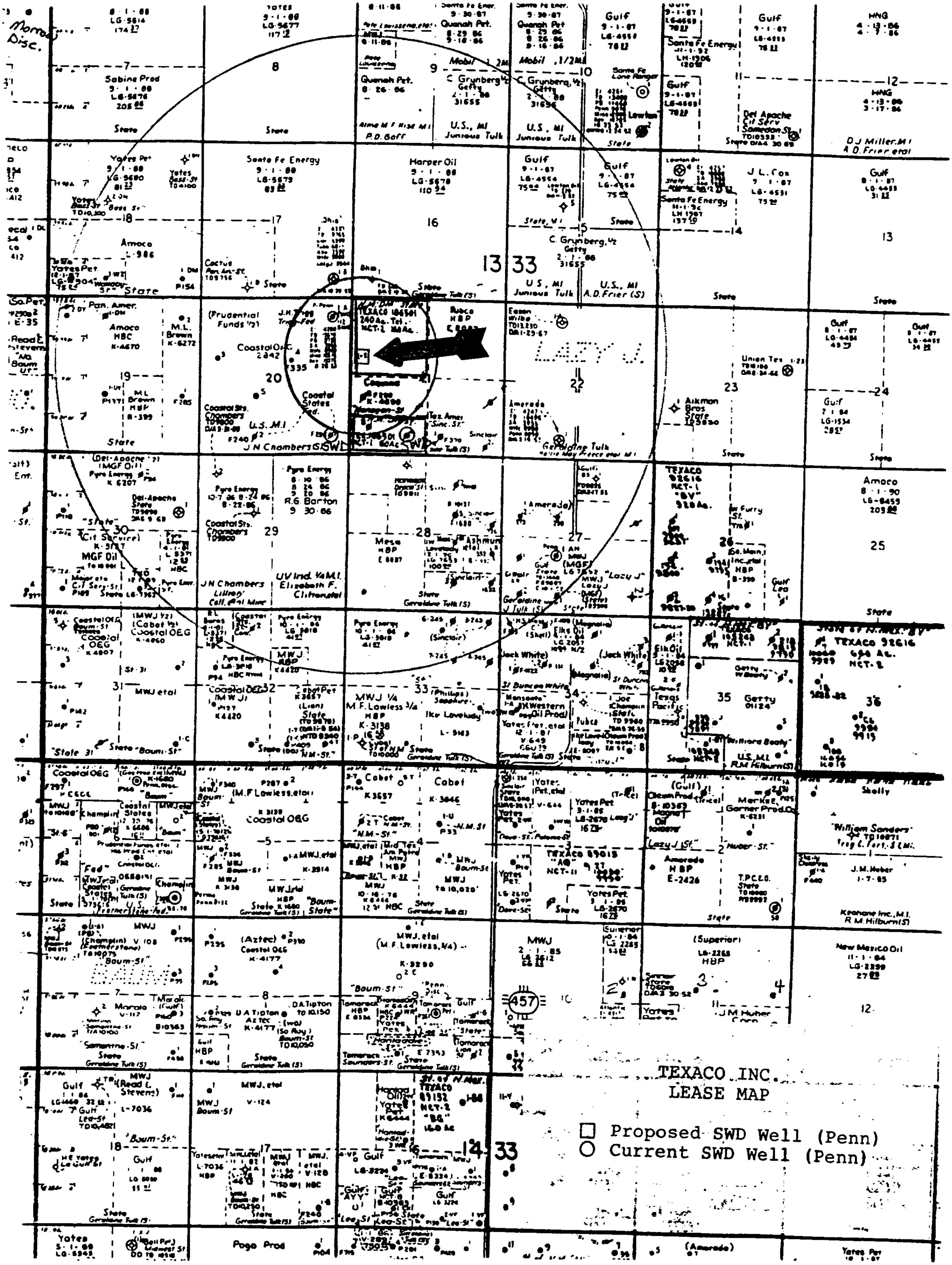
   If no, for what purpose was the well originally drilled? oil production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No. None.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. No other oil or gas zones are known to exist.

TEXACO INC.
N.M. "DM" STATE NCT-2 NO. 1
UNIT LETTER E, 1980' FNL & 330' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO





TEXACO INC.
LEASE MAP
Proposed SWD Well (Penn)
Current SWD Well (Penn)
13 33
14 33

ATTACHMENT TO FORM C-108

WELLS WITHIN 1/2 MILE RADIUS OF
TEXACO INC. N.M. "DM" STATE NCT-2 WELL NO. 1

GULF OIL CORPORATION
STATE B-10307 NO. 1
UNIT LETTER M, 660' FSL & 660' FWL
SECTION 16, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 365' in 15 1/2" hole with 574 sx.
Cement circulated.

TD 660'

12-53 P&A

COASTAL OIL & GAS CORPORATION
BAUM SWD NO. 1
UNIT LETTER A, 660' FNL & 660' FEL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 385' in 15" hole with 450 sx.
Cement circulated.
9 5/8" 29.3, 36# casing set at 4060' in 10" hole with 2150 sx.
Cement circulated.
5 1/2" 15.5, 17# casing set at 9780' in 7 7/8" hole with 2162 sx.
Cement circulated.
4 1/2" 13# liner set from 9345-13,347 in 7 7/8" hole with 1000 sx. Cement circulated.

