

CAMPBELL & BLACK, P.A.

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November 6, 1989

HAND-DELIVERED

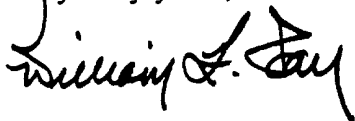
William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

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.

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. _____

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

SchematicTabular Data

Surface Casing set @ 365'

Size 11 3/4 " Cemented with 250 sx.TOC surface feet determined by circulatedHole 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' (PBD 9803')

Injection interval

9734 feet to 9740 feet
(perforated ~~XXXXXXX~~, indicate which)Tubing size 2 3/8" lined with internal plastic coating set in a
(material)Baker Lok-set packer at 9680 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Bough C
- Name of Field or Pool (if applicable) Lazy J Penn
- Is this ~~a~~ new well drilled for injection? ☐ Yes ☒ No

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

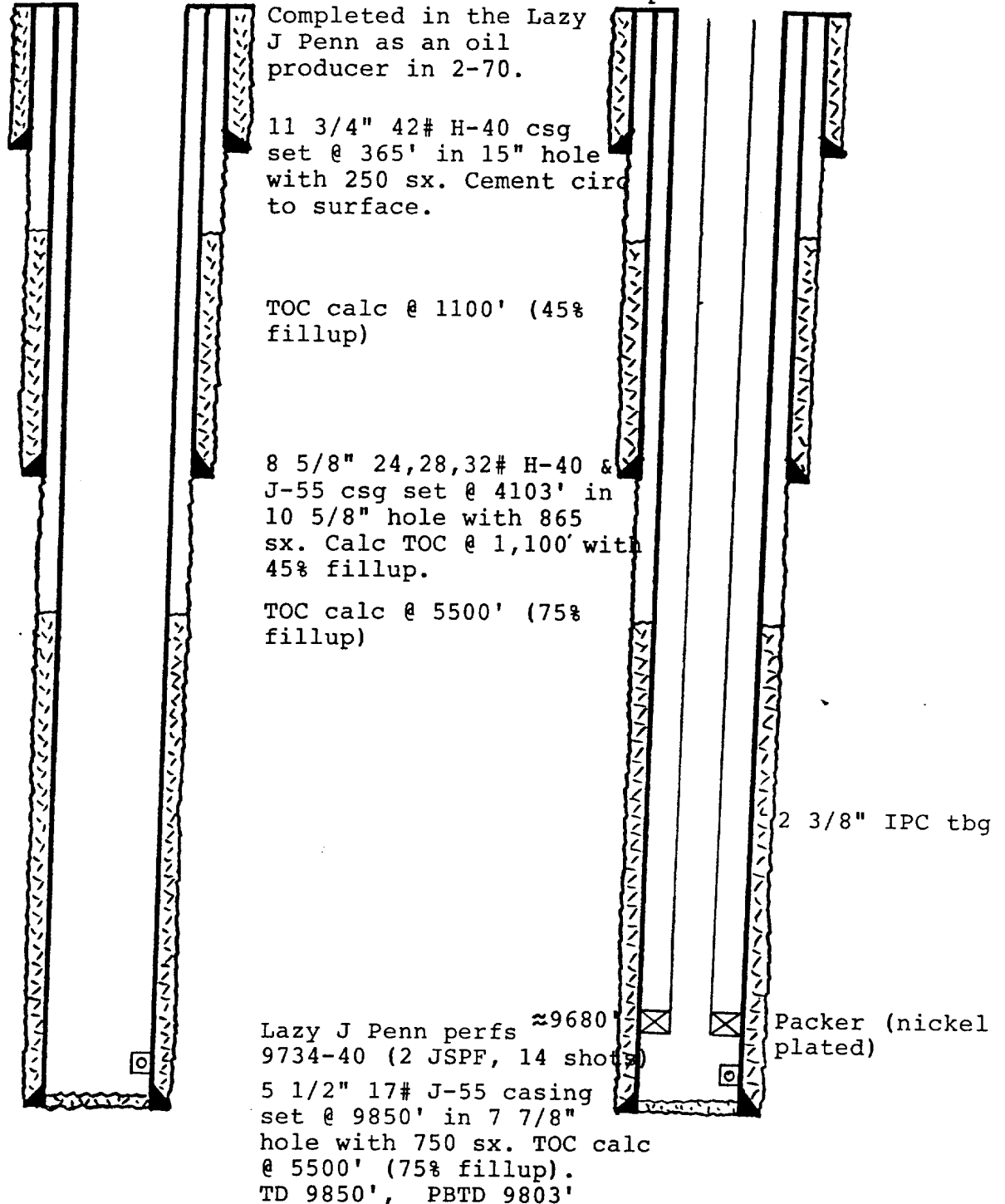
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No. None.

