

NOV

C-108 11/52

## APPLICATION FOR AUTHORIZATION TO INJECT

## VACUUM DRINKARD

I. Purpose:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  
Application qualifies for administrative approval?  Yes  No

II. Operator: TEXACO EXPLORATION AND PRODUCTION INC.

Address: P. O. Box 3109, MIDLAND, TX 79702

Contact party: JAMES A. HEAD Phone: (915) 688-4613

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

IV. Is this an expansion of an existing project?  Yes  No  
If yes, give the Division order number authorizing the project \_\_\_\_\_.

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

## XIV. Certification

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

Name: JAMES A. HEAD Title: ASSET MANAGER

Signature: James A. Head Date: 11/194

\* 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.

**VACUUM DRINKARD FIELD  
PRESSURE MAINTENANCE PROJECT  
APPLICATION FOR AUTHORIZATION TO INJECT WATER**

**ATTACHMENT III TO FORM C-108**

Attached is a description of the eight wells proposed for injection for this project. Six wells are to be drilled for injection while two are existing producers to be converted. Also attached are the completion records of the two wells to be converted as well as their wellbore schematics. For the new wells a typical wellbore schematic is included.

**ATTACHMENT V TO FORM C-108**

Attached are two maps of the project area. The first shows all wells drilled in the project area within two miles of the proposed injectors which are shown in yellow triangles. The second map shows all wells drilled through to the injection interval. The red circles are one-half mile radius around each proposed injector to identify the area of review.

**ATTACHMENT VI TO FORM C-108**

Attached is a listing of all wells that have penetrated the injection interval in the area of review of the proposed injectors. Also included are wellbore schematics of the wells.

**ATTACHMENT VII TO FORM C-108  
DATA ON PROPOSED OPERATION**

Proposed average and maximum daily rate for the project:

Average Daily Rate:	5000 BWPD (625 BWPD/well)
Maximum Daily Rate:	8000 BWPD (1000 BWPD/well)

The injection system is closed.

The proposed average and maximum\* surface injection pressures are:

Average injection pressure	1400 PSIG
Maximum injection pressure	1500 PSIG

\* Until a fracture gradient is determined, maximum injection pressure will be based on a 0.2 psi/ft gradient.

The source of injection water will be produced water from the Glorieta and Grayburg-San Andres Formations. This will be supplied from the Vacuum Glorieta West Unit and the Vacuum Grayburg San Andres Unit waterfloods. As shown on the attached water analysis of Drinkard produced water and the above mentioned sources, the waters are compatible.

## **ATTACHMENT VIII TO FORM C-108**

### **FORMATION DESCRIPTION**

The Drinkard formation is a microcrystalline dolomite deposited in a patch reef environment. The structure is a southeasterly dipping stratigraphic trap with permeability pinchouts in all directions.

The Drinkard is in the Paleozoic era, Permian System, Leonard Age and Yeso group.

The top of the Drinkard is found at approximately 7450' to 7600' and is approximately 500 feet thick.

No known faults cut through the Drinkard that may act as conduits for gas, oil, or injection fluids to seep into fresh water aquifers above the injection zone within the proposed injection project. There are water injection projects above the Drinkard in the Paddock (Vacuum Glorieta West Unit) and the Grayburg-San Andres (Vacuum Grayburg-San Andres Unit and Central Vacuum Unit). The productive formation below the Drinkard is the Abo Reef. No contamination of the Ogallala through faults cutting these shallower zones has been observed.

Listed below are the formations and depths of oil productive zones in this area.

Grayburg-San Andres	4300'
Glorieta-Paddock	5900'
Blinberry	6500'
Drinkard	7450'
Abo	8300'
Wolfcamp	9400'
Penn Reef	10000'
Devonian	12000'

## **ATTACHMENT IX TO FORM C-108**

### **PROPOSED STIMULATION PLAN FOR A TYPICAL INJECTION WELL**

All injection wells will be cased hole completions selectively perforated. The stimulation program initially will be medium sized acid jobs using 15% HCL. As the project matures restimulation with larger acid treatments may be required.

**ATTACHMENT X TO FORM C-108**

**WELL LOGS**

As the new wells are drilled, logs will be filed with the Division.

Logs on New Mexico "O" NCT-1 No. 36 and New Mexico "R" NCT-3 No. 26 have previously been sent to the Division.

**ATTACHMENT XI TO FORM C-108**

**CHEMICAL ANALYSIS OF FRESH WATER WITHIN  
ONE MILE OF INJECTION WELLS**

The attached map shows the location of two fresh water wells in the vicinity of the proposed pressure maintenance project which have chemical analysis. Attached are the attendant water analyses.

**ATTACHMENT XII TO FORM C-108**

Texaco has examined available geological and engineering data and finds no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

**ATTACHMENT XIII TO FORM C-108**

**NOTIFICATION OF SURFACE OWNERS AND OPERATORS**

Texaco has notified by certified letter the surface owner and offset operators of the intent to inject as well as the drilling of nonstandard locations.

See the attached list of Offset Operators and surface owner.

Attached is a copy of the legal notice and affidavit of publication in the Hobbs Daily News-Sun.

**VACUUM DRINKARD**  
**PRESSURE MAINTENANCE PROJECT**  
**ATTACHMENT III TO FORM C-108**  
**APPLICATION FOR AUTHORIZATION TO INJECT**  
**PROPOSED INJECTION WELLS**

<u>OPERATOR</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>API NUMBER</u>	<u>UNIT</u>	<u>SEC</u>	<u>TWN</u>	<u>RANGE</u>	<u>FOOTAGE</u>	<u>LOCATION</u>	<u>STATUS</u>
TEXACO E&P INC.	N. M. "R" ST. NCT-3	28	N/A	P	1	18S	34E	1310 FSL 110 FEL	NEW LOCATION	
TEXACO E&P INC.	N. M. "R" ST. NCT-1	17	N/A	G	6	18S	35E	2530 FNL 2530 FEL	NEW LOCATION	
TEXACO E&P INC.	N. M. "R" ST. NCT-1	16	N/A	G	6	18S	35E	1410 FNL 2630 FEL	NEW LOCATION	
TEXACO E&P INC.	N. M. "L" ST.	17	N/A	H	1	18S	34E	2560 FNL 10 FEL	NEW LOCATION	
TEXACO E&P INC.	N. M. "L" ST.	16	N/A	A	1	18S	34E	1310 FNL 10 FEL	NEW LOCATION	
MARATHON OIL	WARN ST. A/C 2	25	N/A	C	6	18S	35E	113 FNL 1429 FWL	NEW LOCATION	
TEXACO E&P INC.	N. M. "R" ST. NCT-3	26	3002531993	J	1	18S	34E	1980 FSL 1755 FEL	PRODUCING	
TEXACO E&P INC.	N. M. "O" ST. NCT-1	36	3002532339	N	36	17S	34E	330 FSL 2210 FWL	PRODUCING	

C108 ATTACHMENT III  
WELLS TO BE CONVERTED TO WATER INJECTION

OPERATOR	WELL NAME API NO.	LOCATION	COMPLETION DATE	TD	PSTD	CASING SIZE	CASING DEPTH	CEMENT BACKS	TOP	PRODUCING METHOD	STIMULATION INTERVAL	CURRENT STATUS	REMARKS
Texaco E&P Inc. N. M. "R" ST. NCT-3 No. 261 1980 FS / 1750' FE 3002531993	8/13/93	8000	7950	6-5/8	1470	650	0	CIRC	7585-7829	FRAC40000	PROD	Drilled	
Texaco E&P Inc. N. M. "O" ST. NCT-1 No. 36 330 FSL 2210 FWL 3002532339	3/20/94	8100	8100	6-5/8	1470	650	1000	TS	7494-7762	A/25000	PROD	Drilled	

Submit to Appropriate  
District Office  
State Lease - 6 copies  
Fee Lease - 5 copies  
**DISTRICT I**  
P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**  
P.O. Drawer DD, Artesia, NM 88210

**DISTRICT III**  
1000 Rio Bracito Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-105  
Revised 1-1-89

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

### WELL API NO.

30-025-31993

### S. Indicate Type of Lease

STATE  FEE

### 6. State Oil & Gas Lease No.

B-1306

7. Lease Name or Unit Agreement Name  
NEW MEXICO 'R' STATE NCT-3

### WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:  
OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_

### 8. Well No.

26

### 9. Pool name or Wildcat

VACUUM DRINKARD

4. Well Location  
Unit Letter J : 1980 Feet From The SOUTH Line and 1755 Feet From The EAST Line

Section 1	Township 18-SOUTH	Range 34-EAST	NMMP	LEA	County
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10. Date Spudded 06-11-93	11. Date T.D. Reached 07-03-93	12. Date Compl. (Ready to Prod.) 09-07-93	13. Elevations (DF& RKB, RT, GR, etc.) GR-3987', KB-4001'	14. Elev. Casinghead 3987'
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15. Total Depth 8000'	16. Plug Back T.D. 7950'	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By 0 - 8000'	Rotary Tools Cable Tools
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19. Producing Interval(s), of this completion - Top, Bottom, Name 7585' - 7829'; DRINKARD	20. Was Directional Survey Made YES
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21. Type Electric and Other Logs Run GR-DLL-MSFL-LSS, GR-CNL-LDT, GR-FMI	22. Was Well Cored YES
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23. **CASING RECORD (Report all strings set in well)**

CASING SIZE	WEIGHT LB/FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	24#	1470'	11	CL-C 650 SX CIRC. 148 SX	
5 1/2	15.5# & 17#	8000'	7 7/8	CL-H 1750 SX, CIRC. 127 SX	
				DV @ 5003'	

24. **LINER RECORD**

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8	7852'	

26. Perforation record (interval, size, and number)  
7585' - 7829'; 2 JSPF, 284 HOLES.

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	7585' - 7829'	ACID: 25000 GAL 20% HCL
		ACID/Frac'D: 40000 GAL 65 QUALITY
		CO2 FOAMED 20% HCL

28. **PRODUCTION**

Date First Production 07-16-93	Production Method (Flowing, gas lift, pumping - Size and type pump) PUMPING - 2.5 X 1.5 X 24				Well Status (Prod. or Shut-in) PRODUCING		
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Date of Test 09-13-93	Hours Tested 24	Choke Size	Prod's For Test Period	Oil - Bbl. 79	Gas - MCF 129	Water - Bbl. 17	Gas - Oil Ratio 1633
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Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.) 40.80
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29. Disposition of Gas (Sold, used for fuel, vented, etc.) SOLD	Test Witnessed By EDDIE WELBORN
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30. List Attachments  
DEVIATION SURVEY

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature C.P. Basham / SOH

Printed Name C.P. BASHAM

Title DRLG. SUPT.

Date 09-16-93

# INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

### Southeastern New Mexico

T. Anhy	1484'	T. Canyon	
T. Salt		T. Strawn	
B. Salt		T. Atoka	
T. Yates		T. Miss	
T. 7 Rivers		T. Devonian	
T. Queen	3647'	T. Silurian	
T. Grayburg		T. Montoya	
T. San Andres	4255'	T. Simpson	
T. Glorieta	5773'	T. McKee	
T. Paddock	5879'	T. Ellenburger	
T. Blinebry	6156'	T. Gr. Wash	
T. Tubb		T. Delaware Sand	
T. Drinkard	7547'	T. Bone Springs	
T. Abo		T.	
T. Wolfcamp		T.	
T. Penn		T.	
T. Cisco (Bough C)		T.	

### Northwestern New Mexico

T. Ojo Alamo		T. Penn. "B"	
T. Kirland-Fruitland		T. Penn. "C"	
T. Pictured Cliffs		T. Penn. "D"	
T. Cliff House		T. Leadville	
T. Menefee		T. Madison	
T. Point Lookout		T. Elbert	
T. Mancos		T. McCracken	
T. Gallup		T. Ignacio Ocote	
Base Greenhorn		T. Granite	
T. Dakota		T.	
T. Morrison		T.	
T. Todilto		T.	
T. Entrada		T.	
T. Wingate		T.	
T. Chinle		T.	
T. Permian		T.	
T. Penn "A"		T.	

### OIL OR GAS SANDS OR ZONES

No. 1, from 7585'	to 7829'	No. 3, from.....to.....
No. 2, from.....to.....		No. 4, from.....to.....

### IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....	feet.....
No. 2, from.....to.....	feet.....
No. 3, from.....to.....	feet.....

### LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
7547'	8000'	453'	DOLOMITE W/ TRACE OF ANHYDRITE				

**RECEIVED**  
 SEP 17 1993  
 OCD HUBBOS  
 OFFICE

Submit to Appropriate  
District Office  
State Lease - 6 copies  
Fee Lease - 5 copies  
**DISTRICT I**  
P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**  
P.O. Drawer DD, Artesia, NM 88210

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-105  
Revised 1-1-89

**OIL CONSERVATION DIVISION**

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

WELL API NO.

30-025-32339

5. Indicate Type of Lease

STATE

FEE

6. State Oil & Gas Lease No.

548570

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1a. Type of Well:  
 OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_

7. Lease Name or Unit Agreement Name  
NEW MEXICO 'O' STATE NCT-1

b. Type of Completion:  
 NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DEF RESVR  OTHER \_\_\_\_\_

8. Well No.

36

2. Name of Operator  
TEXACO EXPLORATION AND PRODUCTION INC.

3. Address of Operator  
P. O. Box 3109, Midland, Texas 79702

9. Pool name or Wildcat  
VACUUM DRINKARD

4. Well Location

Unit Letter N : 330 Feet From The SOUTH Line and 2210 Feet From The WEST Line

Section 36 Township 17-SOUTH Range 34-EAST NMPM LEA County

10. Date Spudded 02-09-94	11. Date T.D. Reached 02-26-94	12. Date Compl. (Ready to Prod.) 03-11-94	13. Elevations (DF& RKB, RT, GR, etc.) GR-3995', KB-4009'	14. Elev. Casinghead 3995'
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15. Total Depth 8100'	16. Plug Back T.D. 8050'	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By Rotary Tools 0 - 8100'	Cable Tools
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19. Producing Interval(s), of this completion - Top, Bottom, Name 7498' - 7762'; DRINKARD	20. Was Directional Survey Made YES
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21. Type Electric and Other Logs Run GR-DLL-MSFL, GR-SDL-DSN-CSNG, GR-CCL	22. Was Well Cored NO
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23. **CASING RECORD (Report all strings set in well)**

CASING SIZE	WEIGHT LB/FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	24#	1470'	11	CL-C 650 SX, CIRC. 145 SX	
5 1/2	15.5# & 17#	8100'	7 7/8	CL-H 1375 SX, CIRC. 92 SX,	
				TOC BY T.S @ 1000',	
				DV TOOL @ 5013'.	

24. **LINER RECORD**

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8	7779'	

25. **PERFORATION RECORD (interval, size, and number)**  
7498' - 7762'; 2 JSPF, 200 HOLES.

DEPTH INTERVAL	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
	AMOUNT AND KIND MATERIAL USED	
7498' - 7762'	ACID 25000 GAL 15% HCl	

28. **PRODUCTION**

Date First Production 03-06-94	Production Method (Flowing, gas lift, pumping - Size and type pump) PUMPING				Well Status (Prod. or Shut-in) PRODUCING		
Date of Test 03-20-94	Hours Tested 24	Choke Size	Prod's For Test Period	Oil - Bbl. 64	Gas - MCF 54	Water - Bbl. 2	Gas - Oil Ratio 844
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.) 39.40	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)  
SOLD

Test Witnessed By

GLEN BOLAND

30. List Attachments

DEVIATION SURVEY

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature C.P. Basham / Sh H Printed Name C.P. BASHAM Title DRLG. SUPT. Date 03-22-94

# INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

### Southeastern New Mexico

T. Anhy	1466'
T. Salt	
B. Salt	
T. Yates	
T. 7 Rivers	
T. Queen	3660'
T. Grayburg	
T. San Andres	4245'
T. Glorieta	5837'
T. Paddock	5910'
T. Blinebry	6325'
T. Tubb	7328'
T. Drinkard	7495'
T. Abo	7903'
T. Wolfcamp	
T. Penn	
T. Cisco (Bough C)	

### Northwestern New Mexico

T. Canyon	
T. Strawn	
T. Atoka	
T. Miss	
T. Devonian	
T. Silurian	
T. Monroya	
T. Simpson	
T. McKee	
T. Ellenburger	
T. Gr. Wash	
T. Delaware Sand	
T. Bone Springs	
T.	
T.	
T.	
T. Ojo Alamo	
T. Kirtland-Fruitland	
T. Pictured Cliffs	
T. Cliff House	
T. Menefee	
T. Point Lookout	
T. Mancos	
T. Gallup	
Base Greenhorn	
T. Dakota	
T. Morrison	
T. Todilto	
T. Entrada	
T. Wingate	
T. Chinle	
T. Permian	
T. Penn "A"	
T. Penn "B"	
T. Penn "C"	
T. Penn "D"	
T. Leadville	
T. Madison	
T. Elbert	
T. McCracken	
T. Ignacio Otzze	
T. Granite	
T.	

### OIL OR GAS SANDS OR ZONES

No. 1, from	7498'	.....	to	7762'	.....	No. 3, from.....	.....	to.....
No. 2, from.....	.....	to.....	.....	.....	.....	No. 4, from.....	.....	to.....

### IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....	.....	to.....	.....	feet.....
No. 2, from.....	.....	to.....	.....	feet.....
No. 3, from.....	.....	to.....	.....	feet.....

### LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
7495'	7903'	408'	DOLOMITE				
7903'	8100'	197'	DOLOMITE & SHALE				

**RECEIVED**

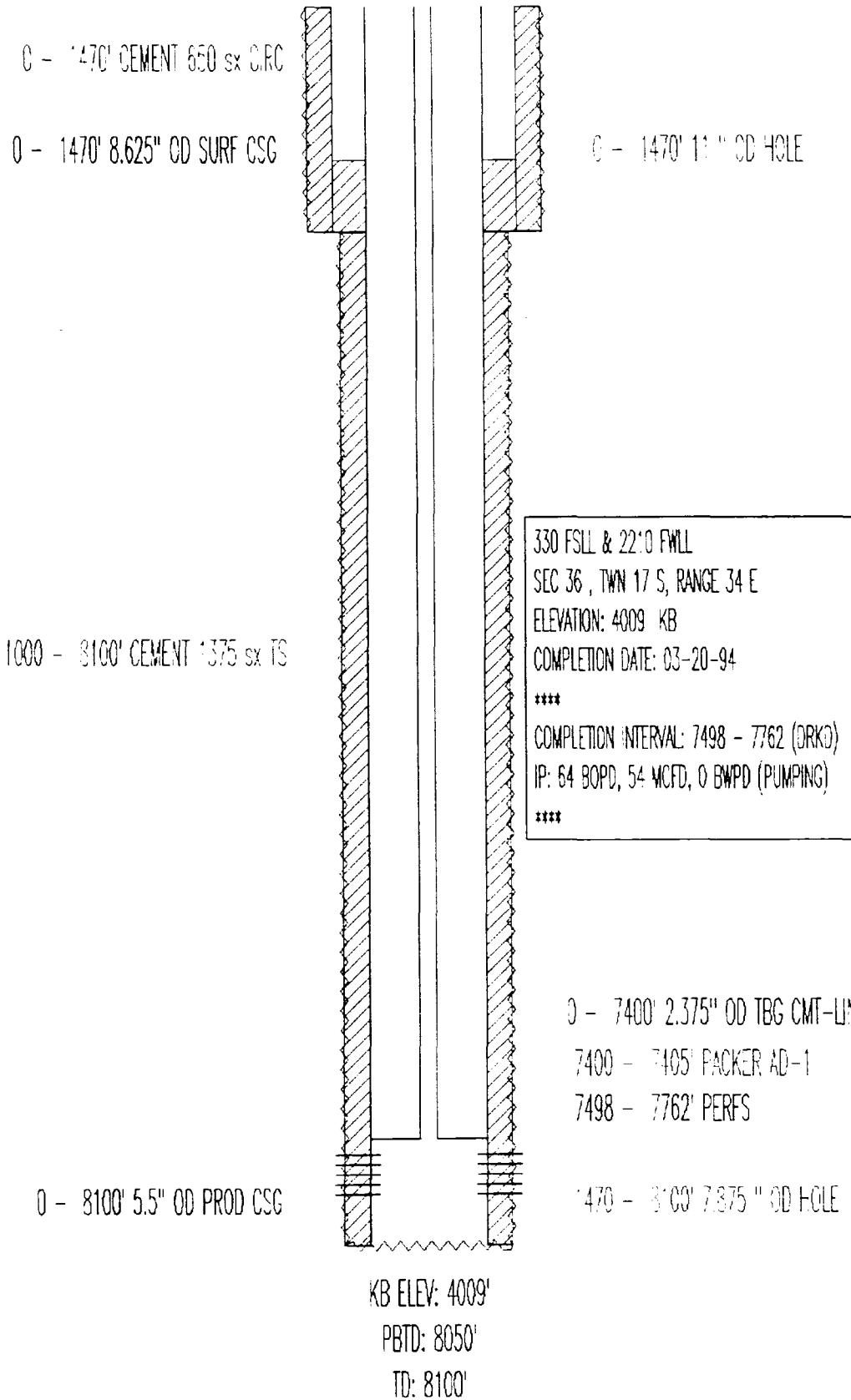
MAR 2 1994

OCD HUBBS  
OFFICE

PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "O" ST. NO. 36  
API# 3002532339

PROPOSED INJECTION WELL



PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-3 NO. 26  
API# 3002531993

PROPOSED INJECTION WELL

C - 1470' CEMENT 650 sx CRC

O - 1470' 8 5/8" OD SURF CSG

O - 3000' CEMENT 1750 sx CRC

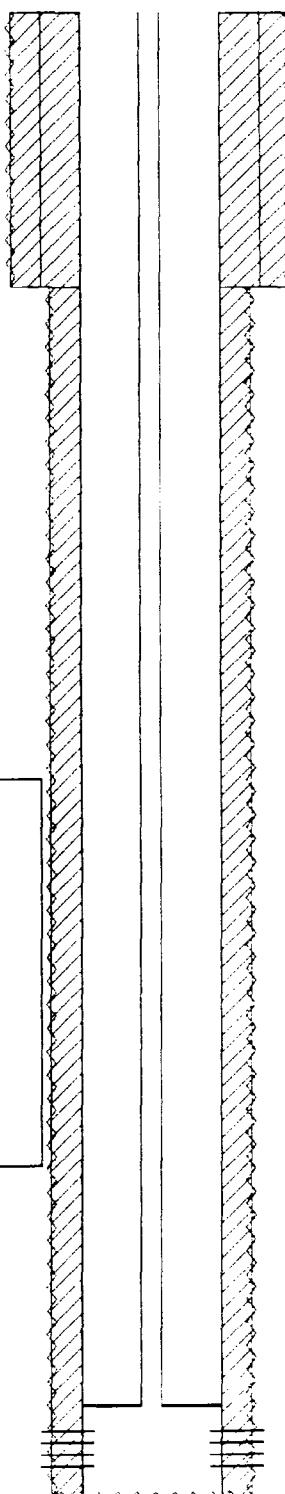
1980 FSL & 1755 FEL  
SEC 1, TWN 18 S, RANGE 34 E  
ELEVATION: 4001 KB  
COMPLETION DATE: 09-13-93

\*\*\*\*

COMPLETION INTERVAL: 7585 - 7829 (DRKD)  
IP: 79 BOPD, 129 MCFD, 17 BMPD (PUMPING)