8-53 Completed as oil producer in Baum Upper Penn through perforations at 9590-9718'.
3-67 P&A
1-69 Re-entered. Ran 4 1/2" liner. Cement circulated behind liner (sealed off perforations at 9590-9718). Convert to SWD into Devonian open hole from 13,347-13,572.
3-85 P&A

COASTAL OIL & GAS CORPORATION
FEDERAL "20" NO. 4
UNIT LETTER G, 2080' FNL & 2080' FEL
SECTION 20, Y-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 375' in 17 1/2" hole with 400 sx.
Cement circulated.
8 5/8" 24, 32# casing set at 4075' in 11" hole with 300 sx.
Top of cement calculated at 2500' (45% fillup).
5 1/2" 15.5, 17# casing set at 9854' in 7 7/8" hole with 200 sx.
Top of cement calculated at 8700' (75% fillup).

TD 9852' PBTD 9852'

1-69 Completed as an oil producer in Baum Upper Penn through perforations at 9713-9732.
11-83 Shut-in.

COASTAL OIL & GAS CORPORATION
FEDERAL "20" NO. 1
UNIT LETTER P, 660' FSL & 660' FEL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 387' in 17 1/2" hole with 375 sx.
Cement circulated to surface.
8 5/8" 24, 32# casing set at 4075' in 11" hole with 300 sx.
Top of cement calculated at 2500' (45% excess).
5 1/2" 15.5, 17# casing set at 9840' in 7 7/8" hole with 250 sx.
Top of cement calculated at 8400' (75% fillup).

TD 9840' PBTD 9840'

3-68 Completed as an oil producer in Baum Upper Penn through perforations at 9748-9800.
4-85 Converted to SWD into perforations 9748-9800.

TEXACO INC.
N.M. "DM" STATE NCT-2 NO. 1
UNIT LETTER E, 1980' FNL & 330' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 42# casing set at 365' in 15" hole with 250 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4103' in 10 5/8" hole with 865 sx. Top of cement calculated at 1100' (45% fillup).
5 1/2" 17# casing set at 9850' in 7 7/8" hole with 750 sx.
Top of cement calculated at 5500' (75% fillup).

TD 9850' PBTD 9803'

2-70 Completed as oil producer in Lazy J Penn through perforations 9734-9740.
2-86 Shut-in (0 BOPD, 174 BWPD).

COQUINA OIL CORPORATION
HANAGAN STATE NO. 1
UNIT LETTER K, 1650' FSL & 2310' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 23.8# casing set at 360' in 15" hole with 300 sx.
Cement circulated to surface.
8 5/8" 24, 32# casing set at 4030' in 11" hole with 450 sx.
Top of cement calculated at 2800' (45% fillup).
5 1/2" 15.5, 17# casing set at 9827' in 7 7/8" hole with 250 sx.
Top of cement calculated at 8400' (75% fillup).

TD 9828' PBTD 9773'

4-68 Completed as oil producer in Lazy J Penn through perforations 9719-9765.
9-74 P&A

COQUINA OIL CORPORATION
HANAGAN STATE NO. 2
UNIT LETTER L, 1980' FSL & 430' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

13 3/8" 48# casing set at 393' in 17 1/2" hole with 375 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4199' in 11" hole with 500 sx.
Top of cement calculated at 2850' (45% fillup).
5 1/2" 17# casing set at 9810' in 7 7/8" hole with 450 sx.
Top of cement calculated at 7250' (75% fillup).

TD 9810' PBTD 9806'

11-69 Completed as oil producer in Lazy J Penn through perforations at 9718-9734.
9-74 P&A

TEXACO INC.
N.M. "DM" STATE NCT-1 NO. 2
UNIT LETTER M, 990' FSL & 660' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 42# casing set at 363' in 15" hole with 250 sx.
Cement circulated to surface.
8 5/8" 24, 28, 32# casing set at 4146' in 11" hole with 865 sx.
Top of cement calculated at 1040' (45% fillup).
5 1/2" 17# casing set at 9900' in 7 7/8" hole with 765 sx.
Top of cement calculated at 5500' (75% fillup).

TD 9900' PBTD 9847'

5-70 Completed as oil producer in Lazy J Penn through perforations at 9737-9752.
9-76 P&A

TEXACO INC.
LAZY J PENN SWD WELL
N.M. "DM" STATE NCT-1 NO. 1
UNIT LETTER N, 660' FSL & 1980' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

11 3/4" 23.72# casing set at 364' in 15" hole with 300 sx.
Cement circulated to surface.
8 5/8" 24# casing set at 4150' in 10 5/8" hole with 650 sx.
Top of cement calculated at 2000'.
4 1/2" 11.60# casing set at 9899' in 7 7/8" hole with 1100 sx.
Top of cement calculated at 3400'.

TD 9900' PBTD 9867'

12-67 Completed as oil producer in Lazy J Penn through perforations at 9742-9792'.
9-75 Converted to SWD into perforations 9742-9792'.
9-89 Shut-in.

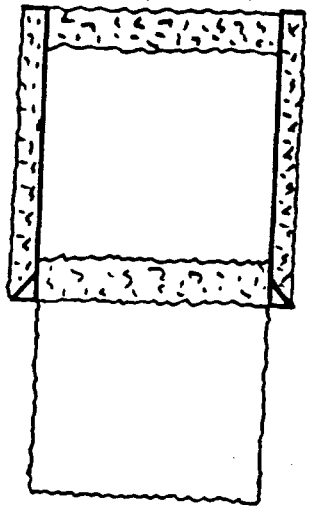
GULF OIL CORPORATION
STATE B - 10307 No. 1
UNIT LETTER M, 660' FS & WL
SECTION 16, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

P&A (12-53)

Spot 17 sx cement plug from 25' to surface.