- 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.

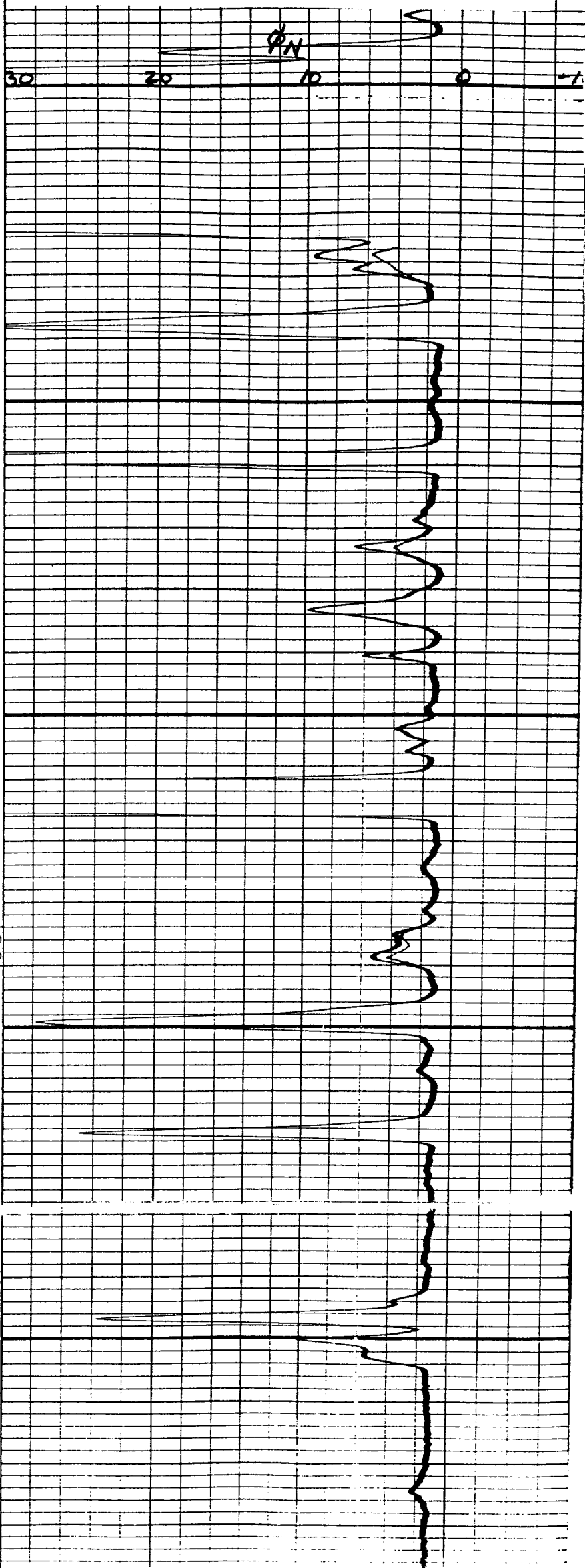
TEXACO INC.
 N.M. "DM" STATE NCT-2 NO. 1
 UNIT LETTER E, 1980' FNL & 330' FWL
 SECTION 21, T-13-S, R-33-E
 LEA COUNTY, NEW MEXICO