\*\*\*\*

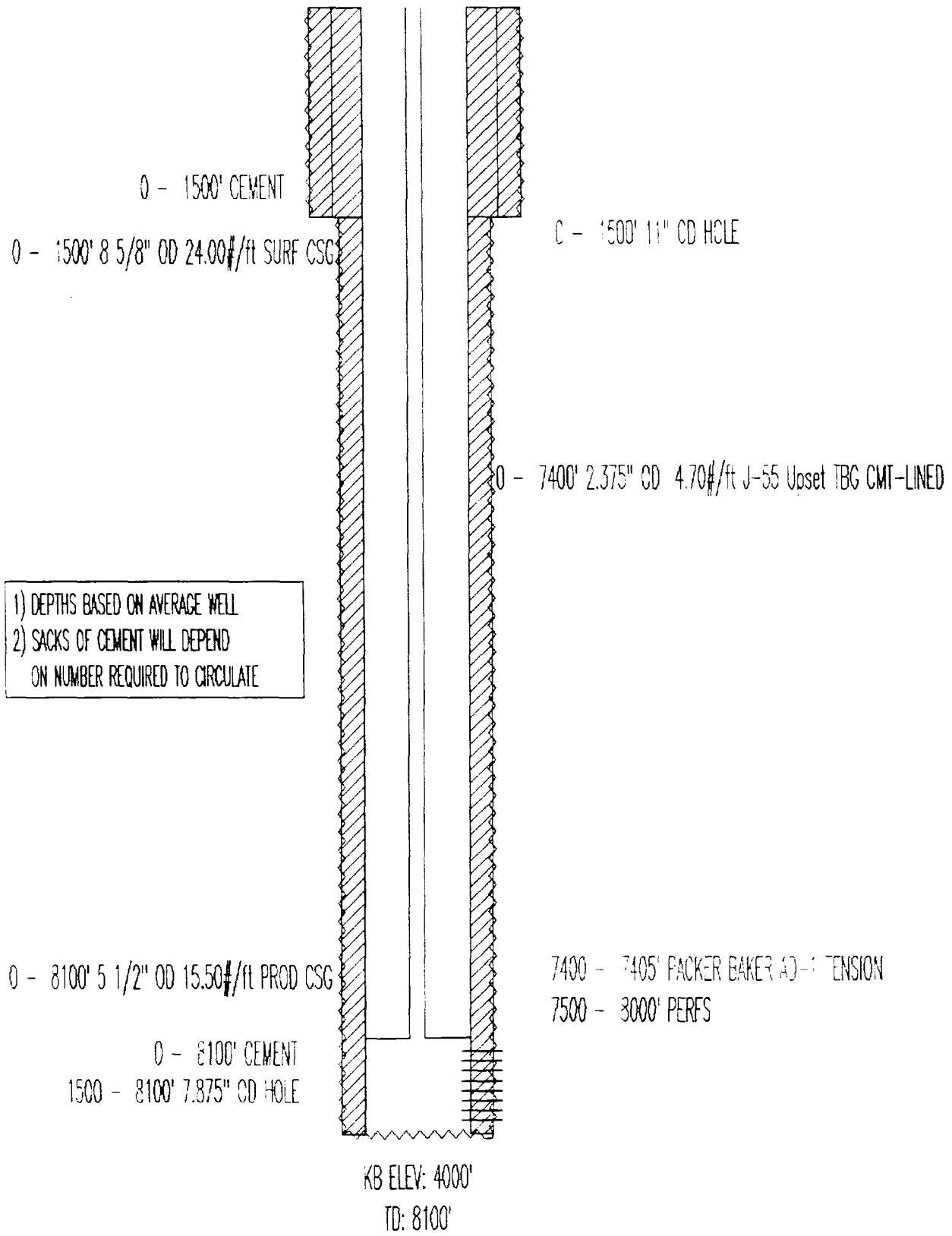
O - 8000' 5 1/2" OD PROD CSG



7495 - 7500' PACKER AD-1  
7585 - 7829' PERFS DRINKARD  
1470 - 3000' 7 3/8" OD HOLE

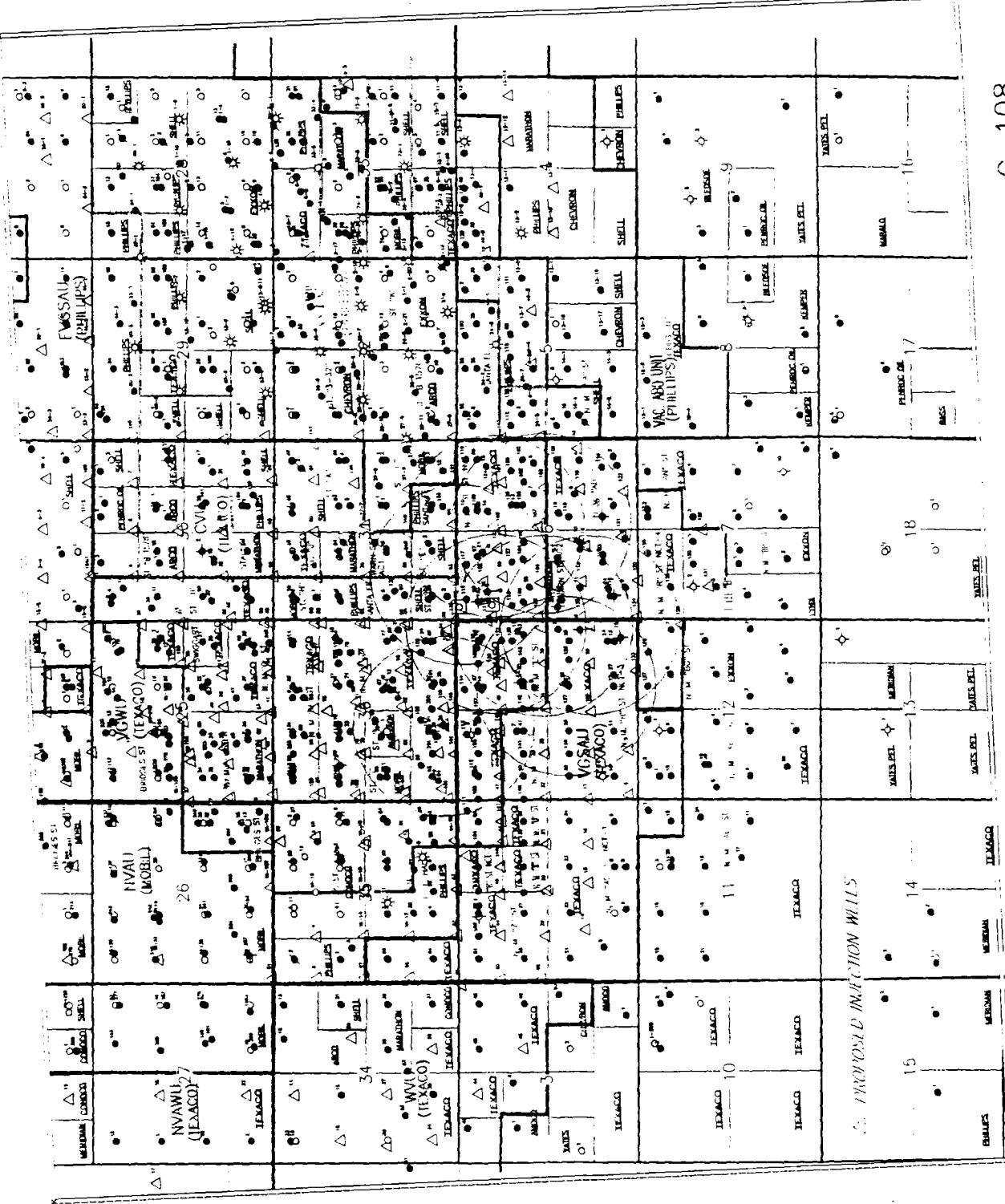
KB ELEV: 4001'  
PBD: 7950'  
TD: 8000'

TYPICAL VACUUM DRINKARD  
NEW INJECTION WELL



ATTACHMENT V

C-108



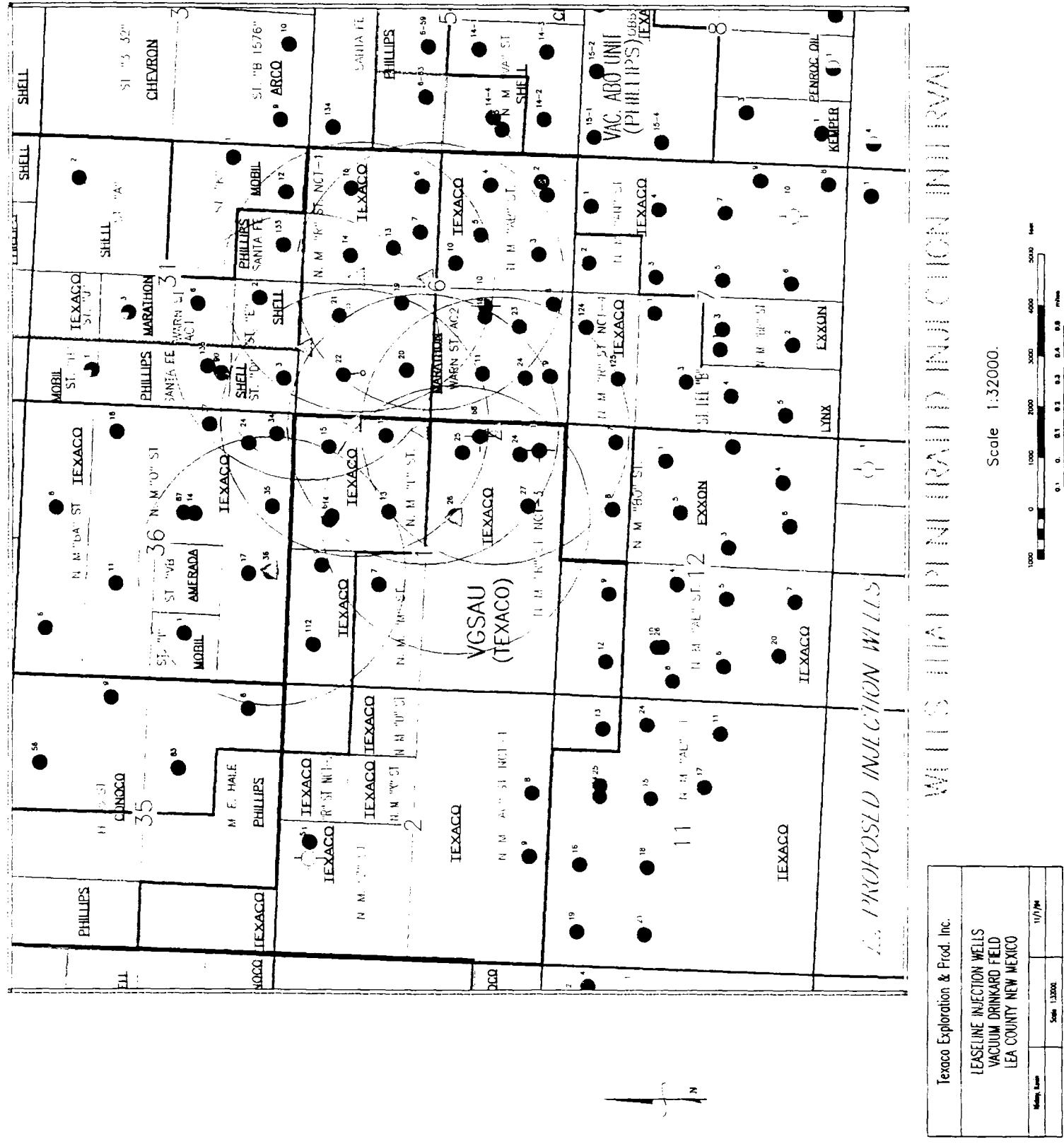
Scale 1:54000.

Texaco Exploration & Prod. Inc.

LEASELINE INJECTION WELLS  
VACUUM DRINKARD FIELD  
LEA COUNTY NEW MEXICO

Sheet 1/4000

Scale 1:54000



Texaco Exploration & Prod. Inc.

LEASLINE INJECTION WELLS  
VACUUM DRINKARD FIELD  
W COUNTY NEW YORK

Scale 1:32000.

C-100

ATTACHMENT V

C108 ATTACHMENT VI  
WELLS WITHIN 1/2 MILE RADIUS OF REVIEW

OPERATOR	WELL NAME & API NO.	LOCATION	COMPLETION DATE	POTO	CASING SIZE	CASING DEPTH	CEMENT BACKS	TOP	METHOD	INTERVAL	PRODUCING STATUS	CURRENT REMARKS	
Marathon Oil Co	Wam Slat No. 6 3002530082	330' FSL 233' FWL SEC 6, T16S R35E (N)	3/13/62	8867	8518 13-3/8	357	3199	1440	0	CIRC	T839 - 8163'	SI	
Marathon Oil Co	Wam Slat 2 No. 9 3002530083	330' FSL 913' FWL SEC 6, T16S R35E (M)	9/16/71	8771	8737 13-3/8	356	3159	1200	0	CIRC	8458 - 8735'	SI	
Marathon Oil Co	Wam Slat 2 No. 10 3002530082	1650' FSL 2232' FWL SEC 6, T16S R35E (K)	5/29/63	8470	8423 13-3/8	371	3115	0	CIRC	8644 - 8791'	PLA		
Marathon Oil Co	Wam Slat 2 No. 11 3002520031	1650' FSL 810' FWL SEC 6, T16S R35E (L)	11/11/62	8799	7005 13-3/8	360	3150	0	CIRC	7600 - 8085'	SI		
Marathon Oil Co	Wam Slat 2 No. 18 3002531867	1650' FSL 2035' FWL SEC 6, T16S R35E (K)	4/5/93	8250	8183 11-3/4	1480	850	0	CIRC	8423 - 8702'	SI		
Marathon Oil Co	Wam Slat 2 No. 19 3002531927	2010' FSL 2230' FWL SEC 6, T16S R35E (F)	5/10/83	8160	8090 11-3/4	1460	850	0	CIRC	7832 - 8044'	PROD	Drilled	
Marathon Oil Co	Wam Slat 2 No. 20 3002531934	2160' FSL 910' FWL SEC 6, T16S R35E (E)	6/13/83	8168	8056 11-3/4	1453	1000	0	CIRC	7815 - 7977'	PROD	Drilled	
Marathon Oil Co	Wam Slat 2 No. 21 3002531989	1100' FSL 1933' FWL SEC 6, T16S R35E (C)	7/17/83	8200	8068 11-3/4	1485	750	0	CIRC	7823 - 7949'	PROD	Directionally drilled BHL 825' FNL, 2116' FWL	
Marathon Oil Co	Wam Slat 2 No. 22 3002532034	1219' FSL 880' FWL SEC 6, T16S R35E (D)	8/21/83	8134	8048 11-3/4	1444	900	0	CIRC	7584 - 7853'	PROD	Drilled Directionally drilled BHL 832' FNL, 843' FWL	
Marathon Oil Co	Wam Slat 2 No. 23 3002532187	980' FSL 1920' FWL SEC 6, T16S R35E (N)	12/4/83	8300	8205 11-3/4	1477	800	0	CIRC	7840 - 8030'	PROD	Drilled	
Marathon Oil Co	Wam Slat 2 No. 24 3002532189	980' FSL 400' FWL SEC 6, T16S R35E (M)	10/25/83	8170	8080 11-3/4	1460	850	0	CIRC	7606 - 8041'	PROD	Drilled	
Texaco E&P Inc.	Vacuum Gildorf West Unit No. 80 3002520270	2130' FSL 660' FFL SEC 31, T17S R35E (L)	2/16/84	10500	10239 13-3/8	337	1539	1750	0	CIRC	8030-8135'	PROD	Reconnected to Gildorf 3/18/77 Wolfcamp & Abo parts packed off 3/18/77 Formerly Phillips Petroleum Corporation Santa Fe No. 87
Phillips Petroleum Corporation	Santa Fe No. 133 3002532333	435' FSL 1930' FEL SEC 31, T17S R35E (O)	2/23/84	8100	8100 13-3/8	5145	2400	0	CIRC	7540-7508'	PROD	Drilled	
Phillips Petroleum Corporation	Santa Fe No. 135 3002532438	1743' FSL 808' FWL SEC 31, T17S R35E (I)	5/19/84	8052	7854 8-5/8	1500	850	0	CIRC	7537-7684'	PROD	Drilled	
Texaco E&P Inc.	N. M. "OF" Slat NCT-1 No. 37 3002532450	1650' FSL 330' FEL SEC 38, T17S R34E (I)	5/3/94	8184	8023 8-5/8	1476	5148	1700	0	CIRC	7704-7859'	PROD	Drilled
Texaco E&P Inc.	N. M. "OF" Slat NCT-1 No. 35 3002532338	355' FSL, 1875' FEL SEC 38, T17S R34E (O)	3/28/94	8100	7880 8-5/8	1460	650	0	CIRC	7518-7751	PROD	Drilled	
Texaco E&P Inc.	N. M. "OF" Slat NCT-1 No. 34 3002532271	380' FSL, 330' FEL SEC 38, T17S R34E (P)	1/7/94	8000	7940 8-5/8	1460	650	0	CIRC	7551-7872	PROD	Drilled	

C108 ATTACHMENT VI  
WELLS WITHIN 1/2 MILE RADIUS OF REVIEW

OPERATOR	WELL NAME API NO.	LOCATION	COMPLETION DATE	TD	PSTD	CASING BITE DEPTH	CEMENT BACKS	TOP	METHOD	PRODUCING INTERVAL	CURRENT STATUS
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 24 3002520946	860 FSL 860 FEL SEC 36, T118S R34E (P)	7/4/64	10300	10300 13-3/8	1534 9-5/8 2-7/8	1200 1700 10300	0 0 2400	CIRC CIRC CALC	5942-6200 10208-10212 10042-10062	SI SI SI
Texaco E&P Inc.	N. M. "P" St. No. 6 3002520914	770 FNL 2080 FEL SEC 1, T118S R34E (B)	2/8/71	12255	12155 13-3/8	1510 9-5/8 2-7/8	1200 1700 10587 11300	0 0 1600 670	CIRC CIRC BHDH	9619-984' 5601-6152' 8022 10872-11234'	SI SI SI SI
Texaco E&P Inc.	NEW MEXICO "L" ST. No. 12 3002531062	1860 FNL 860 FEL SEC 1, T118S R34E (H)	8/24/63	8000	7984 8-5/8	1476 5-1/2	850 1800	0 1925	CIRC CIRC	9619-984' 6844-6897'	SI SI
Texaco E&P Inc.	NEW MEXICO "L" ST. No. 13 3002532007	1760 FNL 1860 FEL SEC 1, T118S R34E (G)	10/26/63	7990	7970 8-5/8	1470 5-1/2	850 1785	0 0	CIRC CIRC	8246-102207	SQZD SQZ w/ 150' st thru retainer @ 9200'
Texaco E&P Inc.	NEW MEXICO "L" ST. No. 14 3002532006	810 FNL 1860 FEL SEC 1, T118S R34E (B)	11/5/63	7950	7926 8-5/8	1470 5-1/2	850 2105	0 0	CIRC CIRC	7548-7027	PROD
Texaco E&P Inc.	NEW MEXICO "L" ST. No. 15 3002532009	860' FNL 310' FEL SEC 1, T118S R34E (A)	10/2/63	7950	7930 8-5/8	1470 5-1/2	850 7850	0 3175	CIRC	7484-7008'	PROD
Texaco E&P Inc.	Central Vacuum Unit No. 124 3002532006	330 FNL 1864 FWL SEC 7, T118S R34E (C)	2/18/69	8840	4708 10-3/4	338 8-5/8	300 750	0 0	CIRC CIRC	8143-81767' 7987-8014'	ABDN ABDN
Texaco E&P Inc.	Central Vacuum Unit No. 125 3002531060	960 FNL 813 FWL SEC 7, T118S R34E (D)	1/30/68	8800	7798 11-3/4	336 8-5/8 2-7/8	300 485 1400	0 1300 500	CIRC CALC CIRC	6512-8658' 7840-7907' 4554-4735'	SQZD ABDN SI
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 6 3002520953	2310 FNL 780 FEL SEC 6, T118S R34E (H)	3/8/63	8850	8840 11-3/4	357 8-5/8 2-7/8	350 1800 1300	0 0 2731	CIRC CIRC CIRC	8275-8178' 7840-7907' 4554-4735'	SI SI SI
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 7 3002520953	2310 FNL 1650 FEL SEC 6, T118S R34E (G)	7/28/71	8850	8525 11-3/4	360 8-5/8 2-7/8	400 1650 9417	0 0 3000	CIRC CIRC CALC	8245-8510' 8533-8688' 3000	SI SI SI
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 13 3002531060	1905 FNL 2130 FEL SEC 6, T118S R34E (G)	8/9/63	8150	8112 11-3/4	1480 5-1/2	880 6150	0 2100	CIRC CIRC	7809-8070 7701-8098	PROD PROD
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 14 3002532018	860' FNL 2110' FEL SEC 6, T118S R34E (B)	9/10/63	8150	8130 8-5/8	1485 5-1/2	850 6150	0 2800	CIRC CIRC	7572-8101 7557-7908'	PROD PROD
Texaco E&P Inc.	N. M. "P" ST. NCT-1 No. 15 3002532019	510' FNL 840' FEL SEC 6, T118S R34E (A)	12/14/63	8150	8140 8-5/8	1487 5-1/2	850 6150	0 2235	CIRC CIRC	7600-7901' 7233-8448'	PROD PROD
Texaco E&P Inc.	NEW MEXICO TAB-ST. No. 10 3002531061	2310' FSL 2110' FEL SEC 6, T118S R34E (J)	12/24/63	8200	8155 8-5/8	1485 5-1/2	650 6200	0 2195	CIRC CIRC	7600-7901' 6233-8448'	PROD PROD
Texaco E&P Inc.	NEW MEXICO TAB-ST. No. 3 3002530946	860 FSL 1860 FEL SEC 6, T118S R34E (O)	12/26/61	8856	8115 10-3/4	343 7-5/8 4-1/2	250 5404 5124-	0 8856 9097	CIRC CIRC CIRC	8208-8828' 900 550 5324	SI SI SI
Texaco E&P Inc.	NEW MEXICO TAB-ST. No. 4 3002530947	1660 FSL 860 FEL SEC 6, T118S R34E (I)	12/22/61	9080	9068 10-3/4	327 7-5/8 4-1/2	350 5228 5108-	0 9097	CIRC CIRC CIRC	8208-8828' 900 550 5324	SI SI SI
Texaco E&P Inc.	NEW MEXICO TAB-ST. No. 5 3002520163	1860 FSL 1560 FEL SEC 6, T118S R34E (I)	3/14/63	8451	2765 11-3/4	340 8-5/8	300 1400	0 0	CIRC CIRC	8172-8194' 6300-6488'	F&A F&A
Texaco E&P Inc.											2710 TAB CUT AT 1660'