Drilled and abandoned in 12-53.

Spot 17 sx cement plug from 340-365'.



13 3/8" 48# casing set @ 365'.in 15 1/2" hole with 574 sx. Cement circulated to surface.

TD 660'

COASTAL OIL & GAS CORPORATION
BAUM SWD NO. 1
UNIT LETTER A, 660' FN & EL
SECTION 20, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

P&A (3-85)

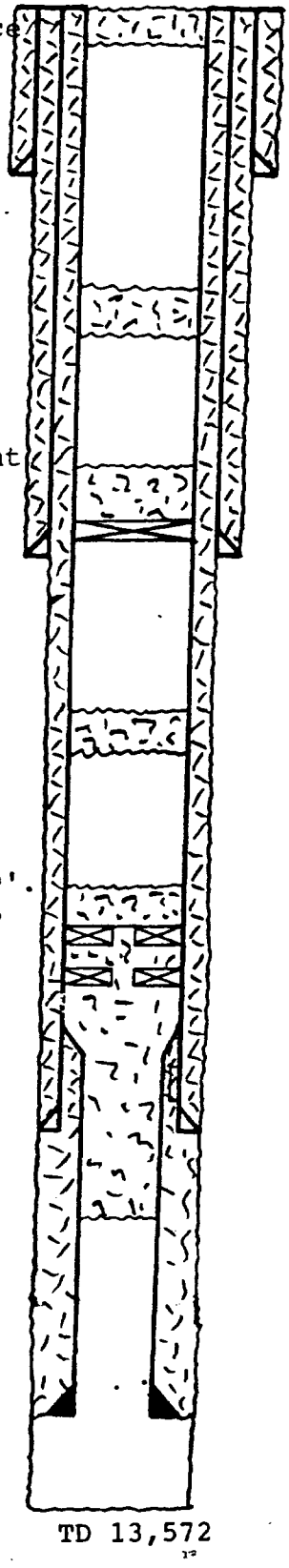
Spot 10 sx cement plug @ surface.

Spot 20 sx cement plug from 1587-1767'.

Set CIBP @ 3790'. Spot 25 sx cmt plug from 3564-3790'.

Spot 20 sx cement plug from 6645-6825'.

3-85 Set cement retainer @ 9220'. Squeeze below retainer with 125 sx cement (calc. bottom of cmt @ 10,900'). Spot 30 sx cement plug on top of retainer (top @ 8949').



Originally completed in Lazy J Penn as an oil producer in 8-5 1-69 converted to SWD into Devonian.

13 3/8" 48# casing set @ 385' in 15" hole with 450 sx-cmt circulated to surface.

9 5/8" 29.3, 36# casing set @ 4060' in 10" hole with 2150 sx Cement circulated to surface.

Baker F-1 Permanent Packer set @ 9250'.

Lazy J Penn perfs @ 9590-9718 (8-53)

5 1/2", 15.5, 17#, casing set 9780' in 7 7/8" hole with 2162 sx. Cement circulated to surfa

4 1/2" 13# liner set from 9345-13,347' in 7 7/8" hole with 1,000 sx-cement circulate 1-69 Converted to SWD into Devonian open hole 13,347-13,572.

COQUINA OIL CORPORATION
HANAGAN STATE NO. 1
UNIT LETTER K, 1650' FSL & 2310' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO

Spotted 15 sx cement plug @ surface P&A (9-74)

Completed in Lazy J Penn as an oil producer in 4-68.

Spotted 40 sx cement plug at 343-443'.

360

11 3/4" 23.8# csg set @ 360' in 15" hole with 300 sx. Cement circulated to surface.

Cut and pulled 8 5/8" casing @ 1119'. Spotted 35 sx cement plug @ 1019-1119'.

TOC calc @ 2800'.

4030'

Spotted 40 sx cement plug @ 4080-4180'.

8 5/8" 24,32# csg set @ 4030' in 11" hole with 450 sx. Calc TOC @ 2800' (45% fillup)

Spotted 35 sx cement plug @ 5360-5460'.

Cut and pulled 5 1/2" casing @ 7492'. Spotted 35 sx cement plug from 7376-7476'.

TOC calc. @ 8400' (75% fillup)

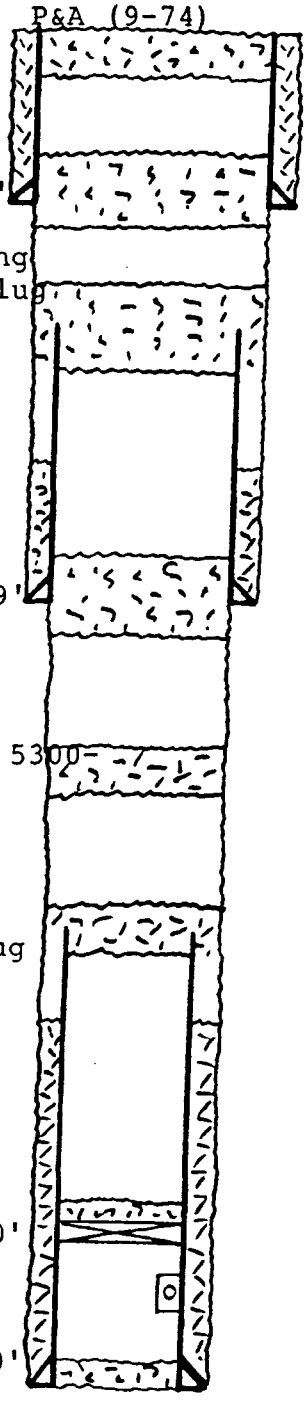
CIBP Set @ 9697'. Dumped 35' cement on top.