Present - SI Producer

Proposed - SWD Well



N.M. "DM" STATE NCT-2 NO. 1
SIDEWALL NEUTRON LOG



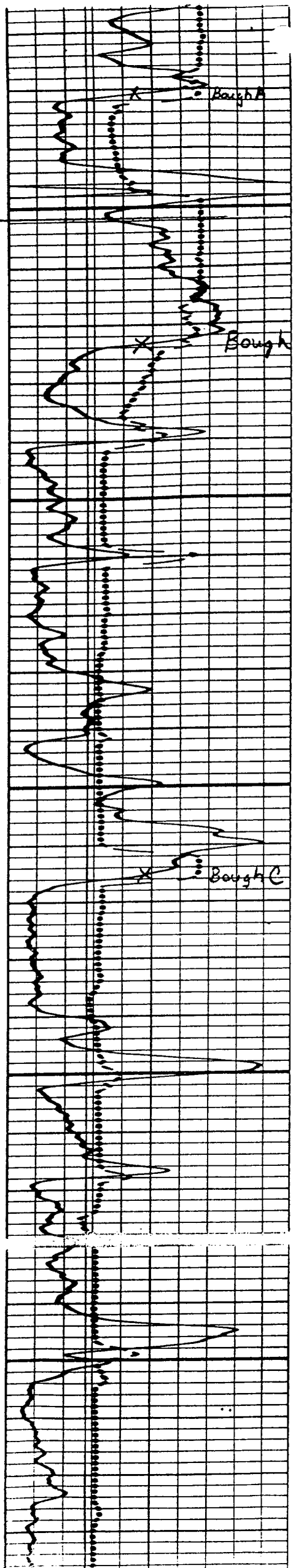
9600

9700

9734

9740

9800



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				Compound				Equiv wt X meq/L =		mg/L	
+-----+				+-----+				-----			
6	*Ca	<-----	*HCO3	5	Ca (HCO3) 2	81.0		5.4		437	
		/----->			CaSO4	68.1		1.0		68	
1	*Mg	----->	*SO4	2	CaCl2	55.5					
		<-----/			Mg (HCO3) 2	73.2					
7	*Na	----->	*Cl	7	MgSO4	60.2		0.6		34	
					MgCl2	47.6		0.6		30	
+-----+				+-----+							
Saturation Values Dist. Water 20 C											
	CaCO3		13 mg/L		NaHCO3	84.0					
	CaSO4 * 2H2O		2090 mg/L		Na2SO4	71.0					
	BaSO4		2.4 mg/L		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
Address : Hobbs, NM
Lease : Saunders Field
Well : Windmill
Sample Pt. : NE/4-SW/4-S21-T13S-R

Date : 10-20-89
Date Sampled : 10-13-89
Analysis No. : 4

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		Compound	Equiv wt X meq/L	= mg/L
5 *Ca <----- *HCO3	3	Ca(HCO3)2	81.0 3.0	243
/----->		CaSO4	68.1 2.2	149
3 *Mg -----> *SO4	3	CaCl2	55.5	
<-----/		Mg(HCO3)2	73.2	
5 *Na -----> *Cl	7	MgSO4	60.2 0.4	25
		MgCl2	47.6 2.2	104
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3 13 mg/L		Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L		NaCl	58.4 5.0	292
BaSO4 2.4 mg/L				

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				Compound	Equiv wt X meq/L	=	mg/L
+-----+				-----			
6	*Ca <-----	*HCO3	3	Ca(HCO3)2	81.0	2.6	209
	/----->			CaSO4	68.1	2.6	177
1	*Mg ----->	*SO4	3	CaCl2	55.5	0.8	45
	<-----/			Mg(HCO3)2	73.2		
3	*Na ----->	*Cl	5	MgSO4	60.2		
				MgCl2	47.6	1.2	57
+-----+				-----			
Saturation Values Dist. Water 20 C				NaHCO3	84.0		
CaCO3 13 mg/L				Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L				NaCl	58.4	3.2	187
BaSO4 2.4 mg/L							