C100 ATTACHMENT VI  
WELLS WITHIN 1/2 MILE RADIUS OF REVIEW

OPERATOR	WELL NAME API NO.	LOCATION	COMPLETION DATE	PATD TD	CASING SIZE	CEMENT BACKS	TOP DEPTH	METHOD	PRODUCING INTERVAL	CURRENT STATUS	REMARKS
Texaco E&P Inc.	N. M. "R" ST. NCT-3 No. 27 3002520004	860 FSL 1180 FEL SEC 1, T168 R34E (O)	5/8/94	8100	7580 6-5/8	1470	600	CIRC	7556-7902	SI	Drilled Failed to Produce
Texaco E&P Inc.	N. M. "R" ST. NCT-3 No. 15 3002520050	487 FSL 560 FEL SEC 1, T168 R34E (O)	6/5/84	10200	10200 13-3/8	355	400	CIRC	8492-8705	P & A	Abo Reef & Wolfcamp Set CIP in both strings @ 8400' 6440' Cat Rig @ 4820' Set pipe @ 4820'. 2020', 1980' Part & set 400' to 45' to set
Texaco E&P Inc.	Vacuum Graybold SA Unit No. 68 3002521110	1655 FSL 330 FEL SEC 1, T168 R34E (I)	10/8/84	8400	0 11-3/4	402	350	CIRC	8472-8572	P & A	CIP WAS CAPS @ 825' 5950', 4745' 6068-8129' SCIF & 400' CIRC CMT. Formerly N. M. "R" ST. NCT-3 No. 18
Texaco E&P Inc.	N. M. "R" ST. NCT-3 No. 24 3002520075	860 FSL 660 FEL SEC 1, T168 R34E (O)	11/4/91	11584	7862 40	407	1000	CIRC	1012-10233	ABDN	Upper Penn Lower Miss. Drilled
Texaco E&P Inc.	N. M. "R" ST. NCT-3 No. 25 3002531830	1980 FSL 660 FEL SEC 1, T168 R34E (I)	4/30/93	8000	7860 11-3/4	1470	1080	CIRC	7546-7906*	PROD	Drilled
Shell Oil	STATE "P" No. 2 3002520023	860 FSL 1700 FWL SEC 31, T178 R35E (N)	5/10/84	10406	8065 13-3/8	332*	300	CIRC	7616-1804'	PROD	Abandoned Wolfcamp parts w/ CIP @ 8065' Squeezed Packer parts with 150
Shell Oil	STATE "P" No. 3 3002532296	330 FSL 665 FWL SEC 31, T178 R35E (M)	2/15/84	8049	8049 13-3/8	1463	1255	CIRC	8216-8118'	ABDN	Part & set @ 3320' circ emt to surface
Exxon	N. M. "BO" ST. NCT-3 No. 7 3002520176	865 FNL 330 FEL SEC 12, T168 R34E (A)	4/21/83	8000	8000 13-3/8	302	325	CIRC	8343-8625*	PROD	Tested Wolfcamp and plugged back to Abo Reef Part and expand @ 1800' w 1050' ar
Modi	STATE "P" No. 12 3002532413	330 FSL 660 FEL SEC 31, T178 R35E (P)	3/17/84	8083	8083 6-5/8	1480	450	CIRC	7626-7902	PROD	Drilled
Marathon Oil Co	Wam St A/C No. 6 3002532311	1980 FSL 2030 FWL SEC 31, T178 R35E (K)	1/24/84	10335	10088 11-3/4	1492	800	CIRC	9436-1005*	PROD	Initial completion in Upper Penn, tested well. Set CIP @ 10065' isolate Upper Penn. Recompleted to Wolfcamp
Texaco E&P Inc.	N. M. "O" ST. NCT-1 No. 14 3002520008	1874 FSL 2008 FEL SEC 36, T178 R34E (N)	7/26/83	12154	12154 13-3/8	1593	1200	CIRC	12114-12122	SQZD	Producing from the Wolfcamp 8-3/8" string Braided sand w/ 800' ar 8000'
Texaco E&P Inc.	Vacuum Glorita West Unit No. 87 3002521637	2090 FSL 2008 FEL SEC 36, T178 R34E (J)	1/23/88	10200	8185 11-3/4	1498	1300	CALC	11202-11270	ABDN	Plugged back from Penn Reef to the Glorita Formerly N. M. "O" ST. No. 25
Texaco E&P Inc.	Vacuum Glorita West Unit No. 112 3002520515	560 FNL 750 FWL SEC 1, T168 R34E (O)	11/18/63	12215	6100 13-3/8	1492	1150	CIRC	6078-8094*	SQZD	Formerly N. M. "M" ST. No. 5 Bent 8-3/8" csg w 850' ar 0-2100' Glorita parts abandoned due to lack Abo string pulled back to Glorita Wolfcamp string still in
Texaco E&P Inc.	N. M. "M" ST. No. 7 3002520494	1800 FNL 1980 FWL SEC 1, T168 R34E (I)	10/11/83	12200	7895 13-3/8	1513	1100	CIRC	8067-1004*	ABDN	Wolfcamp and Glorita part Aboh Producing from Crudeward

C108 ATTACHMENT VI  
WELLS WITHIN 1/2 MILE RADIUS OF REVIEW

OPERATOR	WELL NAME API NO.	LOCATION	COMPLETION DATE	TD	PAT'D CASING SIZE	CASING DEPTH	CEMENT BACKS	TOP	METHOD INTERVAL	PRODUCING INTERVAL	CURRENT STATUS	REMARKS
									T9	T8		
Texaco E&P Inc.	N. M. "M" ST. No. 9 3002520494	860 FNL 2310 FNL SEC 1, T148 R34E (C)	2/21/84	8100	8053 6-5/8	1470	650	0	CIRC	7530-745'	PROD	Drilled
Modell	State CC Com Unit No. 1 3002520872	1940 FSL 860 FNL SEC 36 1178 R34E (L)	8/12/84	12080	10222 16	360	350	0	CIRC	9115-9145	ABDN	Circ plug set in 2-7/8" string Abo and Wolfcamp Commingled in 4-1/2" casg
Texaco E&P Inc.	N. M. "O" ST. NCT-1 No. 17 3002520125	760 FSL 2040 FNL SEC 36 1178 R34E (N)	6/22/83	12082	10070 13-3/8	1612	1200	0	CIRC	9097-9224'	8022D	Circ stand to surf thru perf @ 1640' Bent Reservoir casing collapse @ 9350'
					8-5/8	4750	1700	2700	CALC	8862-9004"	8022D	
					2-7/8	10864	1325	2160	CBL	10130-10140'	8022DABN	Tekton Abo recompleted in Wolfcamp
					3-1/2	10262				11934-11950'	ABDN	Plugged back Devonian to Wolfcamp
					2-7/8	10875				8862-9025'	SI	Wolfcamp Shd In

PRODUCING  
WOLFCAMP

MARATHON OIL  
WARN STATE A/C-1 NO. 6  
API# 3002532311

0 - '492' CEMENT 800 sx  
0 - 1492' 11 3/4" CD SURF CSG  
0 - 3000' CEMENT 600 sx

0 - 3000' 9 5/8" OD INT CSG

60 - '492' 14.75 " OD HOLE

1492 - 3000' 10.75 " OD HOLE

1980 FSLL & 2030 FWLL  
SEC 31 , TWN 17 S, RANGE 35 E  
ELEVATION: 3992 KB  
COMPLETION DATE: 01-24-94

\*\*\*\*  
COMPLETION INTERVAL: 9436 - 10058 (WFMP)  
TRT: 20800 GALS ACID  
UPPER PENN TESTED WET 10102 - 10186

\*\*\*\*

0 - 10335' CEMENT 2025 sx  
3000 - 10335' 8.5 " CD HOLE  
0 - 10335' 5 1/2" OD PROD CSG

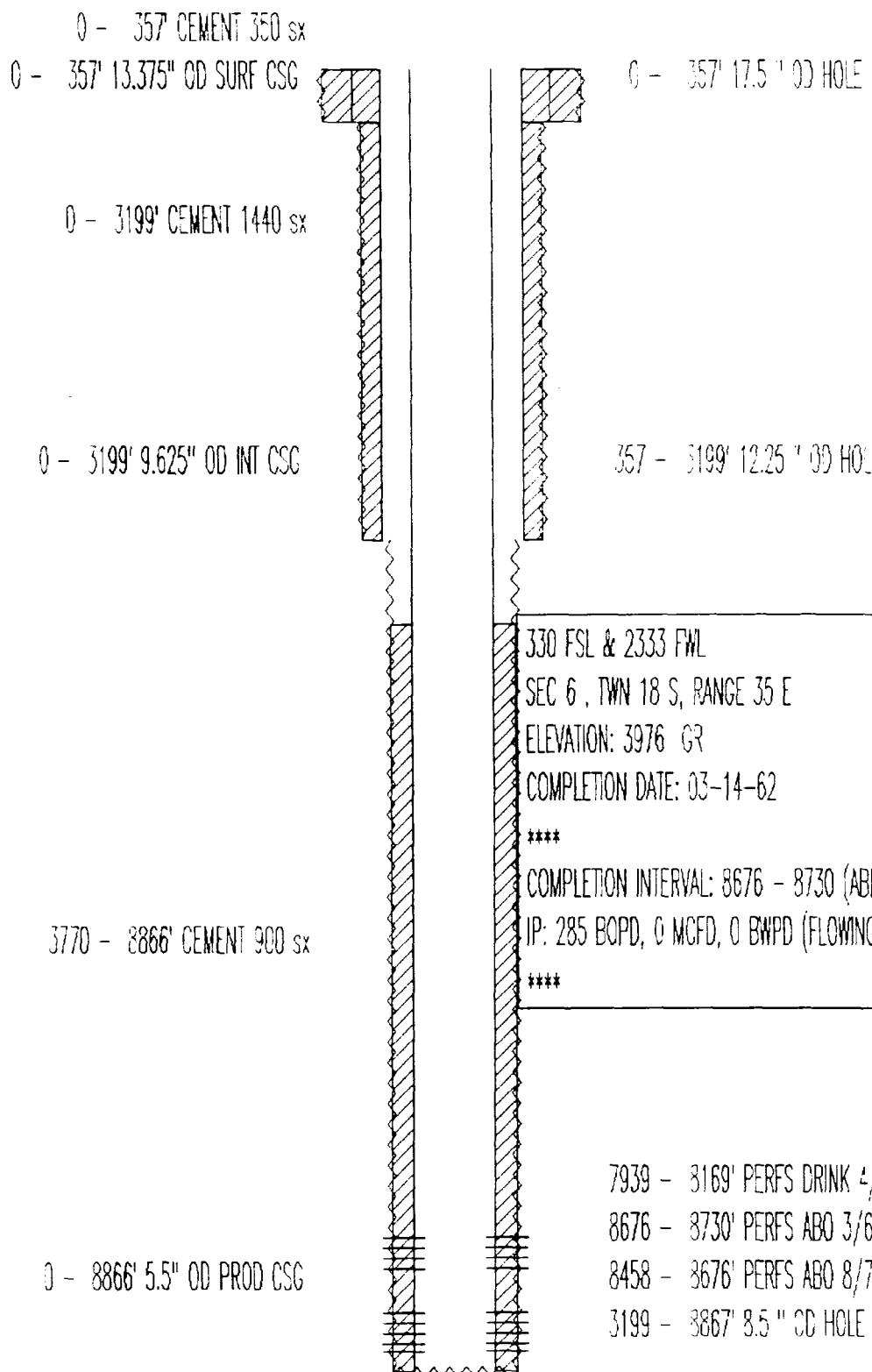
9436 - '0058' PERFS WOLFCAMP  
10096 - 10100' CIBP  
10102 - 10186' ABANDONED PERFS UPPER PENN

PBTD: 10098'

TD: 10335'

CURRENT STATUS - SHUT IN  
ABO & DRINKARD COMMINGLED

MARATHON OIL  
WARN-STATE A/C-2 NO. 8  
API# 3002503082



KB ELEV: 3976'  
PBTD: 8818'  
TD: 8867'

SHUT IN  
ABO AND DRINKARD COMMINGLED

MARATHON OIL  
WARN-STATE A/C-2 NO. 9  
API# 30025030830000

O - 356' CEMENT 350 sx  
O - 356' 13.375" OD SURF CSG

C - 356' 17.5" OD HOLE

O - 3159' CEMENT 1400 sx

O - 3159' 9.625" OD INT CSG

356 - 3159' 12.25" OD HOLE

2915 - 8769' CEMENT 350 sx

O - 8769' 5.5" OD PROD CSG

330 FSL & 913 FWL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3889' DF  
COMPLETION DATE: 06-01-62

\*\*\*\*  
COMPLETION INTERVAL: 8541 - 8608 (ABRF)  
IP: 337 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*\*

7800 - 8068' PERFS DRINK 1/93  
8541 - 8608' PERFS ABO 6/62  
8423 - 8541' PERFS ABO 8/71  
3159 - 3771' 8.5" CC HOLE

KB ELEV: 3979'  
PBTID: 8737'  
TD: 8771'

PLUGGED & ABANDONED

MARATHON OIL  
WARM STATE A/C-2 NO. 10  
API # 3002520020

0 - 10' CEMENT PLUG 6 SX  
0 - 371' CEMENT 3.5 sx  
0 - 371' 13.375" OD SURF CSG  
234 - 424' CEMENT PLUG 20 SX  
1329 - 1519' CEMENT PLUG 20 SX  
0 - 3307' CEMENT 1540 sx

3113 - 3357' CEMENT PLUG 25 SX  
0 - 3307' 9.625" OD INT CSG

225 - 8868' CEMENT 560 sx  
4486 - 5070' CEMENT PLUG 60 SX

0 - 8868' 5.5" OD PROD CSG

C - 371' 17.5" OD HOLE

371 - 3307' 12.25" OD HOLE

1650 FSL & 2232 FWL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3989' DE  
COMPLETION DATE: 05-29-63

\*\*\*  
COMPLETION INTERVAL: 8644 - 8791 (ABO )  
IP: 190 BOPD, 0 MCFD, 0 BWPD (FLOWING)  
\*\*\*\*

8644 - 8791' PERFS  
3307 - 3870' 8.5" OD HOLE

PBTI: 8823'

TD: 8870'

PRODUCING  
DRINKARD

MARATHON OIL  
WARM STATE A/C-2 NO. 11  
API# 3002520031

0 - 360' 13.375" OD SURF CSG

0 - 360' CEMENT 250 sx

0 - 3400' CEMENT 1550 sx

0 - 3400' 8.625" OD INT CSG

745 - 3797' CEMENT 1255 sx

7805 - 7810' CIBP

0 - 8797' 5.5" OD PROD CSG

0 - 360' 17.5" OD HOLE

360 - 3400' 12.25" OD HOLE

1650 FSL & 910 FWL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3992' OF  
COMPLETION DATE: 08-07-63  
\*\*\*\*  
COMPLETION INTERVAL: 8485 - 8655 (ABO )  
TRT: 2000 GALS ACID ( 8485 - 8655 )  
IP: 169 BOPD, 0 MCFD, 0 BWPD (FLOWING)  
\*\*\*\*

7630 - 7790' PERFS DRINKARD 11/92

3400 - 3799' 7.375" OD HOLE

8485 - 8655' PERFS ABO 8/63

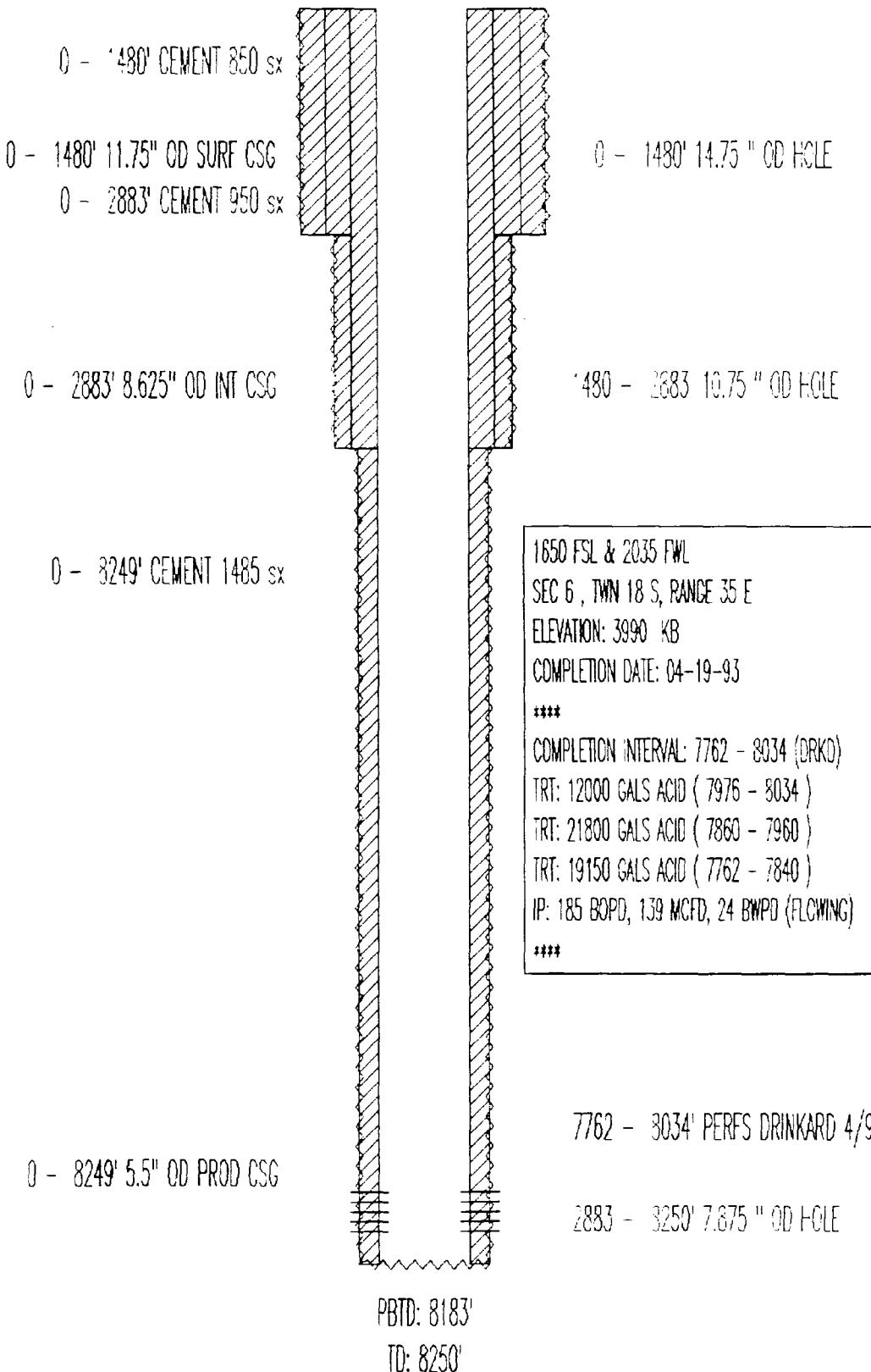
KB ELEV: 3992'

PBTQ: 7805'

TD: 8799'

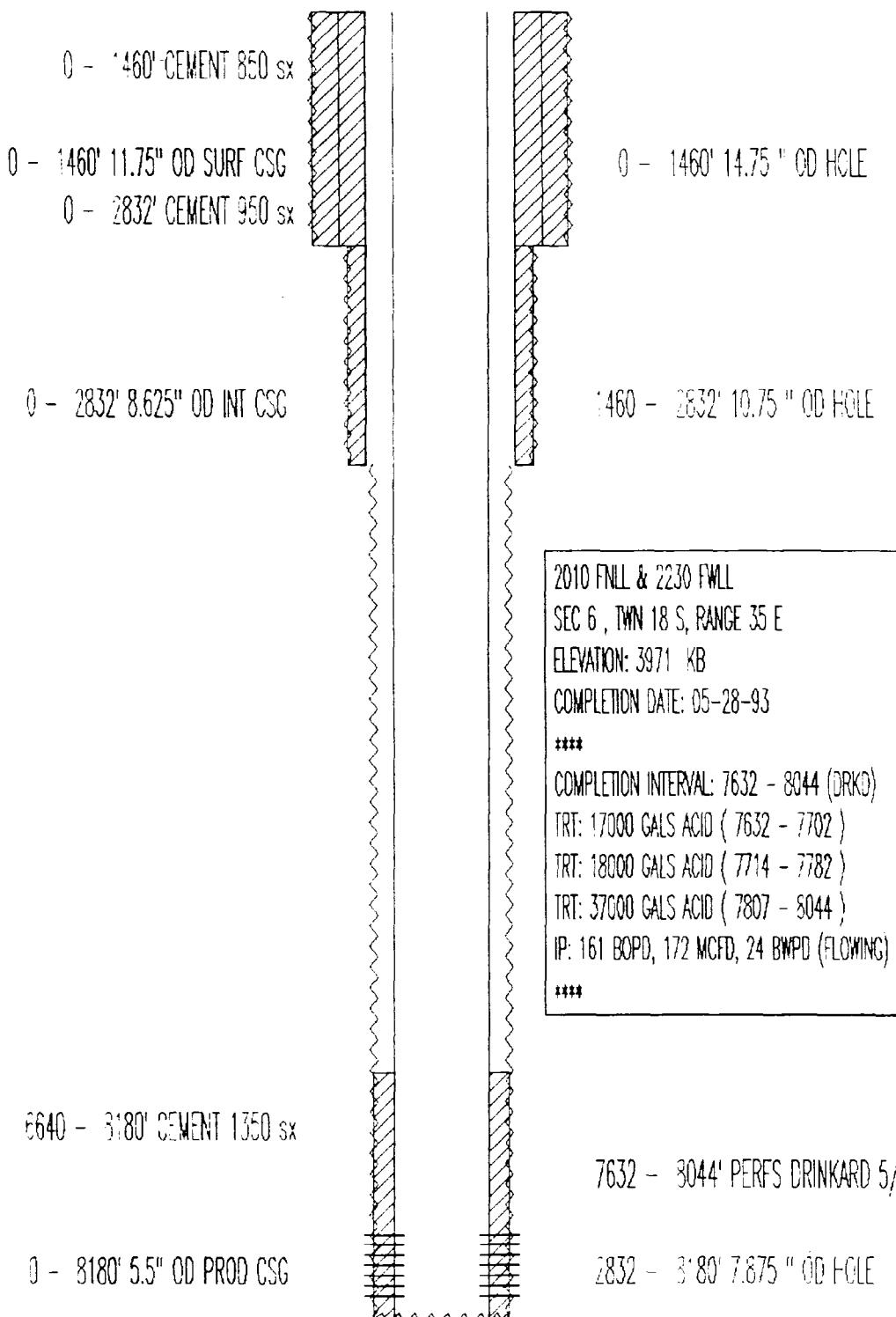
PRODUCING  
DRINKARD

MARATHON OIL  
WARN STATE A/C-2 NO. 18  
API# 3002531887



PRODUCING  
DRINKARD

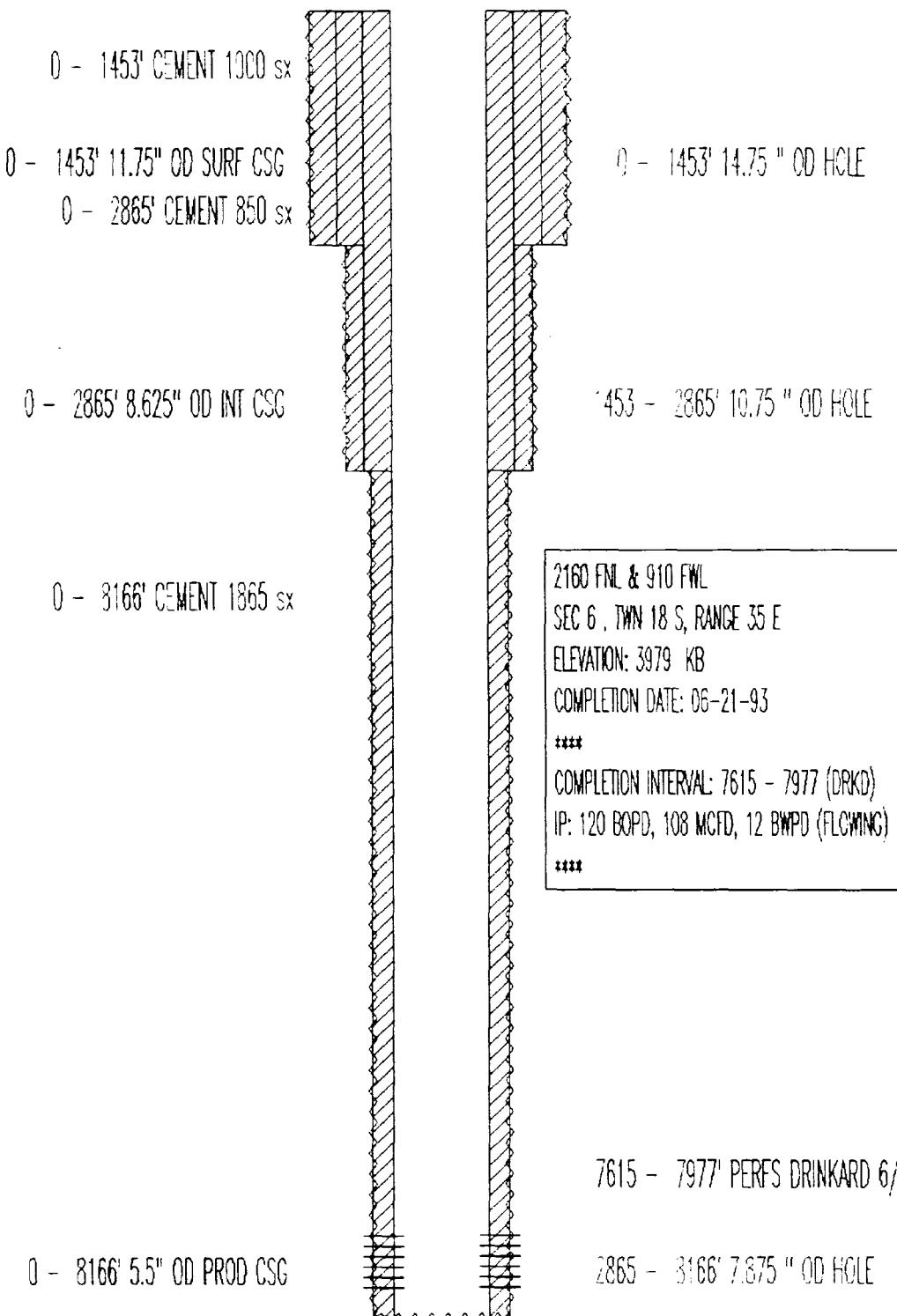
MARATHON OIL  
WARN STATE A/C-2 NO. 19  
API# 3002531927