Lazy J Penn perfs @ 9719-65 (Total 18 shots)

9827'

5 1/2" 15.5,17# csg set @ 9827' in 7 7/8" hole with 250 sx. Calc TOC @ 8400' (75% fillup)
TD 9828 PBTD 9773'.

COQUINA OIL CORPORATION
HANAGAN STATE NO. 2
UNIT LETTER L, 1980' FSL & 430' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO



Spotted 15 sx cement plug @ surface.

Spotted 75 sx cement plug from 334-434'

Cut off and pulled 8 5/8" casing @ 800'. Spotted 50 sx cement plug from 737-837'.

Spotted 40 sx cement plug from 4140-4240'.

Spotted 35 sx cement plug from 5300-5400'.

Cut and pulled 5 1/2" casing @ 6590'. Spotted 35 sx cement plug from 6490-6590'.

CIBP set @ 9600'. Dumped 35' cmt on top of CIBP.

Completed in Lazy J Penn as an oil producer in 11-69.

13 3/8" 48# csg set @ 393' in 17 1/2" hole with 375 sx. Cement circulated to surface.

TOC calc @ 2850'.

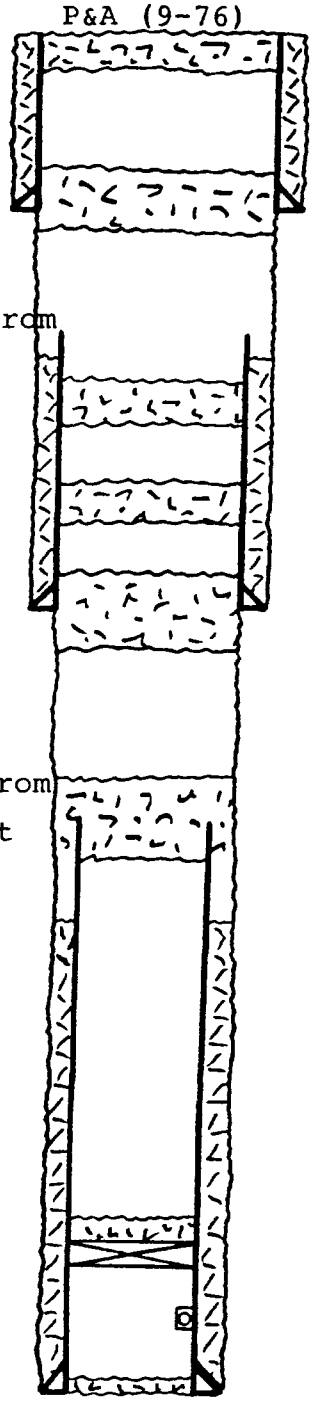
8 5/8" 24,28,32# csg set @ 419 in 11" hole with 500 sx. Calc TOC @ 2850' (45% fillup)

TOC calc @ 7250' (75% fillup)

Lazy J Penn perfs @ 9718-34 (total 34 holes)

5 1/2" 17# csg set @ 9810' in 7 7/8" hole with 450 sx. TOC calc @ 7250'. (75% fillup)
TD 9810', PBTD 9806'

TEXACO INC.
N.M. "DM" STATE NCT-1 NO. 2
UNIT LETTER M, 990' FSL & 660' FWL
SECTION 21, T-13-S, R-33-E
LEA COUNTY, NEW MEXICO



Spot 20' (10 sx) cement plug from 20'to surface.

Spot 100' (70 sx) cement plug from 300-400'.

Cut and pulled 8 5/8" casing from 877'.

Spot 100' (40 sx) cement plug from 1667-1767'.

Spot 100' (40 sx) cement plug from 2318-2418'.

Spot 100' (40 sx) cement plug from 4095-4195'.

Cut and pulled 5 1/2" casing from 5384'. Spot 100' (40 sx) cement plug from 5320-5420'.

Set CIBP @ 9650'. Spot 35' cement plug on top of CIBP.

Completed in Lazy J Penn as an oil producer in 5-70.

11 3/4" 42# H-40 csg set @ 36 in 15" hole with 250 sx.Cemen circulated to surface.

8 5/8" 24,28,32# csg set @ 4146' in 11" hole with 865 sx TOC calc @ 1,040' (45% excess

TOC calc @ 5500' (75% fillup)

Lazy J Penn perfs @ 9737-52.

5 1/2" 17# csg set @ 9900' in 7 7/8" hole with 765 sx. Calc TOC @ 5500 (75% fillup). TD 9900'. PBTD 9847'.

ATTACHMENT TO FORM C-108

PART VII.