REMARKS: Resistivity: 13.5 @ 48 deg. F

Petrolite Oilfield Chemicals Group

Respectfully submitted,
Wayne Dickerson

LAZY J PENN PRODUCED
WATER ANALYSIS REPORT

Company : Texaco
Address : Hobbs, NM
Lease : NM BY St. NCT-2
Well : #1
Sample Pt. : Wellhead

Date : 10-20-89
Date Sampled : 10-19-89
Analysis No. : 1

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		Compound	Equiv wt	X meq/L	= mg/L

150	*Ca <----- *HCO3	Ca(HCO3)2	81.0	9.4	762
	/----->	CaSO4	68.1	65.1	4429
-28	*Mg -----> *SO4	CaCl2	55.5	75.2	4174
	<-----/	Mg(HCO3)2	73.2		
1095	*Na -----> *Cl	MgSO4	60.2		
		MgCl2	47.6		
Saturation Values Dist. Water 20 C		NaHCO3	84.0		
CaCO3	13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O	2090 mg/L	NaCl	58.4	1067.6	62390
BaSO4	2.4 mg/L				

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
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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	Full	<u>STATE LEASE V-2853</u>		2-1-94
State Land Office		Yates Petroleum Co.	40.0%	
P. O. Box 1148		ABO Petroleum Corp.	20.0%	
Santa Fe, New Mexico 87504		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	Full	<u>STATE LEASE V-2852</u>		2-1-94
State Land Office		Yates Petroleum Co.	40.0%	
P. O. Box 1148		ABO Petroleum Corp.	20.0%	
Santa Fe, New Mexico 87504		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	Full	<u>STATE LEASE E-9087</u>		H. B. P.
State Land Office		Kaiser-Francis Oil Co.		
P. O. Box 1148		P. O. Box 21468		
Santa Fe, New Mexico 87504		Tulsa, OK 74121-1468		