KB ELEV: 3971'  
PBT: 8090'  
TD: 8180'

PRODUCING  
DRINKARD

MARATHON OIL  
WARN STATE A/C-2 NO. 20  
API# 3002531934



KB ELEV: 3979'  
PRTD: 8056'  
TD: 8166'

PRODUCING  
DRINKARD

MARATHON OIL  
WARN STATE A/C-2 NO. 21  
API# 3002531969

0 - 53' 16" OD SURF CSG

0 - 53' CEMENT 0 sx

0 - 1465' CEMENT 750 sx

0 - 1465' 11.75" OD INT CSG

0 - 2823' CEMENT 900 sx

0 - 2823' 8.625" OD INT CSG

1050 - 3158' CEMENT 1560 sx

0 - 8158' 5.5" OD PROD CSG

0 - 53' 20" OD HOLE

53 - 1465' 11.75" OD HOLE

1465 - 2823' 10.75" OD HOLE

1109 FNL & 1993 FWL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3988 KB  
COMPLETION DATE: 07-28-93  
\*\*\*\*  
COMPLETION INTERVAL: 7623 - 7989 (DRKD)  
TRT: 29500 GALS ACID ( 7800 - 7989 )  
TRT: 19200 GALS ACID ( 7712 - 7771 )  
TRT: 15834 GALS ACID ( 7623 - 7693 )  
IP: 375 BOPD, 301 MCFD, 62 BWPD (FLCING)  
\*\*\*\*

7623 - 7989' PERFS DRINKARD 7/93

2823 - 3200' 7.875" OD HOLE

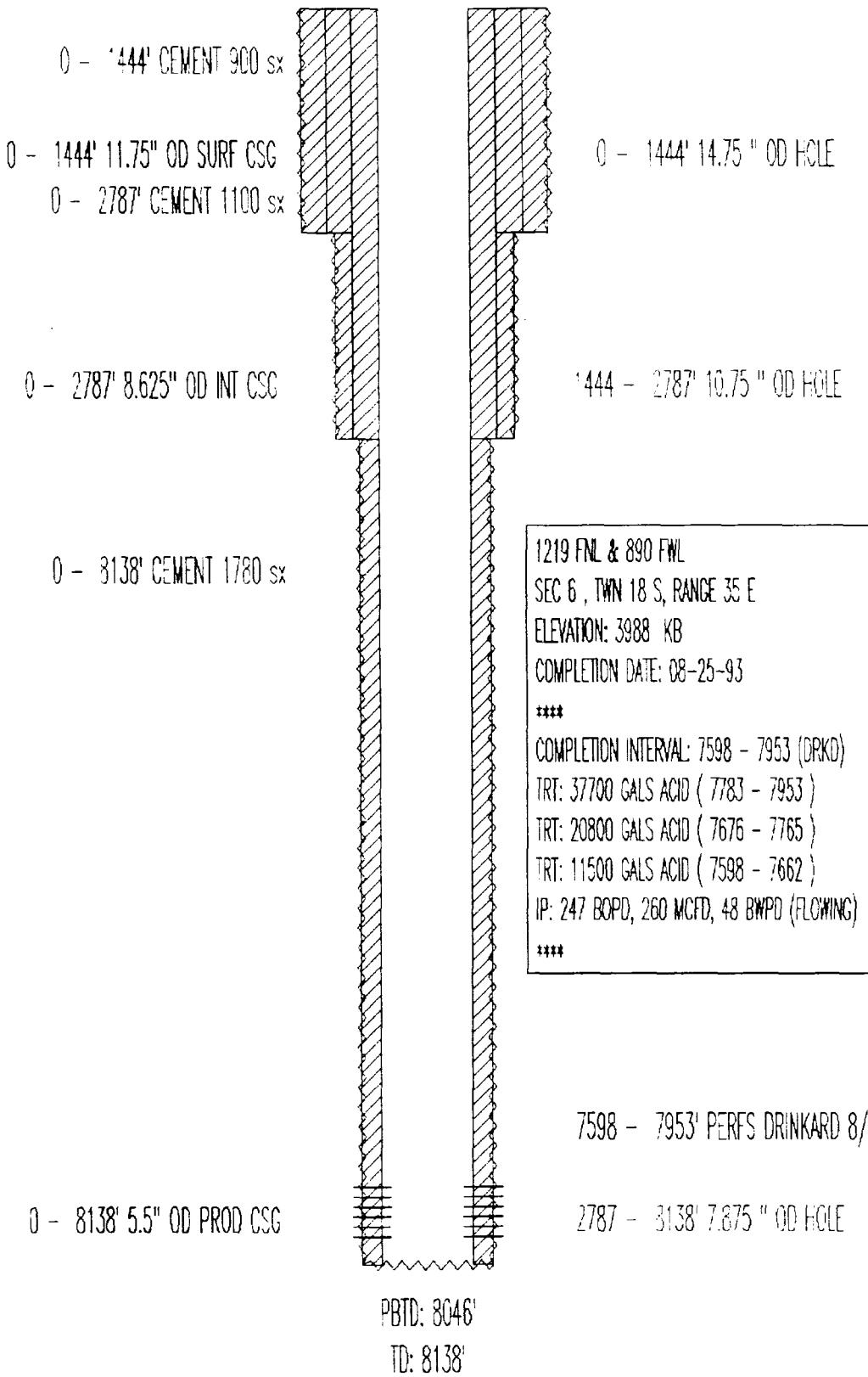
KB ELEV: 3988'

PBD: 8069'

TD: 8200'

PRODUCING  
DRINKARD

MARATHON OIL  
WARN STATE A/C-2 NO. 22  
API# 3C025520340000



PRODUCING  
DRINKARD

MARATHON OIL  
WARM STATE A/C-2 NO. 23  
API# 3002532187

0 - 40' CEMENT 0 sx  
0 - 40' 16" OD SURF CSG

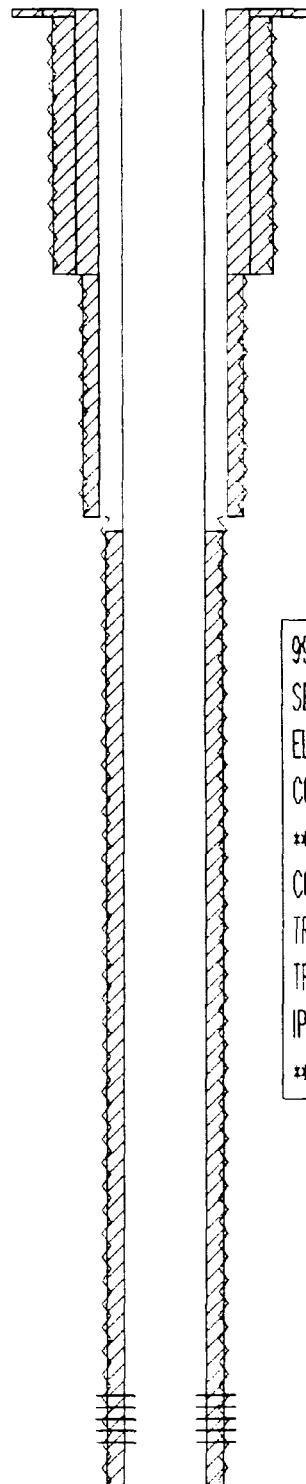
0 - 40' 20" OD HOLE

0 - '477' CEMENT 300 sx  
0 - 1477' 11.75" OD INT CSG  
0 - 2836' CEMENT 300 sx

0 - 2836' 8.625" OD INT CSC

2920 - 3300' CEMENT 1550 sx

0 - 8300' 5.5" OD PROD CSG



990 FSLL & 1920 FWLL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3993' KB  
COMPLETION DATE: 12-15-93  
\*\*\*  
COMPLETION INTERVAL: 7747 - 8030 (DRK)  
TRT: 40000 GALS ACID ( 7870 - 8030 )  
TRT: 17500 GALS ACID ( 7747 - 7844 )  
IP: 235 BOPD, 239 MCFD, 177 BWPD (PUMPING)  
\*\*\*

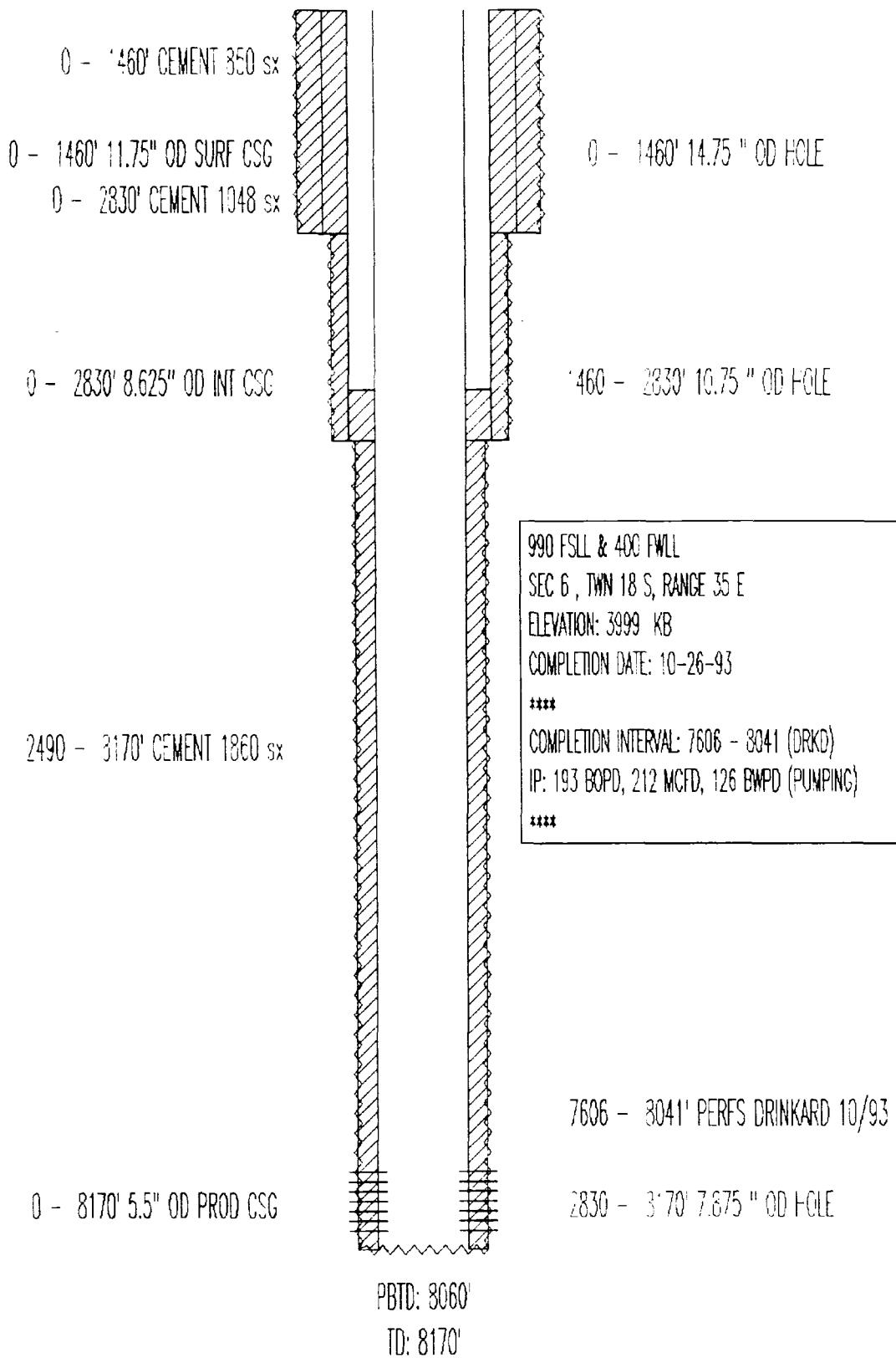
7747 - 8030' PERFS DRINKARD 12/93

2836 - 3300' 7.675" OD HOLE

KB ELEV: 3993'  
PBTD: 8205'  
TD: 8300'

PRODUCING  
DRINKARD

MARATHON OIL  
WARN STATE A/C-2 NO. 24  
API# 3002532189



SHUT IN  
SAN ANDRES

TEXACO INC  
CENTRAL VACUUM UNIT NO. 124  
API# 3002503099

FORMERLY  
N. M. "R" ST. NCT-4 NO. 1

0 - 336' 10.75" OD SURF CSG

0 - 336' CEMENT 300 sx

0 - 3128' CEMENT 750 sx

336 - 3128' 11" OD HOLE

0 - 3128' 8.625" OD INT CSG

8074 - 8110' CIBP 36" CMT CAP  
8143 - 8360' ABANDONED PERFS  
8406 - 8528' ABANDONED PERFS  
8573 - 8760' ABANDONED PERFS  
3128 - 8840' CEMENT 1130 sx CALC  
3128 - 8840' 7.875" OD HOLE

0 - 336' 15" OD HOLE

330 FNL & 1904 FWL  
SEC 7, TWN 18 S, RANGE 35 E  
ELEVATION: 3986' DF  
COMPLETION DATE: 03-07-62  
\*\*\*  
COMPLETION INTERVAL: 8573 - 8760 (ABRF)  
IP: 422 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*  
SECOND CMPL INTRVL: 7997 - 8014 (DRKD)  
TRT: 6000 GALS ACID ( 7997 - 8014 )  
IP: 44 BOPD, 0 MCFD, 44 BWPD (PUMPING)  
\*\*\*

4708 - 4720' CIBP 12" CMT CAP

4648 - 4697' PERFS SAN ANDRES

4686 - 4696' ABANDONED PERFS COMMUNICATE STRINGS

KB ELEV: 3986'

TD: 8840'

7920 - 7938' PLUG HYDROMITE

7997 - 8014' ABANDONED PERFS DRINKARD

0 - 8836' 2.875" OD TBC

0 - 8832' 2.875" OD TBC

SHUT IN  
SAN ANDRES

TEXACO INC  
CENTRAL VACUUM UNIT NO. 125  
API# 3002503100

FORMERLY  
N. M. "R" NCT-4 NO. 2

0 - 336' 11.75" OD SURF CSG  
0 - 336' CEMENT 300 sx  
0 - 336' 15" OD HOLE

1300 - 3313' CEMENT 465 sx SLC  
0 - 3313' 8.625" OD INT CCG

336 - 3313' 1" OD HOLE

500 - 8800' CEMENT 1400 sx TS

5690 - 5720' CIBP 30' CMT CAP  
6059 - 8656' CEMENT PLUG

5721 - 8139' BAR FISH 2-1/16" TBG CMT IN HOLE

8512 - 8656' SQUEEZE PERFS ABO  
0 - 8790' 2.875" OD TBG

KB ELEV: 3985'  
TD: 8800'

990 FNL & 913 FWL  
SEC 7, TWN 18 S, RANGE 35 E  
ELEVATION: 3985' DF  
COMPLETION DATE: 02-22-62  
\*\*\*\*  
COMPLETION INTERVAL: 8512 - 8656 (ABRF)  
IP: 259 BOPD, 0 MCFD, 0 BWPD (FLOWING)  
\*\*\*\*  
SECOND CMPL INTRVL: 7840 - 7907 (DRKD)  
TRT: 9000 GALS ACID ( 7840 - 7907 )  
IP: 17 BOPD, 0 MCFD, 0 BWPD (PUMPING)  
\*\*\*\*

4554 - 4735' PERFS SAN ANDRES  
5000 - 5030' PLUG 30' CMT CAP

6100 - 6130' CIBP 30' CMT CAP

7799 - 7802' CIBP  
7840 - 7907' ABANDONED PERFS DRINKARD

0 - 8793' 2.875" OD TBG  
3313 - 3300' 7.675" OD HOLE

FORMERLY N. M. "O" ST. NO. 25

TEXACO INC  
VGWU NO. 87  
API# 3002521637

PRODUCING  
GLORIETA

O - 1499' CEMENT 1300 sx

C - 1800' CEMENT BRDHD SGZ W/600 SX - TS

O - 1499' 11.75" OD SURF CSG

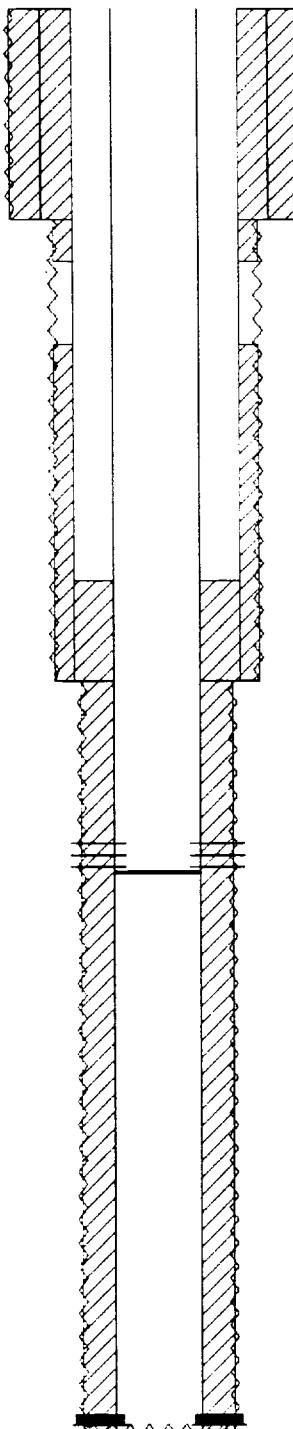
2400 - 4825' CEMENT 1100 sx CALC

O - 4825' 8.625" OD INT CSG

5185 - 6205' CIBP 15' CMT CAP

4100 - 10200' CEMENT 1050 sx CALC

O - 10200' 4.5" OD PROD CSG



O - 1499' 15" CD HOLE

2090 FSLL & 2086 FELL

SEC 36, TWN 17 S, RANGE 34 E

ELEVATION: 4001' DF

COMPLETION DATE: 01-23-66

\*\*\*

COMPLETION INTERVAL: 10088 - 10164 (PSLV)

TRT: 12000 GALS ACID ( 10088 - 10164 )

IP: 75 BOPD, 0 MCFD, 75 BWPD (S)

\*\*\*

1499 - 4825' 10.625" OD HOLE

5930 - 6160' PERFS GLORIETA 3/71, 10/72, 7/87

4825 - 10200' 7.875" CD HOLE

10088 - 10164' ABANDONED PERFS

TD: 10200'

PRODUCING  
GLORIETA

TEXACO  
VACUUM GLORIETA WEST UNIT #90  
API# 3002520270

FORMERLY  
SANTA FE BATTERY 2 NO. 87  
PHILLIPS PETROLEUM

0 - 337' CEMENT 350 sx

0 - 337' 13.375" OD SURF CSG

2400 - 4774' CEMENT 762 sx CALC

0 - 4774' 9.625" OD INT CSC

337 - 4774' 12.25" OD HOLE

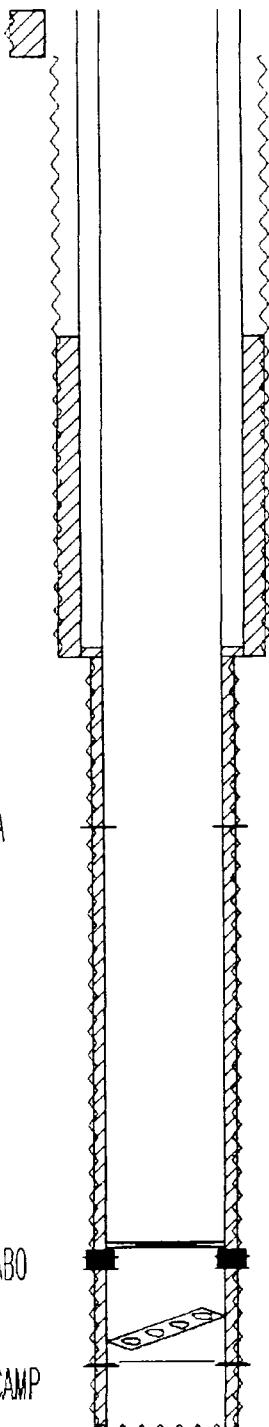
6030 - 6042' PERFS GLORIETA

4700 - '0500' CEMENT 1110 sx CBL

9162 - 9300' ABANDONED PERFS ABO

10006 - 10016' ABANDONED PERFS WOLFCAMP

0 - 10500' 7" OD PROD CSG



0 - 337' 17.5" OD HOLE

2130 FSL & 660 FWL  
SEC 31, TWN 17 S, RANGE 35 E  
ELEVATION: 3982' GR  
COMPLETION DATE: 01-30-64

\*\*\*  
COMPLETION INTERVAL: 10006 - 10016 (WFMP)  
TRT: 500 GALS ACID ( 10006 - 10016 )  
IP: 269 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*  
SECOND CMPL INTRVL: 9162 - 9300 (ABO )  
TRT: 5000 GALS ACID ( 9162 - 9300 )  
IP: 297 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*  
THIRD CMPL INTRVL: 6030 - 6042 (GLRT)  
IP: 309 BOPD, 0 MCFD, 165 BWPD (PUMPING)