1. The average injection rate will be 250 BWPD with a maximum injection rate of 1,000 BWPD.

2. The system will be closed.

3. The average injection pressure will be 0 (zero) psi with the maximum injection pressure of 150 psi.

4. The source of the injected water is the Lazy J Penn.

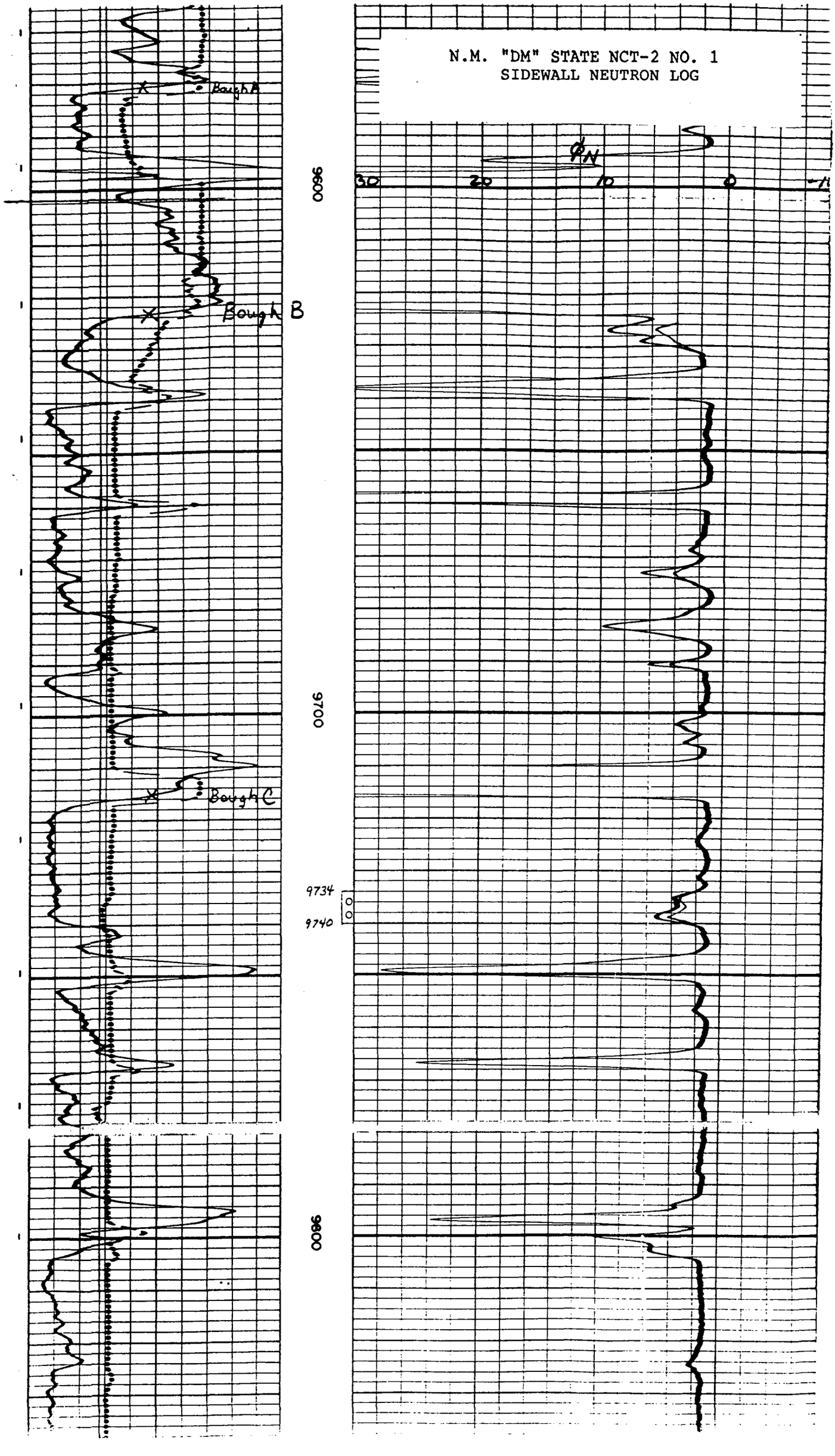
5. Not applicable, as Lazy J Penn water will be re-injected into the Lazy J Penn.

PART VIII. Injection is proposed into the Permo Penn (Bough C) at 9734-40. The proposed injection zone is correlative to the injection zone in Texaco's Lazy J SWD well located approximately one-half mile southeast of the proposed SWD well. The lithology of the Permo Penn consists of phylloid algal limestone interbedded with dense limestone and thin shales. The Bough C is 80' thick in the subject well.

The Ogallala is the only source of drinking water in the area. The base of the Ogallala is at approximately 240', as per the State Engineers Office. There are no other known sources of drinking water above or below the proposed injection zone.

PART IX. The injection perforations 9734-9740 will be acidized with 1500 gallons of 20% NEFE acid.

PART XII. Texaco Inc. has examined available geologic and engineering data and found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.