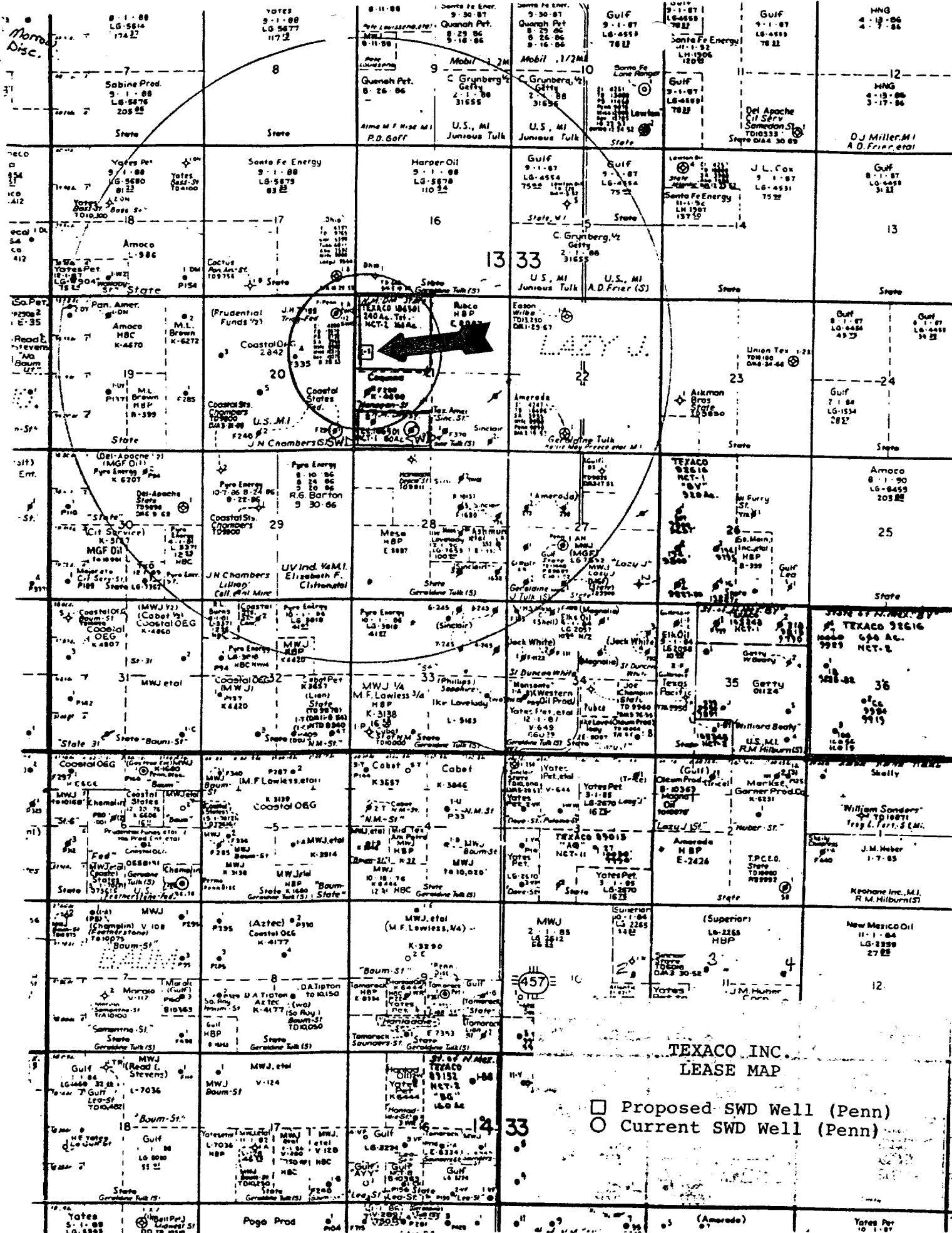
N/2 SW/4 & SE/4 OF SECTION 21, T-13-S, R-33-E

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

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

United States of America	Full	<u>FEDERAL LEASE NM-2842-A</u>		H. B. P.
Bureau of Land Management		Cairn Energy USA, Inc.	50%	
New Mexico State Office		8235 Douglas Avenue		
P. O. Box 1449		Suite 1221		
Santa Fe, New Mexico 87504		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)



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' PBD 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' PBD 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'.

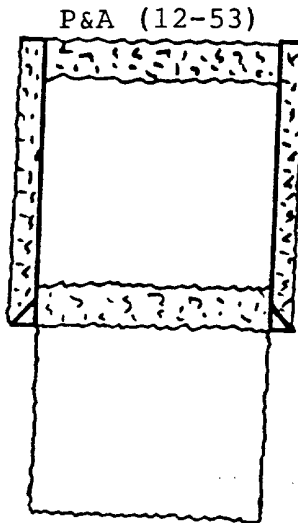
TD 9900' PBTD 9867'

- 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

Spot 17 sx cement plug from
25' to surface.