9105 - 9145' CIBP 7 SX CAP

9595 - 9900' GUN FISH RODS & TBC

9985 - 9990' FISH STUCK PACKER

4774 - 10500' 3.5" OD HOLE

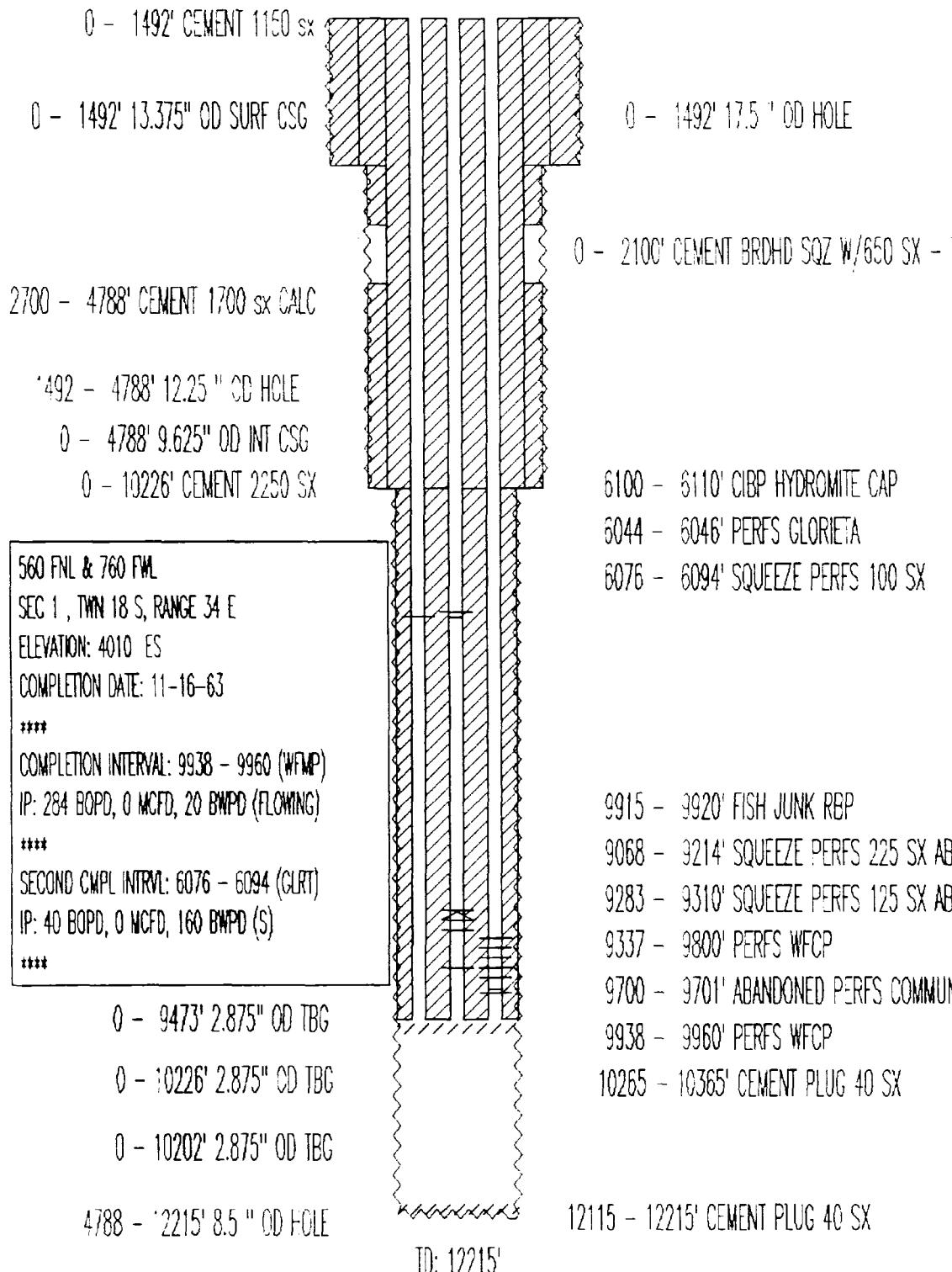
PBTG: 10239'

TD: 10500'

FORMERLY N. M. "M" ST. NO. 5

TEXACO INC  
VGWU NO. 112  
API# 3002520515

PRODUCING  
GLORIETA



P & A

TEXACO INC  
VGSU NO. 68  
API# 3002521110

FORMERLY  
N. M. "R" NCT-3 NO. 16

0 - 402' 11.75" OD SURF CSG  
0 - 402' CEMENT 350 sx  
0 - 400' CEMENT  
0 - 3250' CEMENT 1650 sx  
400 - 3260' CEMENT SQZ 900 SX

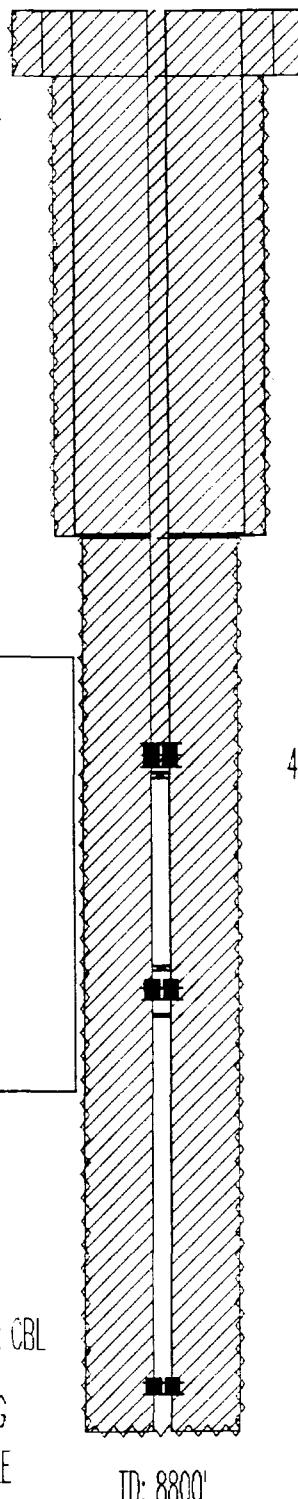
0 - 3250' 8.625" OD INT CSG

1655 FSL & 330 FEL  
SEC 1, TWN 18 S, RANGE 34 E  
ELEVATION: 3996 ES  
COMPLETION DATE: 10-09-64

\*\*\*\*  
COMPLETION INTERVAL: 8472 - 8572 (ABO)  
TRT: FRAC 15000 GALS 0 LBS ( 8472 - 8572 )  
IP: 29 BOPD, 0 MCFD, 0 BWPD (S)

\*\*\*\*

3235 - 3800' CEMENT 1600 sx CBL  
0 - 8800' 2.875" OD TBG  
3250 - 8800' 7.875" OD HOLE



0 - 402' 14.75" OD HOLE  
400 - 400' SQUEEZE PERFS CIRC W/120 SX  
0 - 4686' CEMENT PLUG

402 - 3250' 10.75" OD HOLE  
3260 - 3260' SQUEEZE PERFS

4720 - 4755' CIBP 35' CMT CAP

4536 - 4686' ABANDONED PERFS SQZD W/ 170 SX

5999 - 6125' ABANDONED PERFS  
5915 - 5950' CIBP 35' CMT CAP  
6215 - 6235' CIBP 35' CMT CAP

8472 - 8572' ABANDONED PERFS

SHUT IN  
WOLFCAMP & GLORIETA

TEXACO INC  
NEW MEXICO "L" STATE NO. 6  
API# 3002520514

0 - 1510' CEMENT 1200 sx

0 - 1510' 13.375" OD SURF CSG

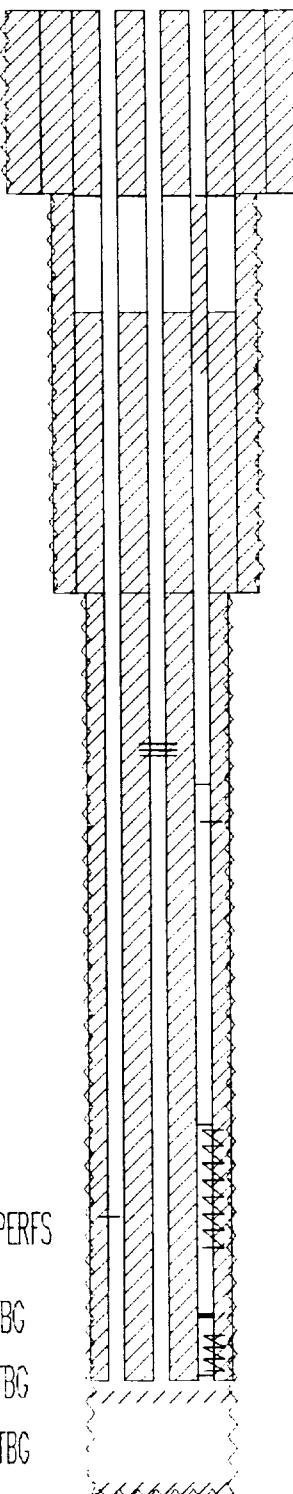
770 FNL & 2030 FEL  
SEC 1, TWN 18 S, RANGE 34 E  
ELEVATION: 4005 ES  
COMPLETION DATE: 11-16-63

\*\*\*\*  
COMPLETION INTERVAL: 9939 - 9964 (WTMP)  
P: 134 BOPD, 0 MCFD, 70 BWPD (FLOWING)

\*\*\*\*  
SECOND CMPL INTRVL: 6103 - 6105 (GLRT)  
TRT: 500 GALS ACID ( 6103 - 6105 )  
IP: 268 BOPD, 0 MCFD, 40 BWPD (FLOWING)

\*\*\*\*

2490 - 13 1/8" CEMENT 1600 SX TS



1600 - 3000' CEMENT PLUG

0 - 1510' 17.5" OD HOLE

1535 - 1535' SQUEEZE PERFS SQZD W/670 SX

0 - 1535' CEMENT ERDHD SQZ W/1000 SX

1510 - 4800' 12.25" OD HOLE

0 - 4800' 9.625" OD INT CSG

0 - 4800' CEMENT 1700 sx

5961 - 6152' PERFS GLORIETA 5/61 & 2/71

6103 - 6105' PERFS

6386 - 6390' RETAINER

6684 - 6697' SQUEEZE PERFS 28 SX

9200 - 9205' RETAINER

9246 - 10220' SQUEEZE PERFS 150 SX

10770 - 10790' CIBP HYDROMITE CAP

10872 - 11234' SQUEEZE PERFS 10 SX

11267 - 11270' FISH JUNK CIBP

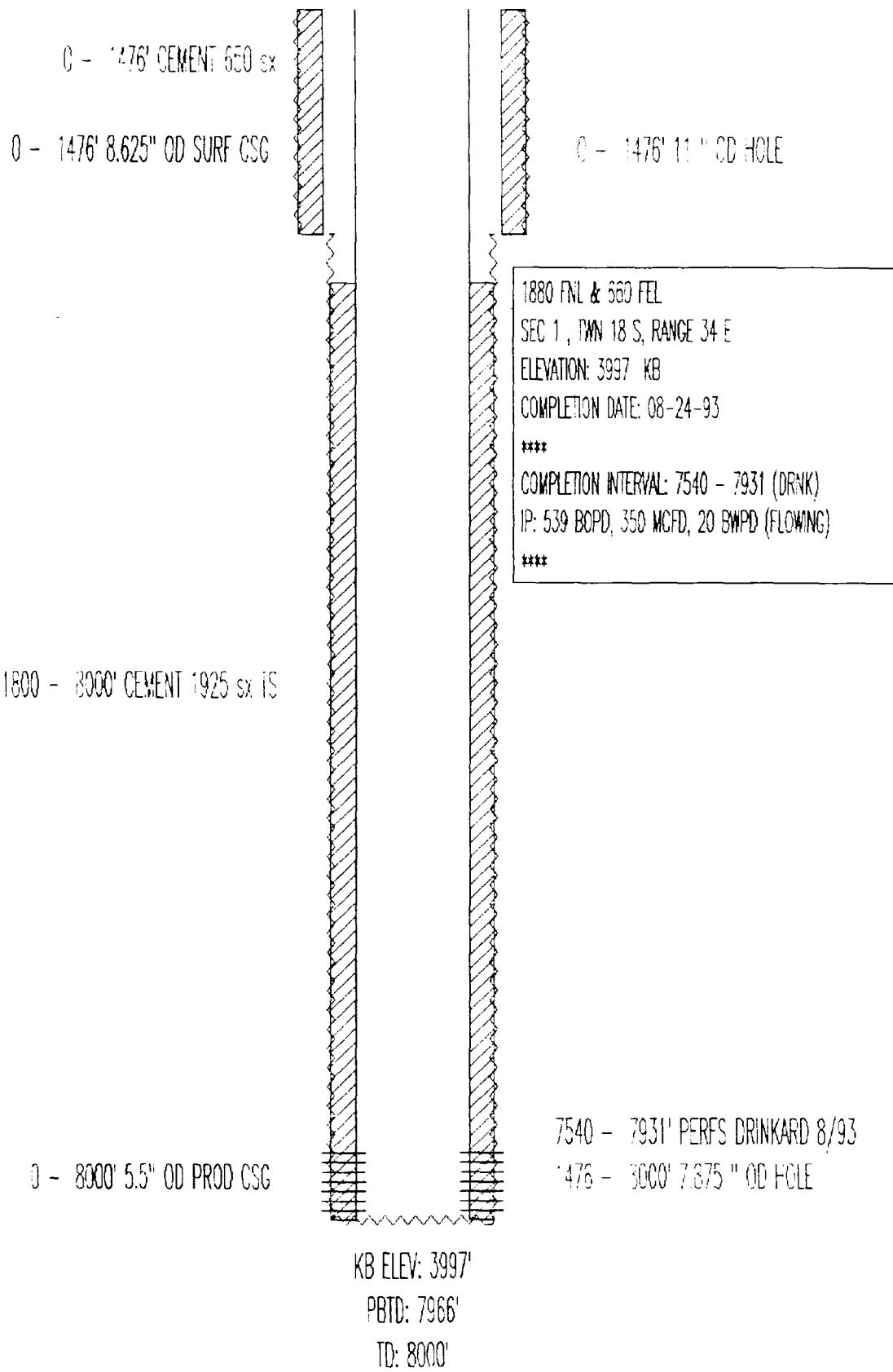
11400 - 11500' CEMENT PLUG

11800 - 11255' 8.5" OD HOLE

12155 - 12255' CEMENT PLUG

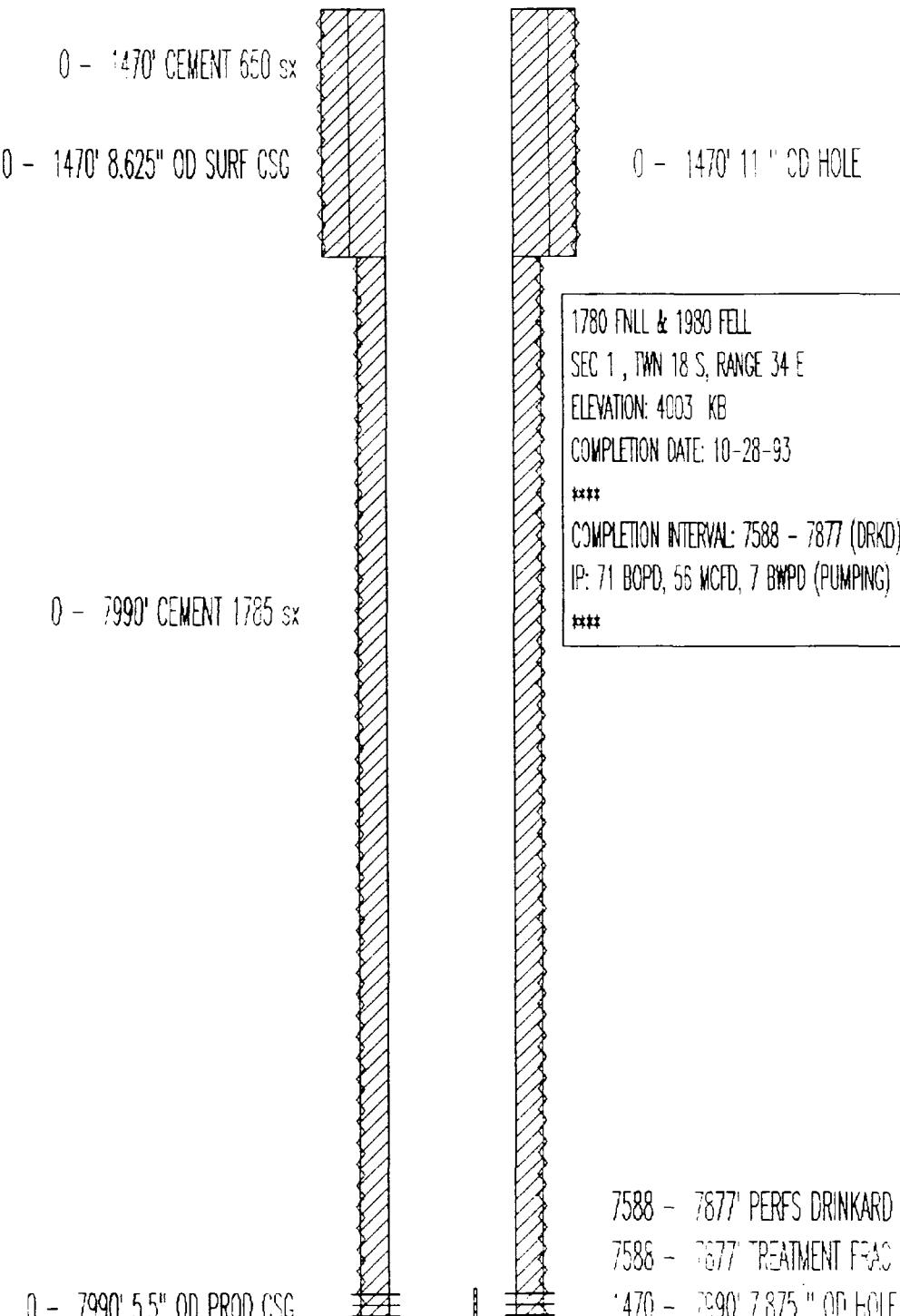
PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "L" STATE NO. 12  
API# 3002531992



PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "L" STATE NO. 13  
API# 3002532007

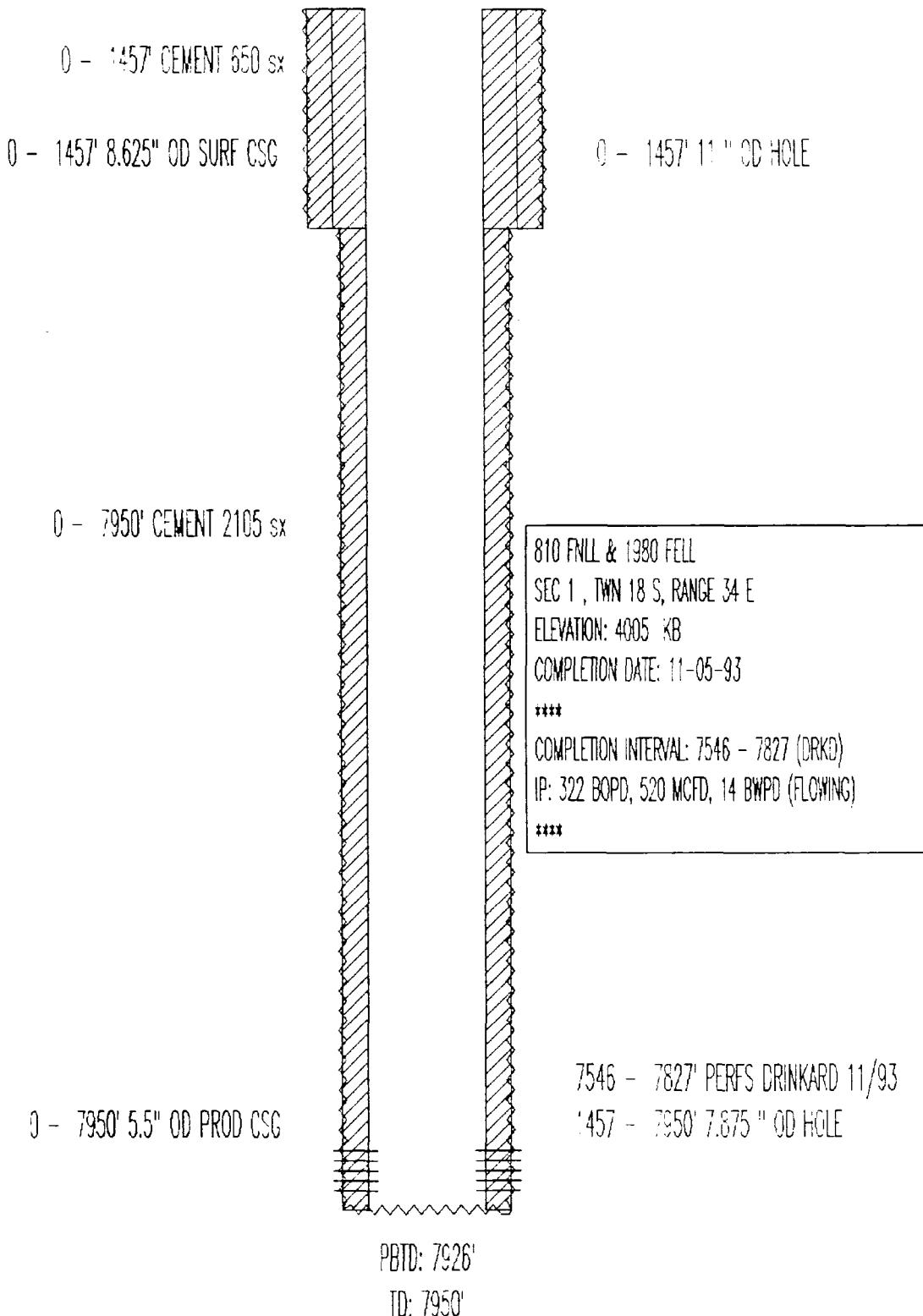


PBD: 7970'

TD: 7990'

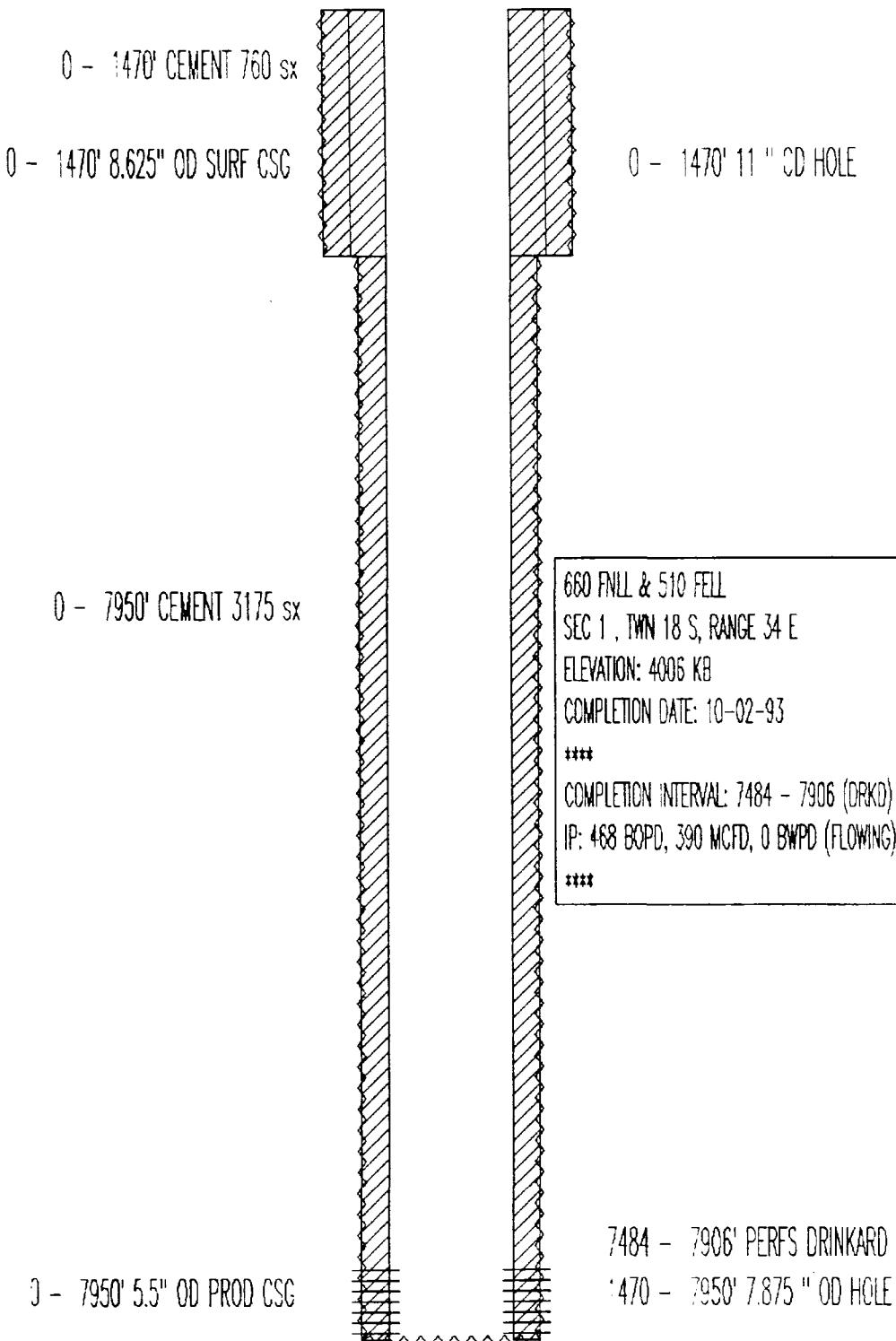
PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "L" STATE NO. 14  
API# 3002532008