N.M. "DM" STATE NCT-2 NO. 1
SIDEWALL NEUTRON LOG
ϕ_N
30
20
10
0
9600
9700
9734
9740
9800
Bough A
Bough B
Bough C

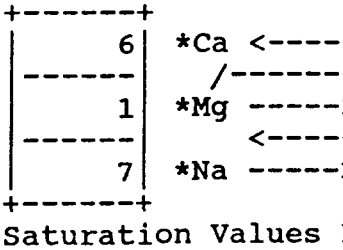
FRESH
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-13-89
Lease	: Saunders Field	Analysis No.	: 5
Well	: Windmill		
Sample Pt.	: SE/4-SW/4-S22-T13S-R		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.8			
2.	H2S	NR			
3.	Specific Gravity	1.001			
4.	Total Dissolved Solids		951.4		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	329.0	HCO3	5.4
12.	Chloride	Cl	254.0	Cl	7.2
13.	Sulfate	SO4	75.0	SO4	1.6
14.	Calcium	Ca	128.0	Ca	6.4
15.	Magnesium	Mg	14.7	Mg	1.2
16.	Sodium (calculated)	Na	150.0	Na	6.5
17.	Iron	Fe	0.8		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		380.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter



Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	5.4	437
CaSO4	68.1	1.0	68
CaCl2	55.5		
Mg(HCO3)2	73.2		
MgSO4	60.2	0.6	34
MgCl2	47.6	0.6	30
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	6.5	381

REMARKS: Resistivity: 15.4 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

FRESH
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-13-89
Lease	: Saunders Field	Analysis No.	: 4
Well	: Windmill		
Sample Pt.	: NE/4-SW/4-S21-T13S-R		

	ANALYSIS		mg/L		* meq/L
1.	pH	8.2			
2.	H2S	NR			
3.	Specific Gravity	1.002			
4.	Total Dissolved Solids		813.7		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	183.0	HCO3	3.0
12.	Chloride	Cl	255.0	Cl	7.2
13.	Sulfate	SO4	125.0	SO4	2.6
14.	Calcium	Ca	104.0	Ca	5.2
15.	Magnesium	Mg	31.6	Mg	2.6
16.	Sodium (calculated)	Na	115.0	Na	5.0
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		390.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

5	*Ca <----- *HCO3	3
	/------->	
3	*Mg -----> *SO4	3
	<---------/	
5	*Na -----> *Cl	7

Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	3.0	243
CaSO4	68.1	2.2	149
CaCl2	55.5		
Mg(HCO3)2	73.2		
MgSO4	60.2	0.4	25
MgCl2	47.6	2.2	104
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	5.0	292

REMARKS: Resistivity: 14.7 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

FRESH
WATER ANALYSIS REPORT

Company : Texaco
Address : Hobbs, NM
Lease : Saunders Field
Well : Windmill
Sample Pt. : NW/4-NE/4-S8-T13S-R3

Date : 10-20-89
Date Sampled : 10-13-89
Analysis No. : 2

	ANALYSIS		mg/L		* meq/L
1.	pH	8.2			
2.	H2S	NR			
3.	Specific Gravity	1.005			
4.	Total Dissolved Solids		676.5		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	157.0	HCO3	2.6
12.	Chloride	Cl	185.0	Cl	5.2
13.	Sulfate	SO4	125.0	SO4	2.6
14.	Calcium	Ca	120.0	Ca	6.0
15.	Magnesium	Mg	14.7	Mg	1.2
16.	Sodium (calculated)	Na	73.6	Na	3.2
17.	Iron	Fe	1.3		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		360.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

6	*Ca <----- *HCO3	3
	/------->	
1	*Mg -----> *SO4	3
	<---------/	
3	*Na -----> *Cl	5

Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	2.6	209
CaSO4	68.1	2.6	177
CaCl2	55.5	0.8	45
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	1.2	57
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3.2	187

REMARKS: Resistivity: 13.5 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

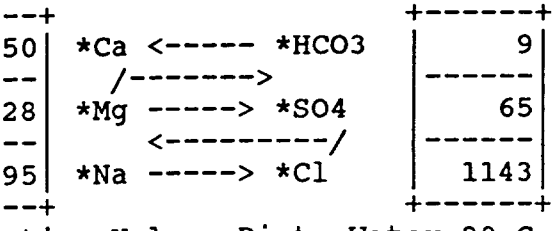
LAZY J PENN PRODUCED
WATER ANALYSIS REPORT

Company	: Texaco	Date	: 10-20-89
Address	: Hobbs, NM	Date Sampled	: 10-19-89
Lease	: NM BY St. NCT-2	Analysis No.	: 1
Well	: #1		
Sample Pt.	: Wellhead		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.7			
2.	H2S	7.0			
3.	Specific Gravity	1.040			
4.	Total Dissolved Solids		72059.1		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	573.4	HCO3	9.4
12.	Chloride	Cl	40513.0	Cl	1142.8
13.	Sulfate	SO4	3125.0	SO4	65.1
14.	Calcium	Ca	3000.0	Ca	149.7
15.	Magnesium	Mg	-338.0	Mg	-27.8
16.	Sodium (calculated)	Na	25183.4	Na	1095.4
17.	Iron	Fe	2.3		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		6100.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter



Saturation Values Dist. Water 20 C

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

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	9.4	762
CaSO4	68.1	65.1	4429
CaCl2	55.5	75.2	4174
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6		
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	1067.6	62390