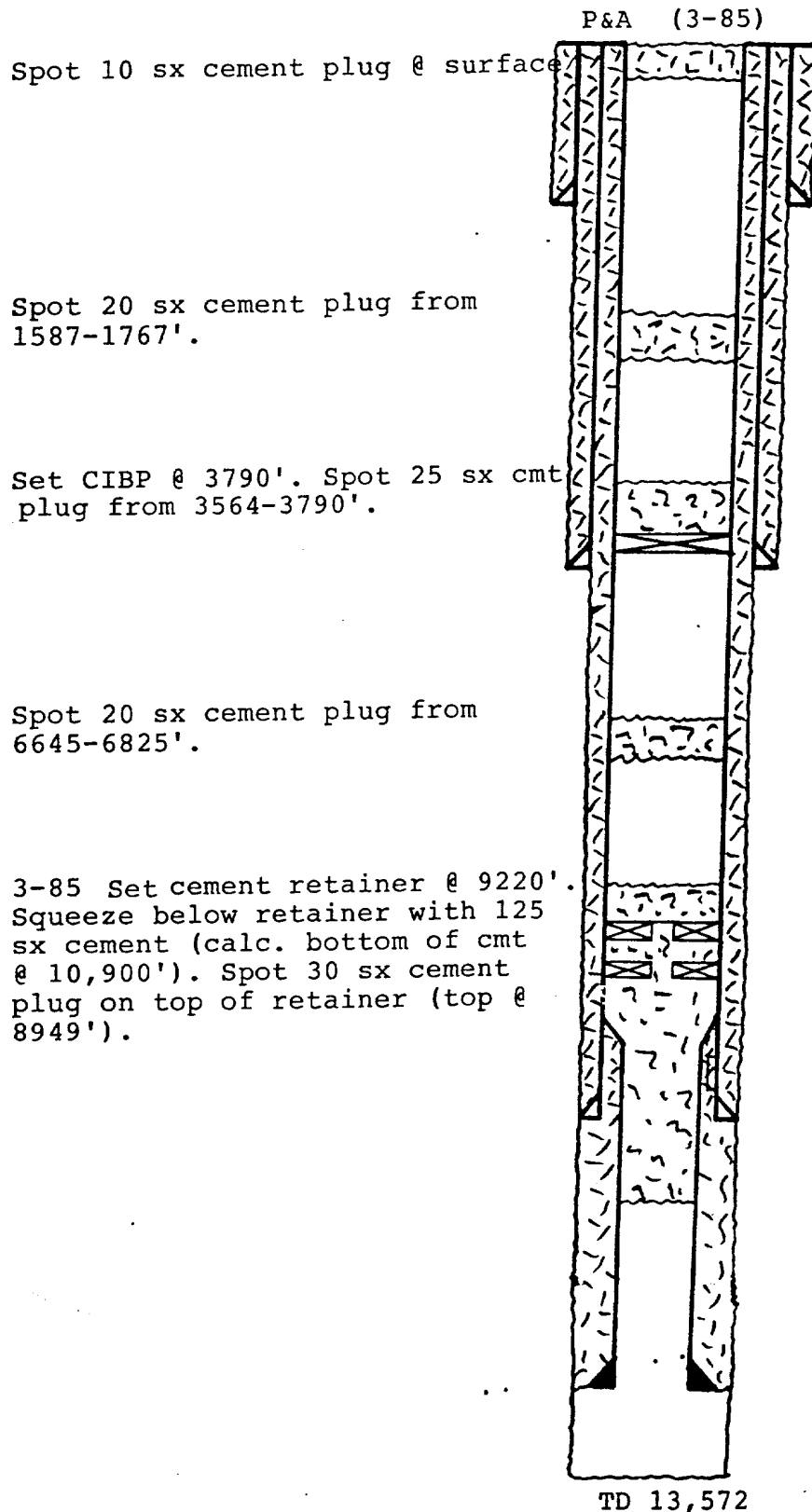
Spot 17 sx cement plug from
340-365'.



Drilled and abandoned in
12-53.

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

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



Originally completed in Lazy J Penn as an oil producer in 8-1-69 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 2160 sx. Cement circulated to surface.

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'.

Spotted 40 sx cement plug @
 4080-4180'.

4030'

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'.

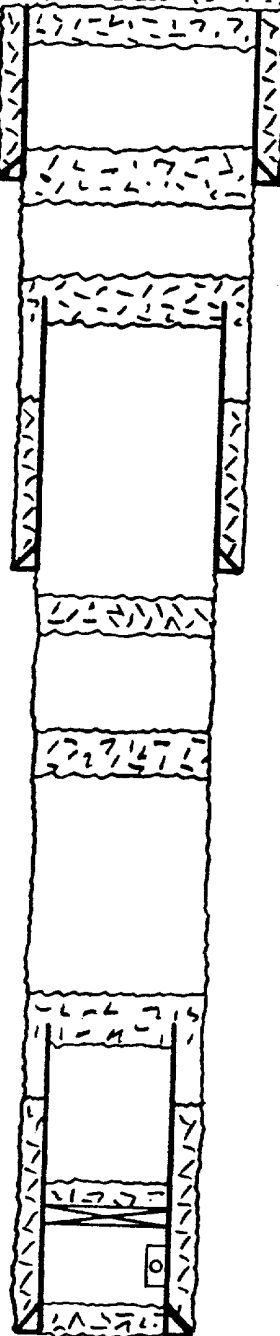
TOC calc. @ 8400' (75% fillup)