PRODUCING  
DRINKARD

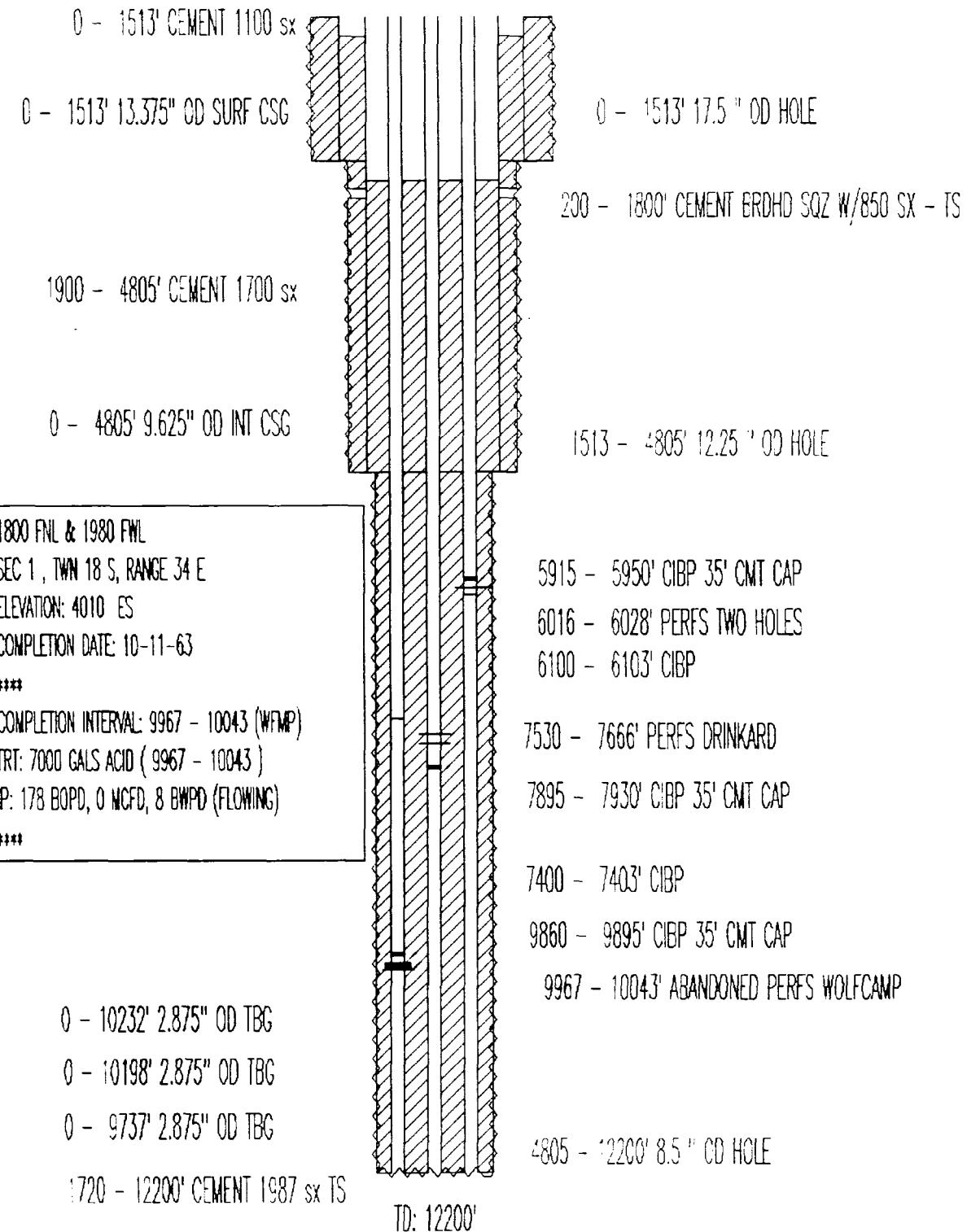
TEXACO EXPL & PROD  
NEW MEXICO "L" STATE NO. 15  
API# 3002532009



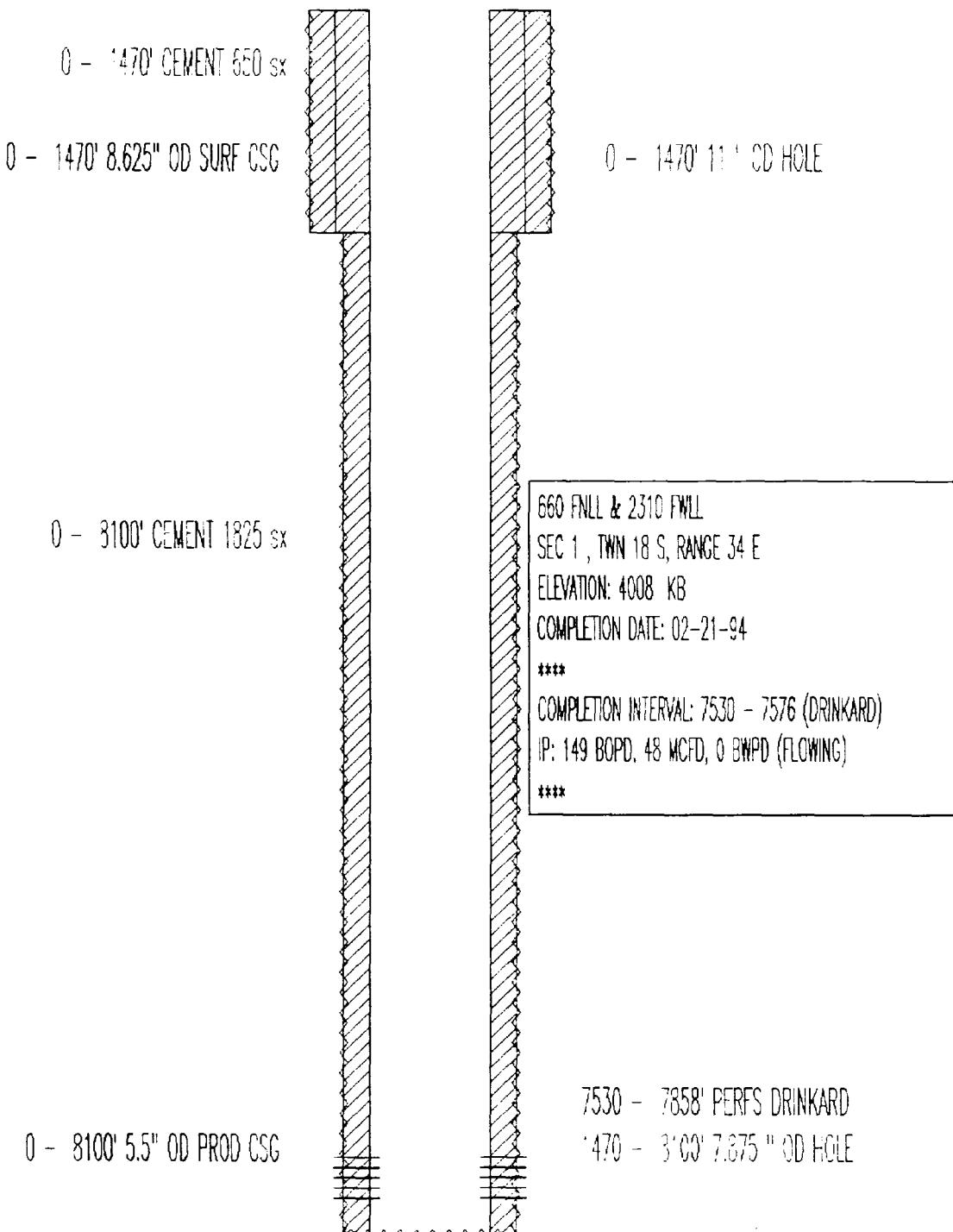
KB ELEV: 4006'  
PBTG: 7930'  
TD: 7950'

PRODUCING  
DRINKARD

TEXACO INC  
NEW MEXICO "M" ST. NO. 7  
API# 3002520494



TEXACO EXPL & PROD  
NEW MEXICO "M" STATE NO. 9  
API# 3002532016



KB ELEV: 4008'

PBTID: 8053'

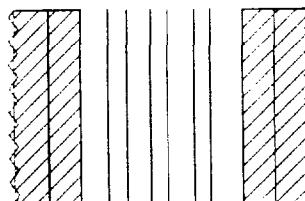
TD: 8100'

TEXACO INC  
NEW MEXICO "0" ST. NCT-1 NO. 14  
API# 3002520008

0 - 1593' CEMENT 1200 sx

0 - 2000' CEMENT ERDHD SQZ W/800SX - TS

0 - 1593' 13.375" OD SURF CSG



0 - 1593' 17.5" OD HOLE

2545 - 4825' CEMENT 1700 sx CALC

0 - 4825' 9.625" OD INT CSG

6649 - 6682' ABANDONED PERFS

9254 - 9260' PERFS COMMUNICATE STRINGS

10331 - 10336' PERFS COMMUNICATE STRINGS

11202 - 11270' ABANDONED PERFS

12114 - 12122' SQUEEZE PERFS 50 SX

5270 - 12154' CEMENT 1250 sx CBL

0 - 12152' 3.5" OD TBG

1593 - 4825' 12.25" OD HOLE

1874 FSL & 2086 FEL  
SEC 36, TWN 17 S, RANGE 34 E  
ELEVATION: 3992 GR  
COMPLETION DATE: 07-26-63

\*\*\*  
COMPLETION INTERVAL: 9954 - 10036 (WFMP)  
IP: 402 BOPD, 0 MCFD, 21 BWPD (FLOWING)

\*\*\*  
SECOND CMPL INTRVL: 9170 - 9254 (ABO )  
TRT: 1000 GALS ACID ( 9170 - 9254 )  
IP: 238 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*

9170 - 9254' PERFS

9954 - 10036' PERFS

10344 - 10462' ABANDONED PERFS

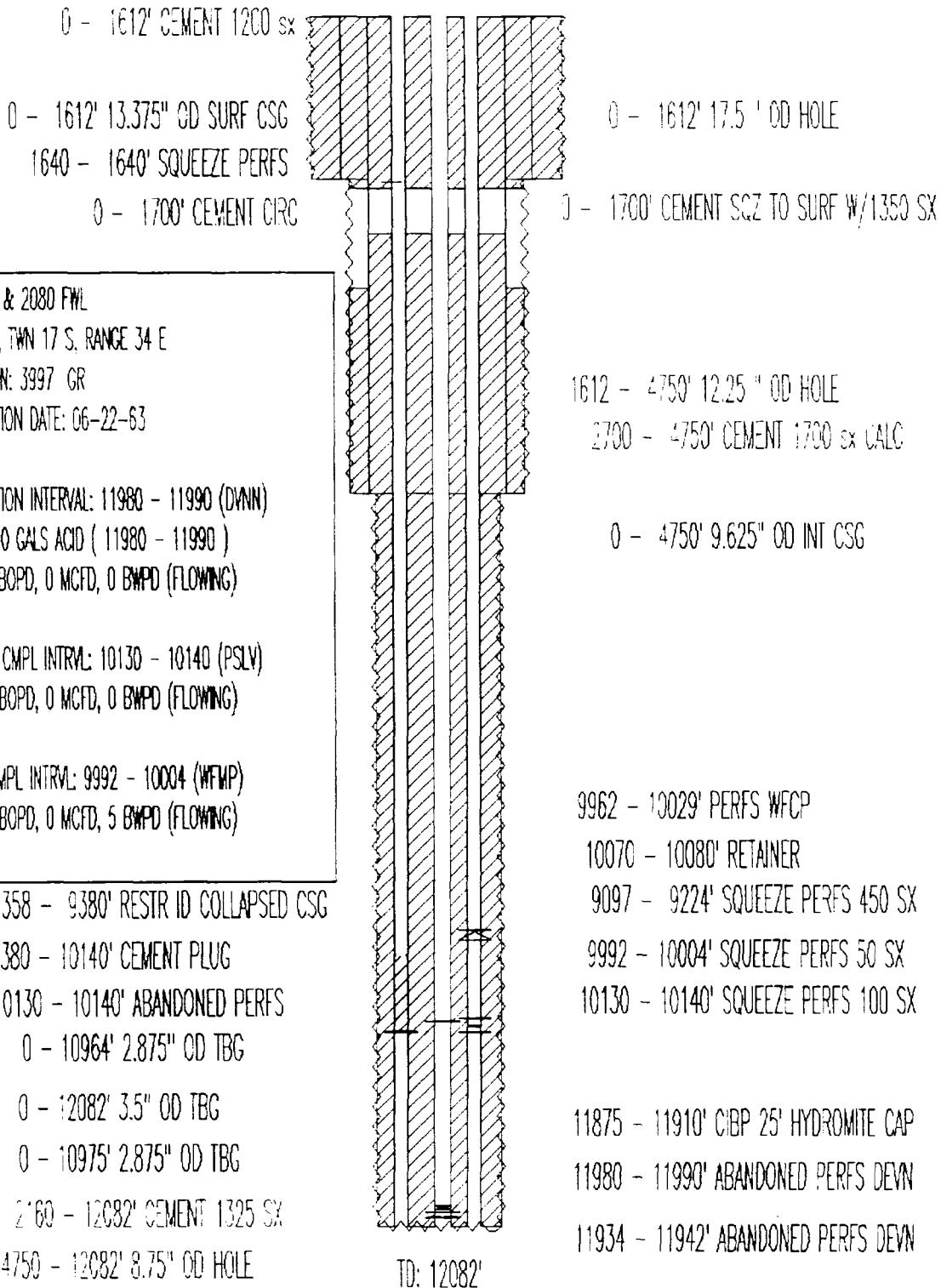
0 - 10818' 2.875" OD TBG

4825 - 12154' 8.75" OD HOLE

0 - 10816' 2.875" OD TBG

TD: 12154'

TEXACO E & P INC.  
N.M. "O" ST. NCT-1 NO. 17  
API# 3002520125



SHUT IN  
GLORIETA

TEXACO INC  
NEW MEXICO "O" STATE NO. 24  
API# 3002520946

O - 1534' CEMENT 1200 sx  
O - 1600' CEMENT BRDNHD SQZ W/900 SX  
O - 1534' 13.375" OD SURF CSG

1650 - 4418' CEMENT 1700 sx CALC

O - 4418' 9.625" OD INT CSG

1534 - 4418' 12.25" OD HOLE

5120 - 5155' CIBP 30' CMT CAP

5942 - 6200' ABANDONED PERFS GLORIETA

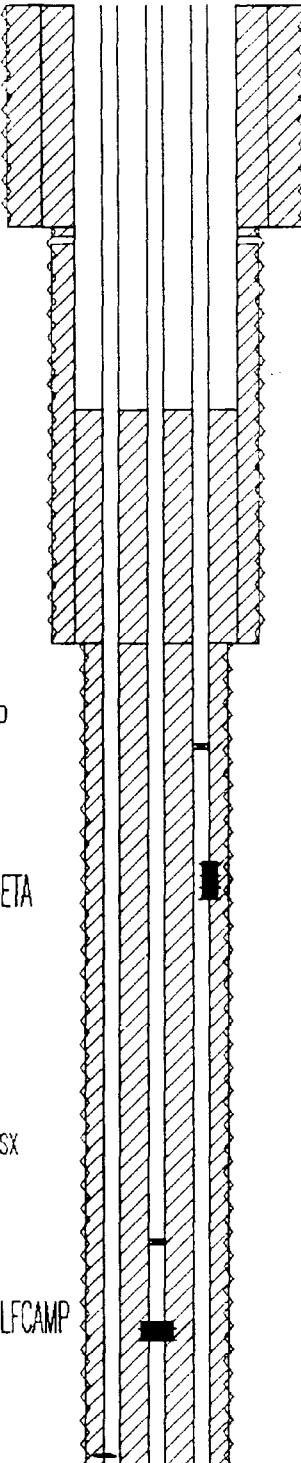
2800 - 10300' CEMENT 2400 sx

10042 - 10062' ABANDONED PERFS WOLFCAMP

O - 10294' 2.875" OD TBG

O - 10289' 2.875" OD TBG

O - 10300' 2.875" OD TBG



TD: 10300'

O - 1534' 17.5" OD HOLE

860 FSL & 660 FEL

SEC 36, TWN 17 S, RANGE 34 E

ELEVATION: 3995 KB

COMPLETION DATE: 07-04-64

\*\*\*

COMPLETION INTERVAL: 10042 - 10062 (WFMP)

TRT: 2000 GALS ACID ( 10042 - 10062 )

IP: 89 BOPD, 0 MCFD, 22 BWPD (S)

\*\*\*

SECOND CMPL INTERVAL: 9133 - 9263 (ABO )

TRT: 4500 GALS ACID ( 9133 - 9263 )

IP: 94 BOPD, 0 MCFD, 0 BWPD (S)

\*\*\*

THIRD CMPL INTERVAL: 5942 - 5954 (GLRT)

TRT: 500 GALS ACID ( 5942 - 5954 )

IP: 658 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*

8560 - 8595' CIBP 30' CMT CAP

9133 - 9263' ABANDONED PERFS ABO

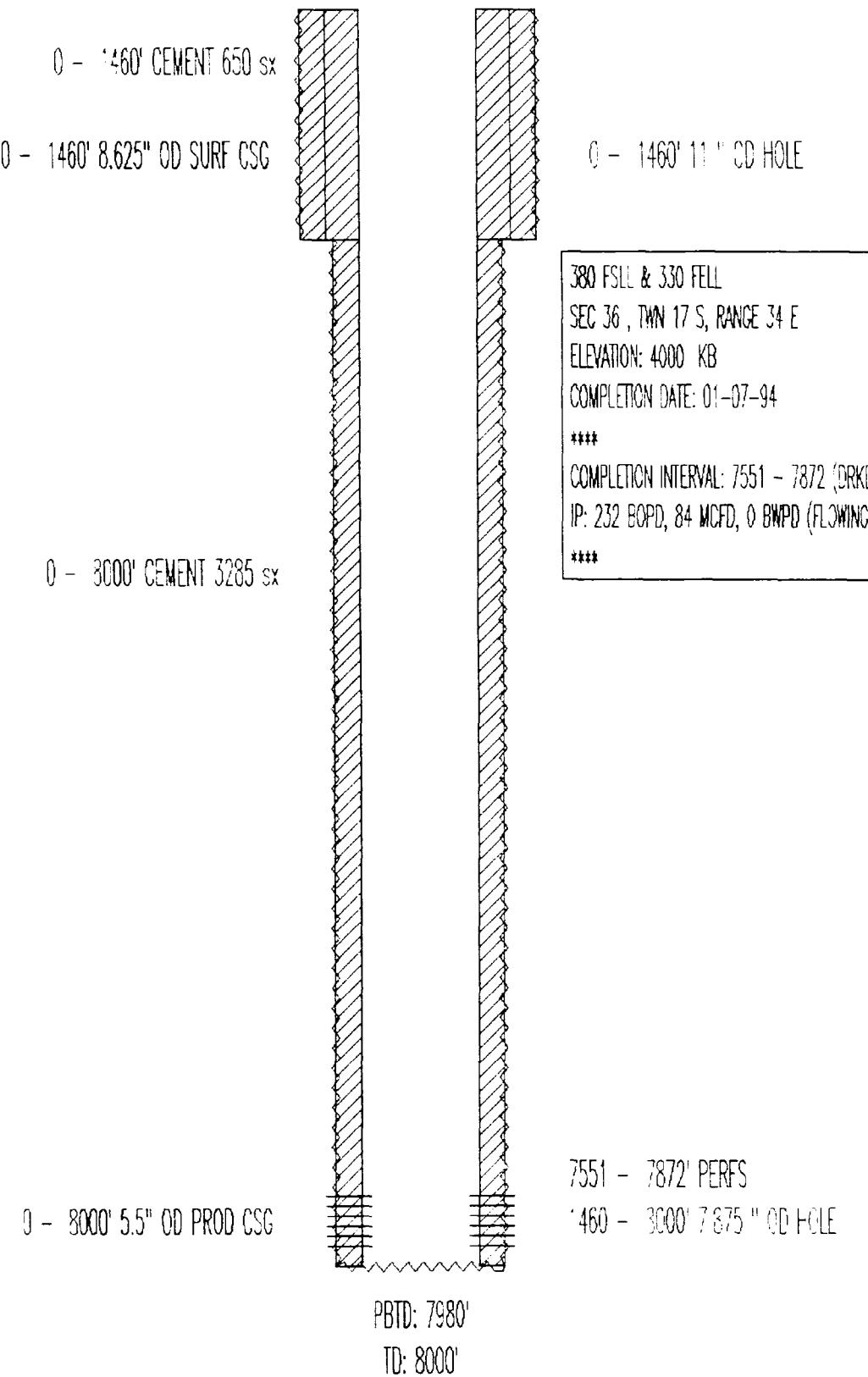
10134 - 10155' CIBP 16' HYDROMITE CAP

4418 - 10300' 8.5" OD HOLE

10206 - 10212' SQUEEZE PERFS PENN REEF 40 SX

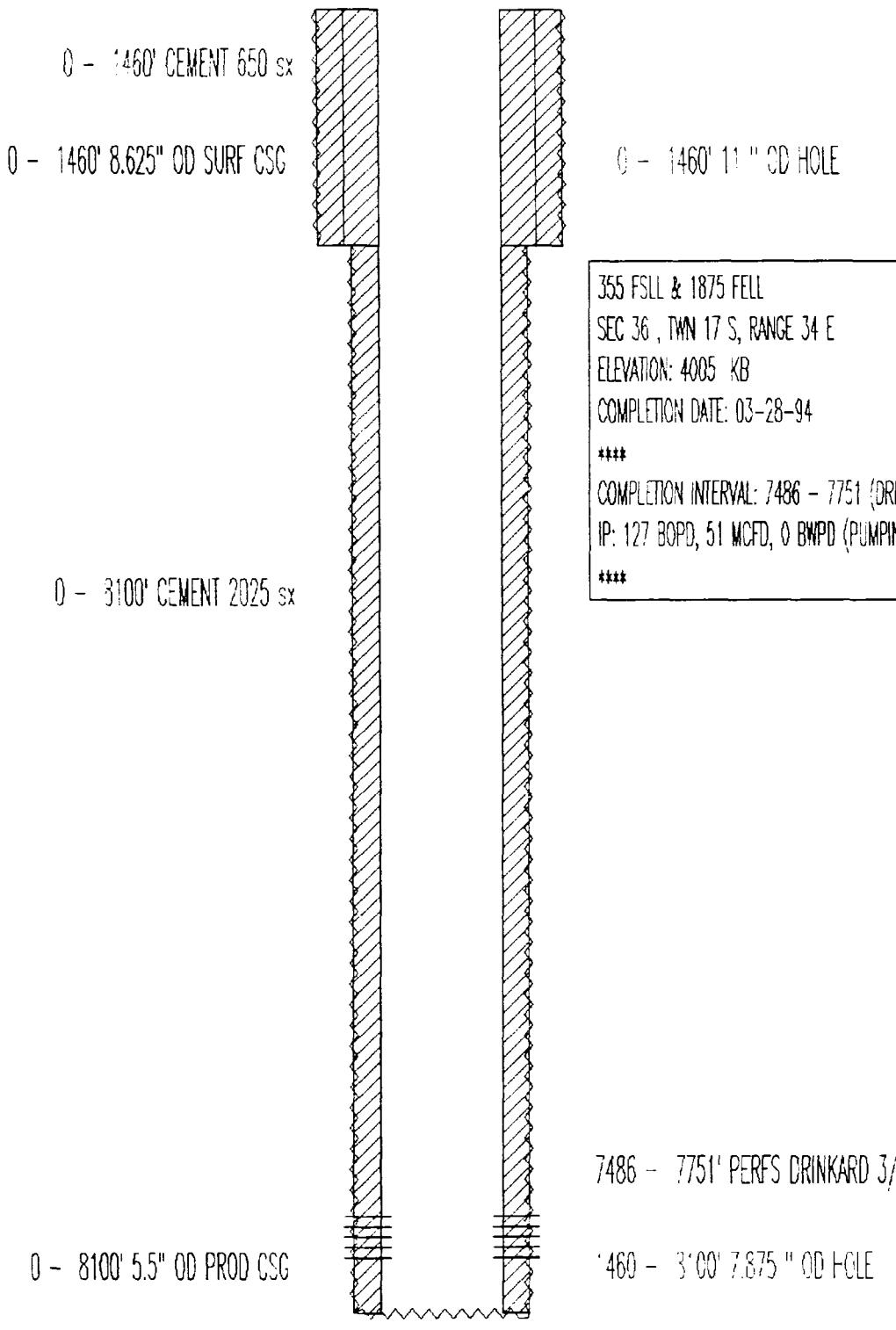
PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "O" STATE NO. 34  
API# 3002532271