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

OFFSET OPERATORS REPORT

COVERING

VARIOUS LANDS IN T-13-S, R-33-E

LEA COUNTY, NEW MEXICO

AS OF: 10-26-89

OWNER	MIN INT	NET ACRES	LESSEE/OPERATOR		EXP DATE
NOTE: THE FOLLOWING LANDS ARE CONTIGUOUS WITH THE NW/4 OF SECTION 21, T-13-S, R-33E, LEA COUNTY, NEW MEXICO.					
SE/4 OF SECTION 17, T-13-S, R-33-E					
State of New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87504	Full		STATE LEASE V-2853 Yates Petroleum Co. ABO Petroleum Corp. Myco Industries, Inc. Yates Drilling Co. 105 South Fourth St. Artesia, NM 88210	40.0% 20.0% 20.0% 20.0%	2-1-94
ALL OF SECTION 16, T-13-S, R-33-E					
State of New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87504	Full		STATE LEASE V-2852 Yates Petroleum Co. ABO Petroleum Corp. Myco Industries, Inc. Yates Drilling Co. 105 South Fourth St. Artesia, NM 88210	40.0% 20.0% 20.0% 20.0%	2-1-94
NE/4 OF SECTION 21, T-13-S, R-33-E					
State of New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87504	Full		STATE LEASE E-9087 Kaiser-Francis Oil Co. P. O. Box 21468 Tulsa, OK 74121-1468		H. B. P.
N/2 SW/4 & SE/4 OF SECTION 21, T-13-S, R-33-E					
State of New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87504	Full		--		OPEN
E/2 OF SECTION 20, T-13-S, R-33-E					
United States of America Bureau of Land Management New Mexico State Office P. O. Box 1449 Santa Fe, New Mexico 87504	Full		FEDERAL LEASE NM-2842-A Cairn Energy USA, Inc. 8235 Douglas Avenue Suite 1221 Dallas, TX 75225 (214) 369-0316 Coastal Oil & Gas Co. 9 Greenway Plaza Houston, TX 77046 (713) 577-1400	50% 50%	H. B. P.

NOTE: Federal Abstract Co. of Santa Fe, New Mexico provided the above leasehold ownership (Operating Rights) for Federal Lease NM-2842-A.
(Note continued next page)

CASE 9797: (Readvertised)

Application of Santa Fe Energy Operating Partners, L.P. for compulsory pooling and a non-standard gas proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the following described acreage in Irregular Section 20, Township 23 South, Range 25 East, and in the following described manner: all of said Section 20 to form a non-standard 599.41-acre, more or less, gas spacing and proration unit for the Undesignated Rock Tank-Lower Morrow Gas Pool and Undesignated Rock Tank-Upper Morrow Gas Pool (both pools which are developed on 640-acre spacing); and, Lots 1 through 7 and the NW/4 NE/4 (N/2 equivalent) of said Section 20, forming a non-standard 301.37-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent. Both units are to be dedicated to a single well to be drilled at a standard gas well location 1980 feet from the North and West lines (Unit F) of said Section 20. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision and a charge for risk involved in drilling said well. Said units are located approximately 6 miles south by east of Riverside, New Mexico.

CASE 9833: Application of Texaco, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced water into the Lazy J-Pennsylvanian Pool in the perforated interval from approximately 9734 feet to 9740 feet in its N.M. "DM" State NCT-2 Well No. 1 located 1980 feet from the North line and 330 feet from the West line (Unit E) of Section 21, Township 13 South, Range 33 East. Said well is located approximately 15.5 miles south-southeast of Caprock, New Mexico.

CASE 9834: Application of Texaco, Inc. for a non-standard gas proration unit, 2 unorthodox gas well locations and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval to redesignate acreage in the Eumont Gas Pool to form a non-standard 320-acre gas proration unit comprising the SE/4 SW/4, NE/4 SE/4, and S/2 SE/4 of Section 23, the W/2 NW/4 of Section 25, and the E/2 NE/4 of Section 26, all in Township 19 South, Range 36 East. Said unit is to be simultaneously dedicated to its William Weir Wells Nos. 1 and 2, both located at unorthodox gas well locations 1980 feet from the North line and 660 feet from the West line (Unit E) of said Section 25 and 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 23, respectively. Said unit is located approximately 4.5 miles south-southeast of Arkansas Junction, New Mexico.

CASE 9799 (Continued from November 1, 1989, Examiner Hearing.)

Application of Bannon Energy Incorporated for an unorthodox oil well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location for its Grace Federal "24" Well No. 1-R to be drilled 330 feet from the North line and 2130 feet from the West line (Unit C) of Section 24, Township 24 North, Range 7 West, Devil's Fork-Gallup Associated Pool, said well to be simultaneously dedicated to an existing standard 160-acre oil spacing and proration unit comprising the NW/4 of said Section 24 along with the Grace Federal "24" Well Nos. 1 and 2 located 950 feet from the North line and 1640 feet from the West line (Unit C) and 1850 feet from the North line and 1820 feet from the West line (Unit F) of said Section 24, respectively. Said unit is located approximately 5 miles north by east of the Southern Union Gas Company Lybrook Plant.

CASE 9818: (Continued from November 15, 1989, Examiner Hearing.)

Application of Blackwood & Nichols Co., Ltd. for an unorthodox coal gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox coal gas well location for its Northeast Blanco Unit Well No. 440 to be drilled 530 feet from the North line and 2135 feet from the East line (Unit B) of Section 11, Township 31 North, Range 7 West, Basin-Fruitland Coal Gas Pool, the N/2 of said Section 11 to be dedicated to said well forming a standard 320-acre gas spacing and proration unit for said pool. This well location is approximately 5.5 miles south of Mile Post No. 247.5 located on the New Mexico/Colorado Stateline.

CASE 9819: (Continued from November 15, 1989, Examiner Hearing.)