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

Lazy J Penn perms @ 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'

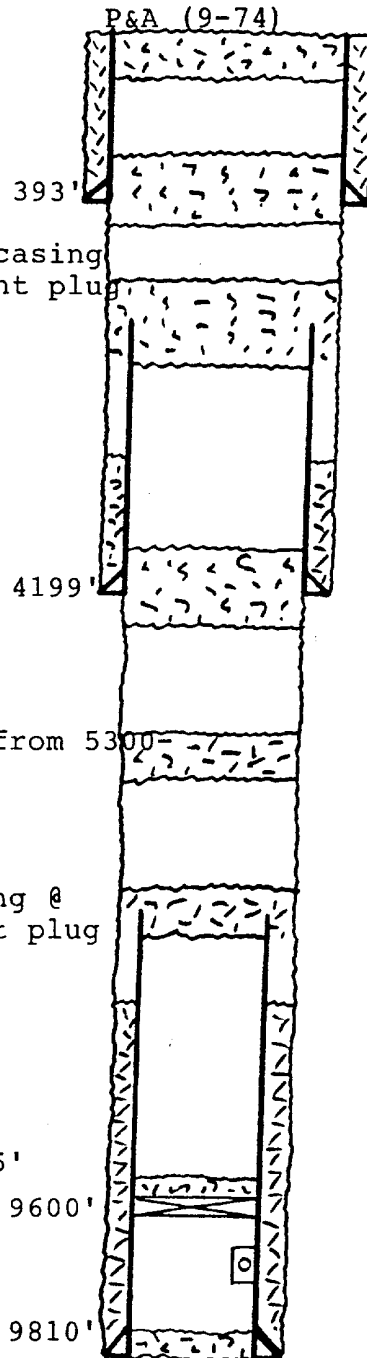
Cut off and pulled 8 5/8" casing
 @ 800'. Spotted 50 sx cement plug
 from 737-837'.

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

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'.

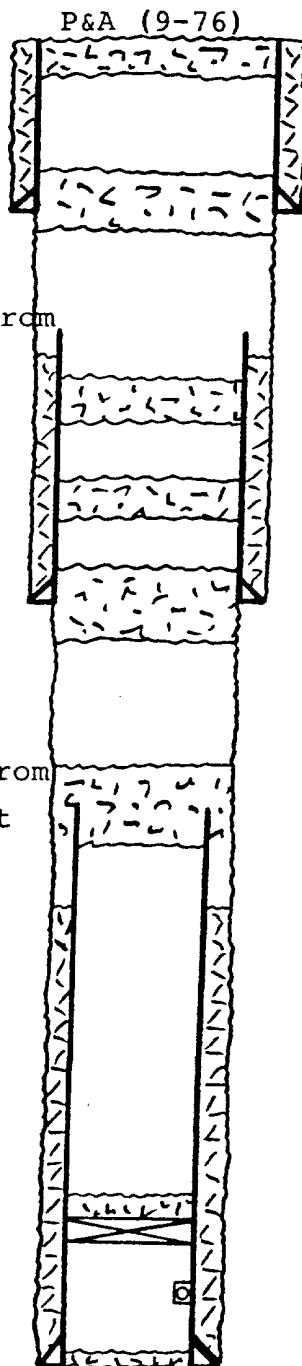
Spot 100' (40 sx) cement plug
 from 1667-1767'.

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'. PBD 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.