PRODUCING  
DRINKARD

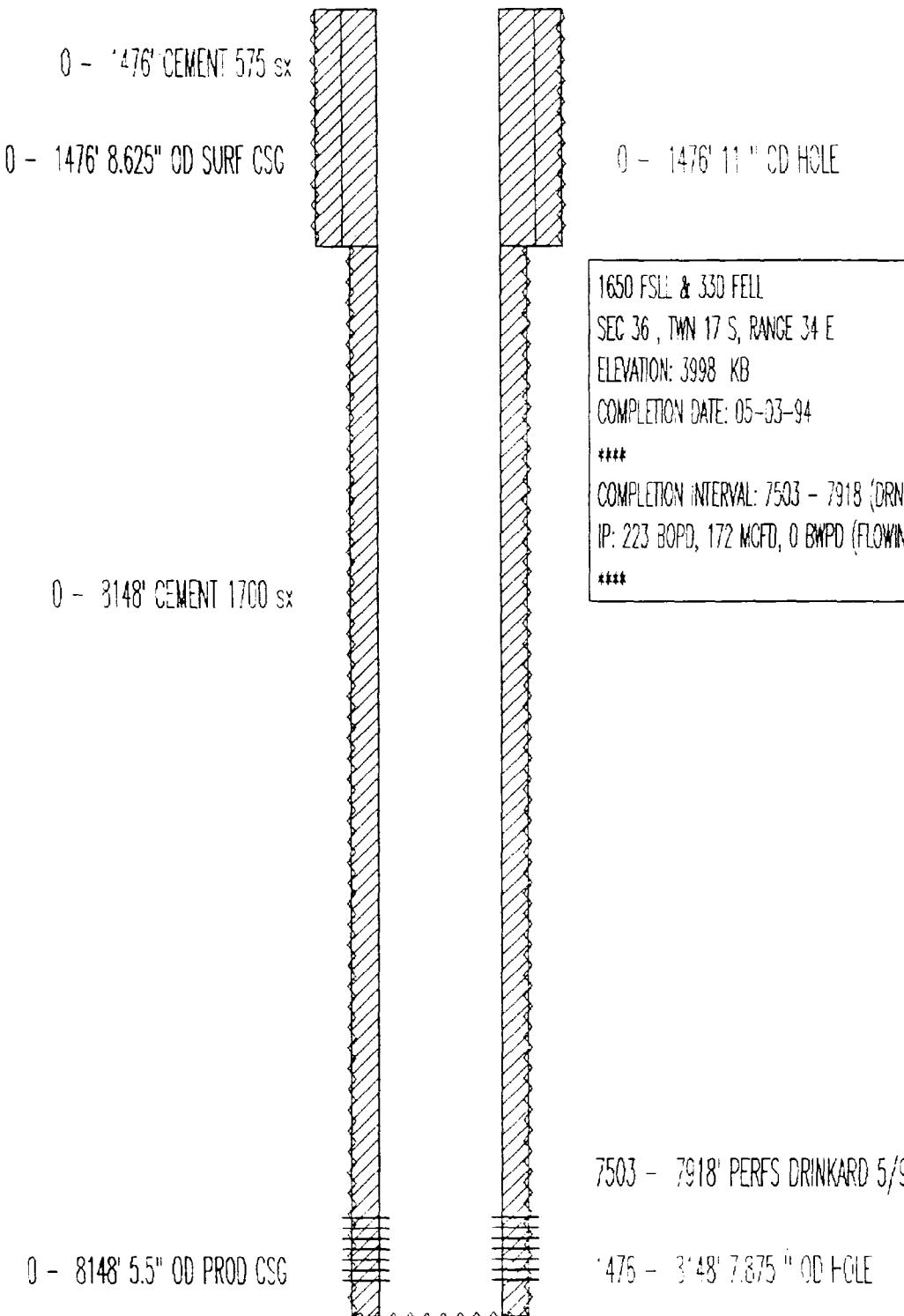
TEXACO EXPL & PROD  
NEW MEXICO "O" STATE NO. 35  
API# 3002532338



PBTI: 7980'

TD: 8100'

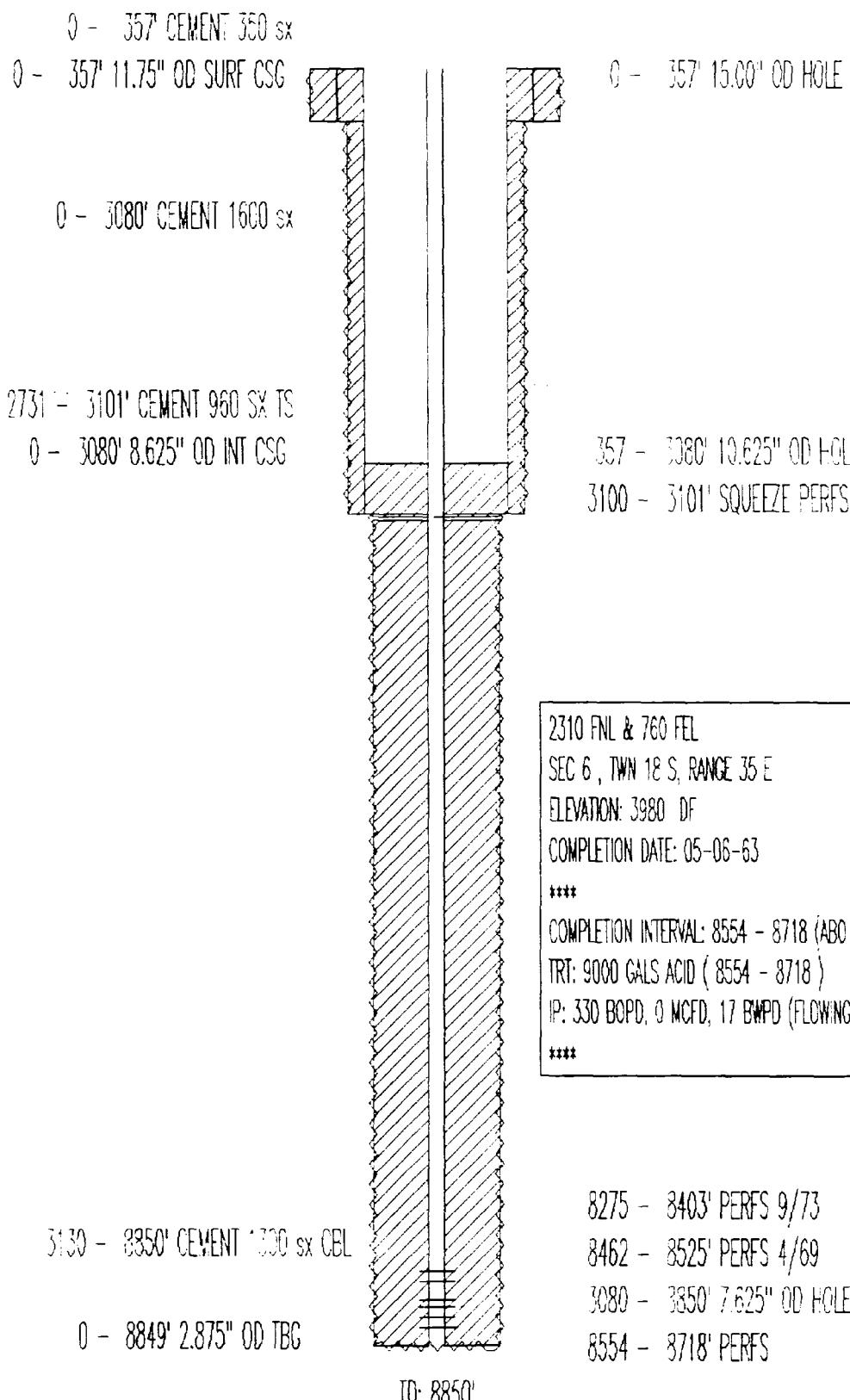
TEXACO EXPL & PROD  
NEW MEXICO "O" STATE NO. 37  
API# 3002532450



KB ELEV: 3998'  
PRTD: 8029'  
TD: 8148'

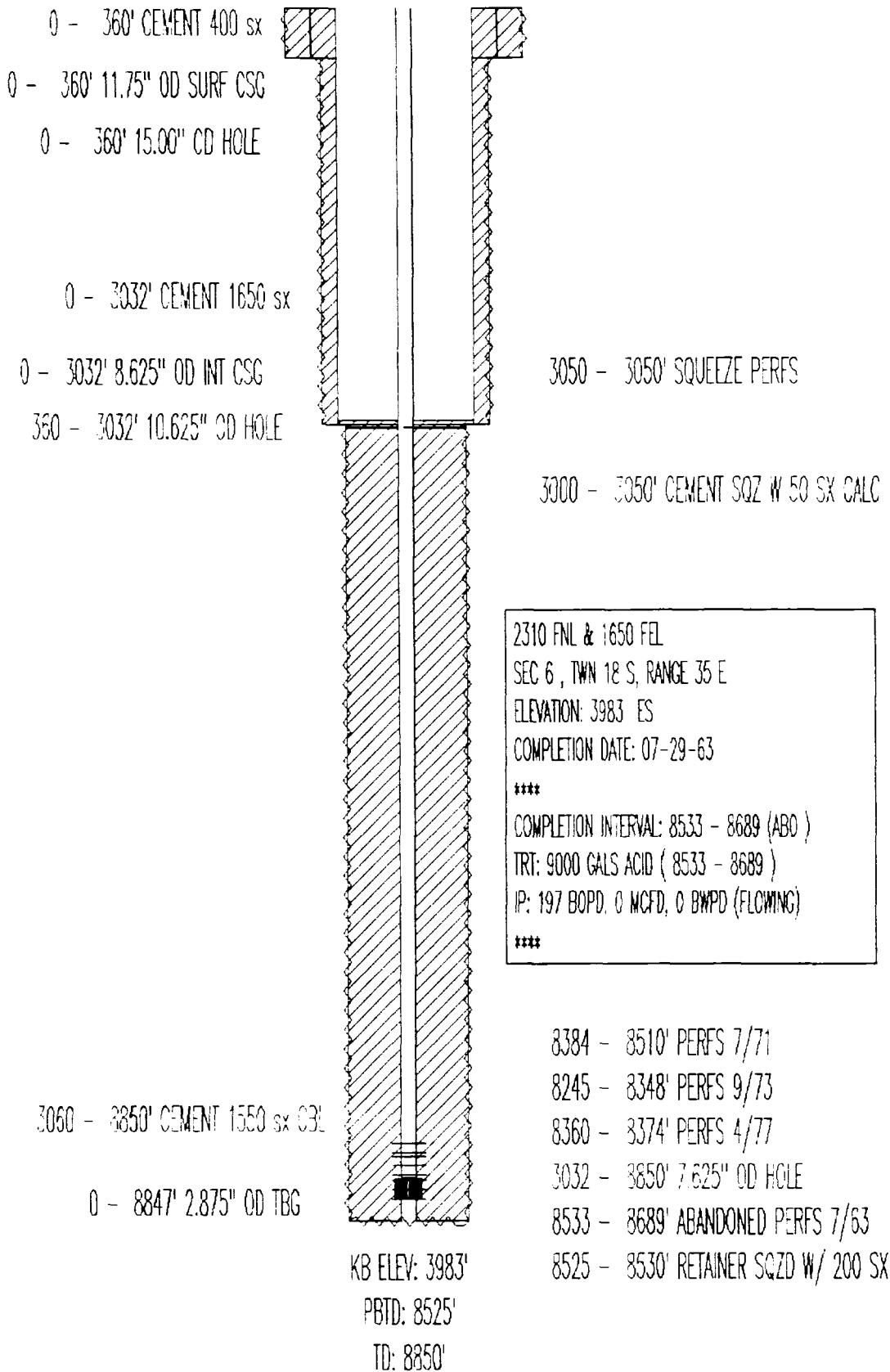
SHUT IN  
ABO REEF

TEXACO INC  
NEW MEXICO "R" ST. NCT-1 NO. 6  
API# 3002520053



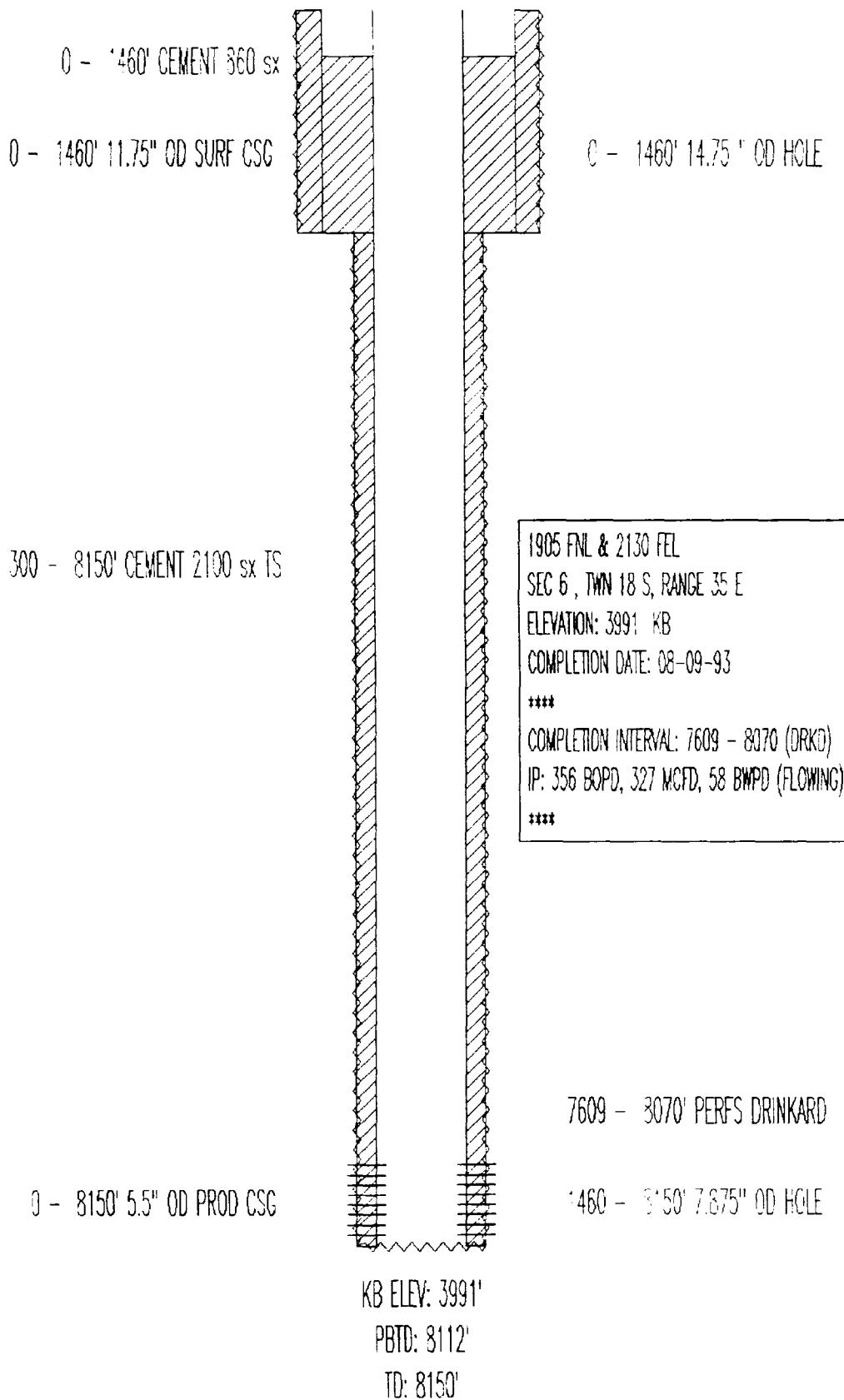
SHUT IN  
ABO REEF

TEXACO INC  
NEW MEXICO "R" ST. NCT-1 NO. 7  
API# 3002520503

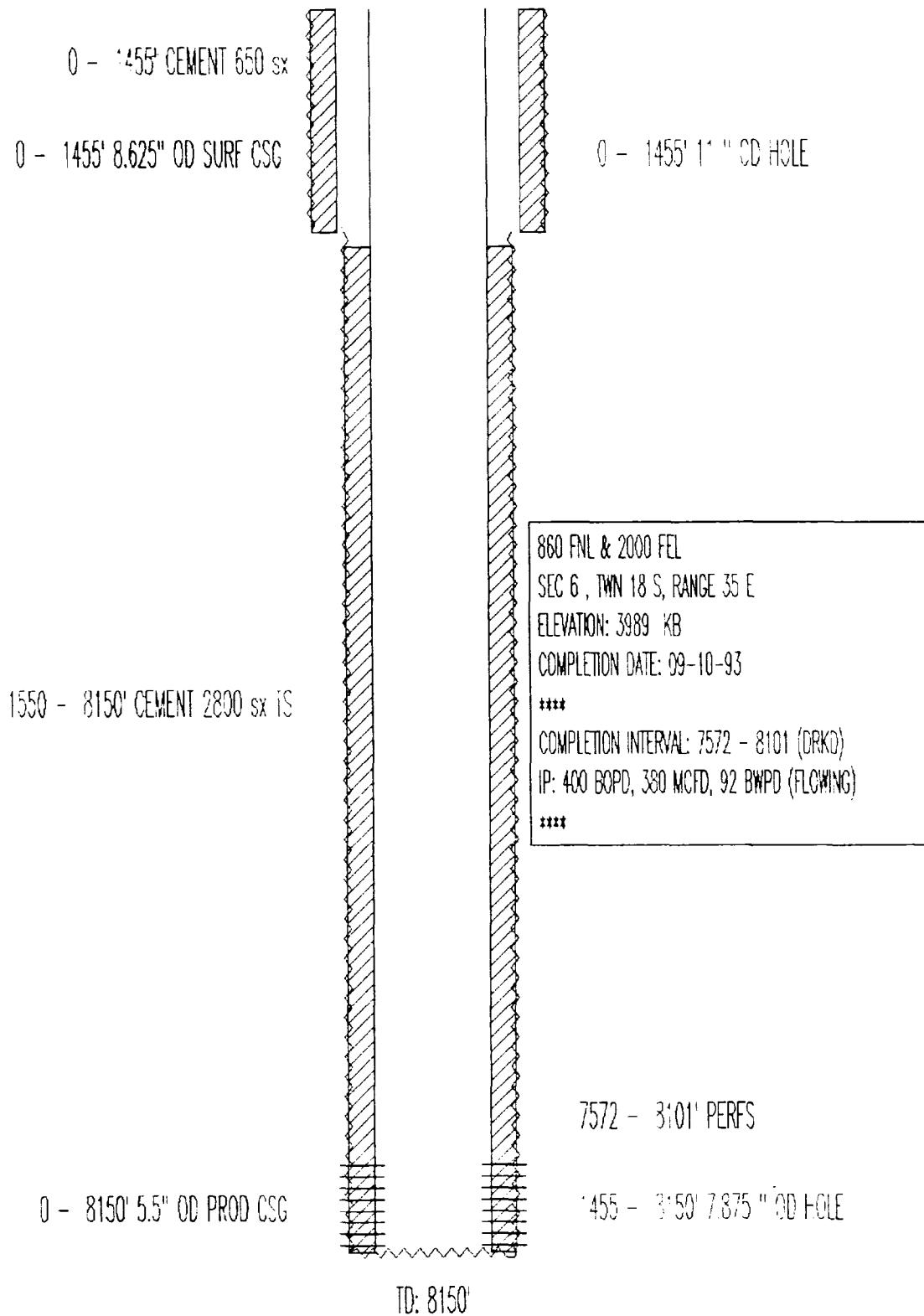


PRODUCER  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-1 NO. 13  
API# 3002531990