Application of Blackwood & Nichols Co., Ltd. for compulsory pooling and an unorthodox gas well location, San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Fruitland formation underlying Lots 7 and 8, the S/2 NW/4, and the SW/4 of Section 4, Township 30 North, Range 7 West, in both San Juan and Rio Arriba Counties, forming a 319.38-acre gas spacing and proration unit for any and all formations and/or pools within said vertical extent developed on 320-acre spacing, which presently includes the Basin-Fruitland Coal Gas Pool, to be dedicated to its Northeast Blanco Unit Well No. 424, to be drilled at an unorthodox coal gas well location 2075 feet from the North line and 1330 feet from the West line (Unit F) of said Section 4. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is approximately 3.5 miles north-northeast of the Navajo Reservoir Dam.

CASE 9820: (Continued from November 15, 1989, Examiner Hearing.)

Application of Blackwood & Nichols Co., Ltd. for compulsory pooling and a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Fruitland formation underlying the E/2 equivalent of Irregular Section 13, Township 30 North, Range 8 West, for any and all formations and/or pools within said vertical extent of this tract developed on 320-acre spacing (which presently includes but is not necessarily limited to the Basin-Fruitland Coal Gas Pool). Said unit is to be dedicated to its Northeast Blanco Unit Well No. 469, to be drilled at a previously approved (NSL-2685) unorthodox coal gas well location 1315 feet from the North line and 645 feet from the East line (Unit H) of said Section 13. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is approximately 1 mile northwest of the Navajo Reservoir Dam.

CASE 9835: Application of Grand Production Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Atoka formation underlying the E/2 SE/4 of Section 10, Township 17 South, Range 37 East, forming a standard 80-acre oil spacing and proration unit for any and all formations and/or pools developed on 80-acre spacing within said vertical extent, which includes but is not necessarily limited to the Humble City-Strawn and Undesignated Humble City-Atoka Pools. Said unit is to be dedicated to a well to be drilled at a standard oil well location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision and a charge for risk involved in drilling said well. Said unit is located approximately 4.5 miles northwest by north of Humble City, New Mexico.

CASE 9836: Application of Grand Resources, Inc. for statutory unitization, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of establishing a secondary recovery project, all mineral interests in the designated and Undesignated Mesa-Gallup Oil Pool underlying 2,120 acres, more or less, of Federal Indian lands in portions of Sections 10, 13, 14, 15, 23, 24, and 25, Township 32 North, Range 18 West, all as projected into the unsurveyed Navajo Indian Reservation. Said unit is to be designated the Mesa Gallup Unit Area. Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of the fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations; including but not limited to, unit voting procedures, selection, removal or substitution of unit operator, and time of commencement and termination of unit operations. Applicant also requests that any such order issued in this case include a provision for carrying any non-consenting working interest owner within the unit area upon such terms and conditions to be determined by the Division as just and reasonable. Said Unit Area is located approximately 12 miles north of Shiprock, New Mexico.

CASE 9837: Application of Benson-Montin-Greer Drilling Corporation for amendment of Division Order No. R-3401, as amended, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks to amend Division Order No. R-3401, as amended, which order promulgated special pool rules for the West Puerto Chiquito-Mancos Pressure Maintenance Project including provisions to permit the calculation of injection credits on a cumulative or annual basis. Applicant now seeks to revise Rules 7, 8, and 9 of said Special Rules to permit the accumulation of gas injection credits on an annual basis and to establish procedures for reporting and, otherwise, accounting for this credit to the Division. Said project comprises acreage in Townships 24, 25, and 26 North, Range 1 West, and is centered approximately 5 miles north-northeast of Lindrith, New Mexico.

CASE 9788: (Continued from November 15, 1989, Examiner Hearing.)

Application of Yates Petroleum Corporation for directional drilling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authorization to directionally drill a well from a surface location of 563 feet from the South line and 2125 feet from the East line (Unit O) of Section 11, Township 20 South, Range 29 East, to an unorthodox bottomhole gas well location in the Morrow formation within 50 feet of a point 2480 feet from the North line and 1980 feet from the East line (Unit G) of Section 14, Township 20 South, Range 29 East, the E/2 of said Section 14 to be dedicated to said well forming a standard 320-acre gas spacing and proration unit for the Undesignated East Burton Flat-Morrow Gas Pool. This well location is approximately 4 miles north-northwest of the junction of U.S. Highway 62/180 and New Mexico State Highway 31.

CASE 9809: (Continued from November 15, 1989, Examiner Hearing.)

Application of Yates Drilling Company for statutory unitization, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of establishing a secondary recovery project, all mineral interests in the Southeast Chaves Queen Gas Area Associated Pool, underlying 560 acres, more or less, of Federal, State and Fee lands in portions of Sections 26, 27, 34, and 35, Township 12 South, Range 31 East. Said unit is to be designated the Cactus Queen Unit. Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of horizontal and vertical limits of the unit area; the determination of the fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations; including but not limited to, unit voting procedures, selection, removal or substitution of unit operator, and time of commencement and termination of unit operations. Applicant also requests that any such order issued in this case include a provision for carrying any non-consenting working interest owner within the unit area upon such terms and conditions to be determined by the Division as just and reasonable. Said Unit Area is centered approximately 12 miles southwest by south of Caprock, New Mexico.

CASE 9810: (Continued from November 15, 1989, Examiner Hearing.)

Application of Yates Drilling Company for a waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Southeast Chaves Queen Gas Area Associated Pool in its proposed Cactus Queen Unit Area (Division Case No. 9809), underlying portions of Sections 26, 27, 34 and 35, Township 12 South, Range 31 East. Said area is centered approximately 12 miles southwest by south of Caprock, New Mexico.