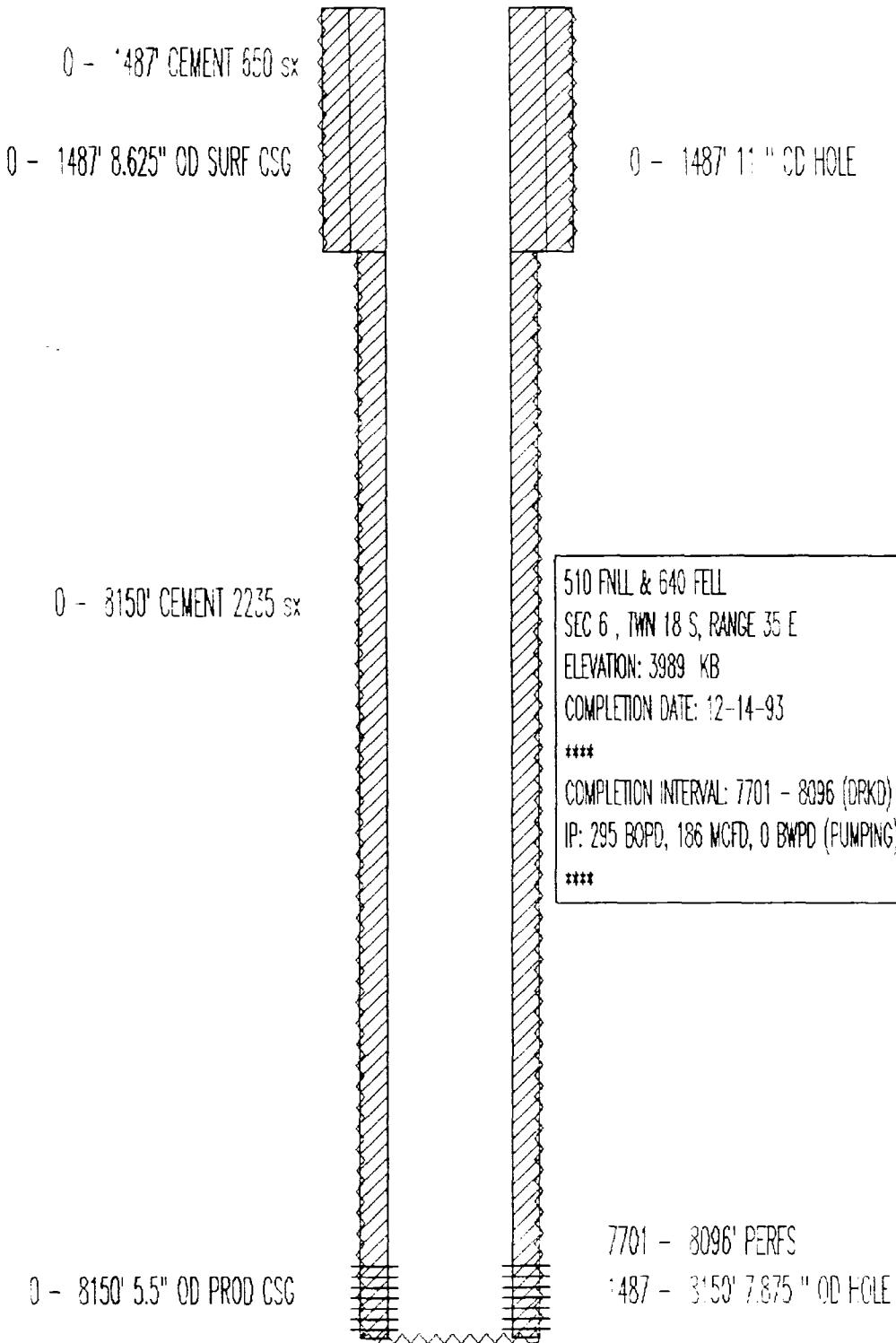


TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-1 NO.14  
API# 3002532018



PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-1 NO. 15  
API# 3002532019



PBTD: 8140'

TD: 8150'

P & A

TEXACO INC  
NEW MEXICO "R" ST. NCT-3 NO. 15  
API# 3002520950

0 - 355' 13.375" OD SURF CSG

0 - 105' CEMENT PLUG

435 - 435' SQUEEZE PERFS

1560 - 1660' CEMENT PLUG

500 - 4800' CEMENT 1700 sx

2720 - 2820' CEMENT PLUG

0 - 4800' 9.625" OD INT CSG

4700 - 4820' CEMENT PLUG

355 - 4800' 12.25" OD HOLE

5965 - 6000' CIBP 35' CMT CAP

4820 - 10200' CEMENT 2400 sx

8405 - 8440' CIBP 35' CMT CAP

8495 - 8706' ABANDONED PERFS ABO

9765 - 9800' CIBP 35' CMT CAP

4820 - 10200' 2.875" OD TBC

4820 - 10200' 2.875" OD TBC

4800 - 10200' 8.5" OD HOLE

0 - 455' CEMENT PLUG

0 - 355' 7.5" OD HOLE

487 FSL & 560 FEL

SEC 1, TWN 18 S, RANGE 34 E

ELEVATION: 3996 ES

COMPLETION DATE: 06-05-64

\*\*\*\*

COMPLETION INTERVAL: 8495 - 8706 (ABO )

TRT: 11500 GALS ACID ( 8495 - 8706 )

IP: 142 BOPD, 0 MCFD, 120 BWPD (S)

\*\*\*\*

5965 - 6000' CIBP 35' CMT CAP

8405 - 8440' CIBP 35' CMT CAP

9765 - 9800' CIBP 35' CMT CAP

9852 - 9862' ABANDONED PERFS WOLFCAMP

9923 - 9925' CIBP

9958 - 9959' ABANDONED PERFS WOLFCAMP

9968 - 9978' SQUEEZE PERFS WOLFCAMP

TD: 10200'

PRODUCING  
DRINKARD

TEXACO PROD  
NEW MEXICO "R" ST. NCT-3 NO. 24  
API# 3002529925

0 - 40' CEMENT REDIMIX

0 - 407' CEMENT 1000 SX

0 - 40' 40" OD SURF CSG

0 - 407' 26" OD SURF CSG

0 - 1565' 20" CD INT CSG

0 - 1565' CEMENT 2150 SX

0 - 5000' 9 5/8" OD INT CSG

0 - 5000' CEMENT 3700 SX

1565 - 5000' 12.25" OD HOLE

7982 - 8000' CIBP 18" CMT CAP

5000 - 11100' 8.75" OD HOLE

0 - 11100' CEMENT 2050 SX

0 - 11100' 7" OD PROD CSG

10115 - 10150' CIBP 35" CMT CAP

11060 - 11100' CIBP 40" CMT CAP

10710 - 10750' CIBP 40" CMT CAP

10799 - 11676' 5" OD LINER

10799 - 11676' CEMENT 175 SX

11100 - 11994' 6.25" OD HOLE

0 - 40' 48" OD HOLE

40 - 407' 30" CD HOLE

407 - 1565' 24" OD HOLE

860 FSL & 660 FEL

SEC 1, TWN 18 S, RANCE 34 E

ELEVATION: 4011 K3

COMPLETION DATE: 11-18-87

TESTED DEVONIAN, LOWER MISS, AND UPPER PENN

NOT PRODUCED

PLUGGED BACK TO VACUUM DRINKARD 12-4-92

7638 - 7900' PERFS DRINKARD

10192 - 10263' ABANDONED PERFS UPPER PENN

11612 - 11652' C.BP 40" CMT CAP

11192 - 11238' ABANDONED PERFS LOWER MISS

11812 - 11912' CEMENT PLUG

11915 - 11994' TREATMENT DEVONIAN-ACID 100% H2O

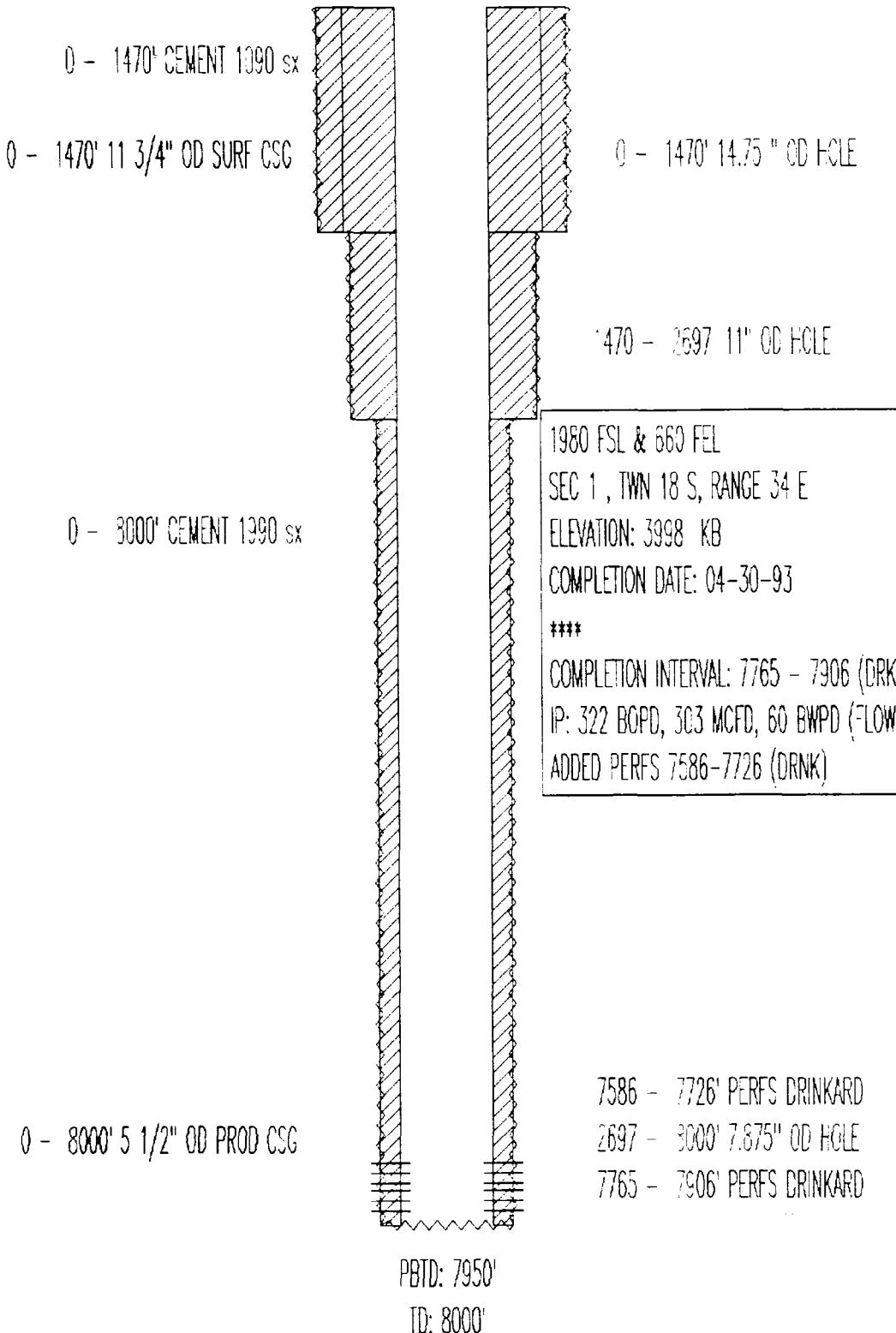
KB ELEV: 4011'

PBTG: 7982'

TD: 11994'

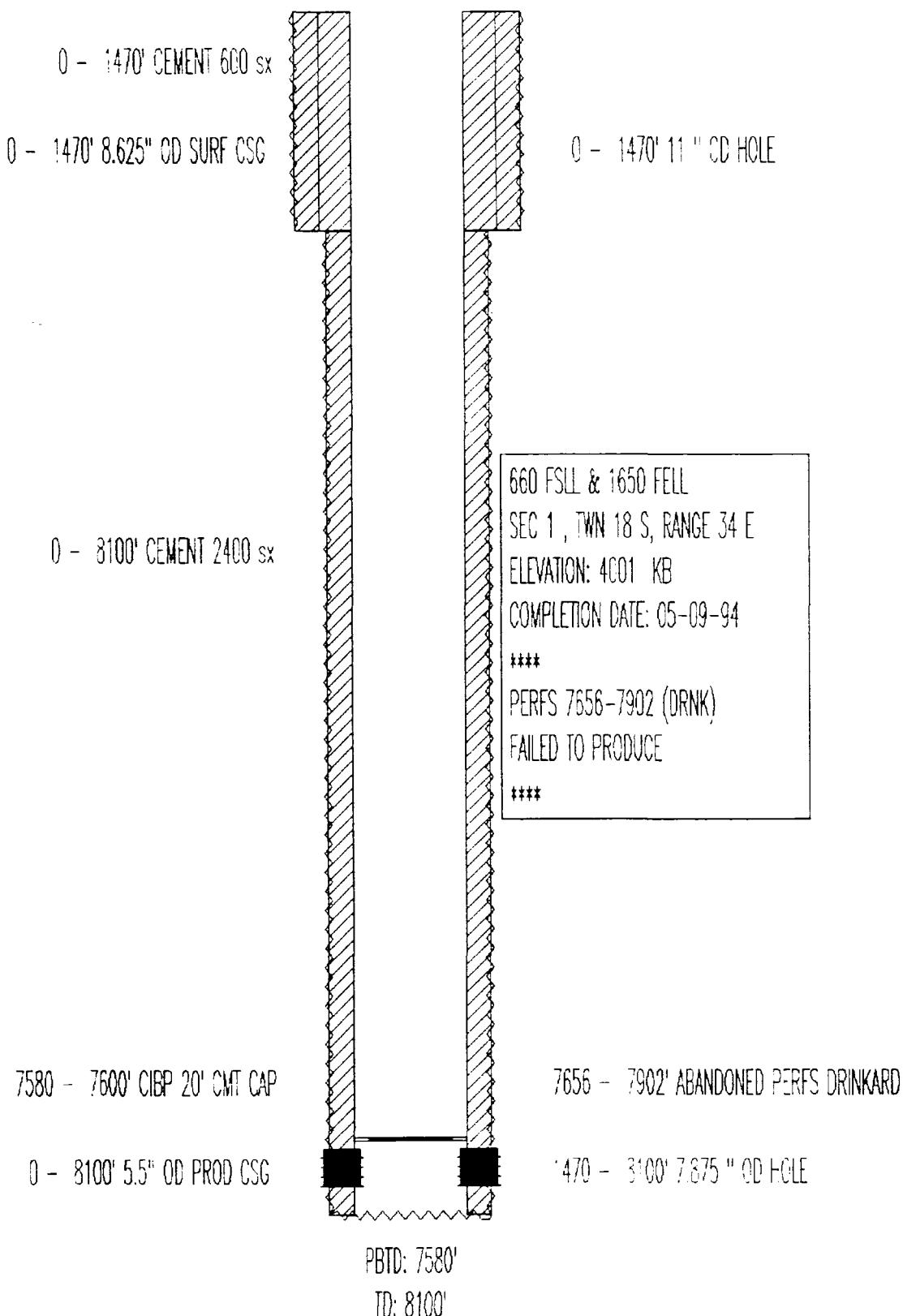
PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-3 NO. 25  
API# 3002531930



SHUT IN  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "R" ST. NCT-3 NO. 27  
API# 3002532004



PRODUCING  
DRINKARD

TEXACO INC  
NEW MEXICO "AB" ST. NO. 3  
API# 3002503086

0 - 343' 10.75" OD SURF CSG

0 - 343' CEMENT 250 sx

0 - 1600' CEMENT

2500 - 5404' CEMENT 300 sx

0 - 5404' 7.625" OD INT CSG

5324 - 8856' CEMENT 550 sx

8115 - 8150' CIBP 35' CMT CAP

8400 - 8856' BAR FISH TUBING, ANCHOR, WL TOOLS

5324 - 8856' 4 1/2" OD LINER

0 - 343' 13.5" OD HOLE

1600 - 1600' SQUEEZE PERFS 450 SX

660 FSLL & 1980 FELL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3966 GR  
COMPLETION DATE: 12-28-61  
\*\*\*\*  
COMPLETION INTERVAL: 8672 - 8846 (ABRF)  
IP: 353 BOPD, 0 MCFD, 0 BWPD (FLOWING)  
\*\*\*\*

343 - 5404' 9.75" OD HOLE

7600 - 7981' PERFS DRINKARD 4/93

8253 - 3458' ABANDONED PERFS ABO 5/73

8492 - 3648' ABANDONED PERFS ABO 2/68

5404 - 3856' 6.75" OD HOLE

8672 - 3846' ABANDONED PERFS ABO 12/61

TD: 8856'

SHUT IN  
ABO REEF

TEXACO INC  
NEW MEXICO "AB" STATE NO. 4  
API# 3002503087

0 - 327' 10 3/4" OD SURF CSG

0 - 327' CEMENT 350 sx

650 - 5228' CEMENT 900 sx

0 - 5228' 7 5/8" OD INT CSG

5108 - 9097' CEMENT 550 sx

0 - 327' 15.0" OD HOLE

1650 FSL & 660 FEL  
SEC 6, TWN 18 S, RANGE 35 E  
ELEVATION: 3984 DF  
COMPLETION DATE: 12-22-61  
\*\*\*  
COMPLETION INTERVAL: 8674 - 8826 (ABRF)  
IP: 341 BOPD, 0 MCFD, 0 BWPD (FLOWING)  
\*\*\*\*

327 - 5228' 9.375" OD HOLE

8208 - 3439' PERFS ABO 7/73  
8483 - 3640' PERFS ABO 1/68  
8674 - 3826' PERFS ABO 12/61  
5228 - 9080' 6.75" OD HOLE

PBTD: 9066'

TD: 9080'

P & A

TEXACO INC  
NEW MEXICO "AB" STATE NO. 5  
API# 3002520163

0 - 1454' CEMENT PLUG 100 SX

0 - 340' 11.75" OD SURF CSG

0 - 340' CEMENT 300 SX

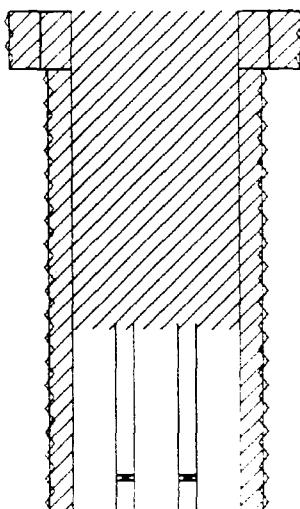
C - 340' 15.00" OD HOLE

0 - 3070' CEMENT 1400 SX

1454 - 1750' CEMENT PLUG 100 SX

1750 - 1900' CEMENT PLUG 400 SX

0 - 3070' 8.625" OD INT CSG



2765 - 2805' CIBP 35' CMT CAP

2765 - 2805' CIBP 35' CMT CAP

340 - 3370' 11.00" OD HOLE

1800 FSLL & 1650 FELL

SEC 6, TWN 18 S, RANGE 35 E

ELEVATION: 3982' GR

COMPLETION DATE: 03-14-63

\*\*\*

COMPLETION INTERVAL: 8694 - 8794 (ABO)

TRT: 6000 GALS ACID ( 8694 - 8794 )

IP: 208 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*

6200 - 8851' CEMENT 1500 SX TS

8172 - 8794' ABANDONED PERFS

TD: 8851'

3965 - 4005' CIBP 35' CMT CAP

3965 - 4005' CIBP 35' CMT CAP

1860 - 3850' 2.875" OD TBC

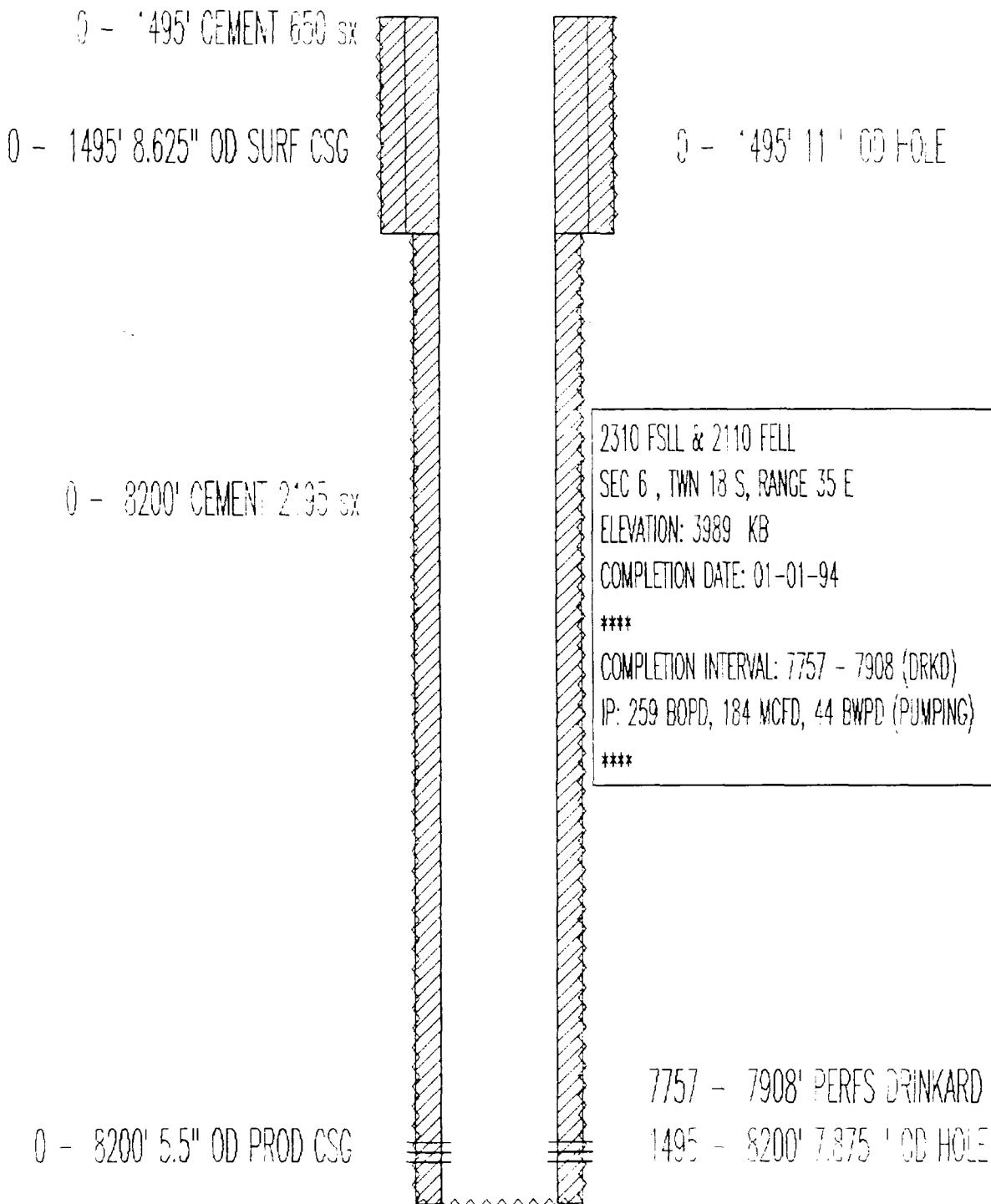
1860 - 3849' 2.875" OD TBC

3300 - 6588' ABANDONED PERFS SQZD W/190 SX

3670 - 3851' 7.875" OD HOLE

PRODUCING  
DRINKARD

TEXACO EXPL & PROD  
NEW MEXICO "AB" STATE NO. 13  
API# 3002531991



KB ELEV: 3989'

PBTD: 8155'

TD: 8200'

PRODUCING  
ABO REEF

EXXON  
NEW MEXICO "BO" ST. NO. 7  
API# 3002520176

0 - 302' 13.375" OD SURF CSG

0 - 302' CEMENT 325 sx

0 - 1900' CEMENT

0 - 1900' CEMENT 1350 sx

2200 - 3403' CEMENT 650 sx TS

0 - 3403' 8.625" OD INT CSG

2100 - 8996' CEMENT 1200 sx TS

8595 - 8600' CIBP 1 SK CMT

0 - 8996' 4.5" OD PROD CSG

8870 - 8875' CIBP 1 SK CMT

C - 302' 13.375" OD HOLE

1900 - 1900' SQUEEZE PERFS

302 - 3403' 12.25" OD HOLE

995 FNL & 330 FEL  
SEC 12, TWN 18 S, RANGE 34 E  
ELEVATION: 3982' DF  
COMPLETION DATE: 04-21-63

\*\*\*  
COMPLETION INTERVAL: 8343 - 8544 (ABO )  
TRT: 12000 GALS ACID ( 8343 - 8544 )  
IP: 144 BOPD, 0 MCFD, 8 BWPD (FLOWING)

\*\*\*\*

8914 - 8953' ABANDONED PERFS

8343 - 8544' PERFS

8544 - 8578' PERFS

3403 - 3000' 7.625" OD HOLE

8620 - 8749' ABANDONED PERFS

TD: 9000'

PRODUCING  
ABO-WFMP

MOBIL OIL  
STATE CC CCM NO. 1  
API# 3002520872

0 - 360' 16" OD SURF CSG

0 - 360' CEMENT 350 sx

0 - 715' CEMENT PLUG 15 SX

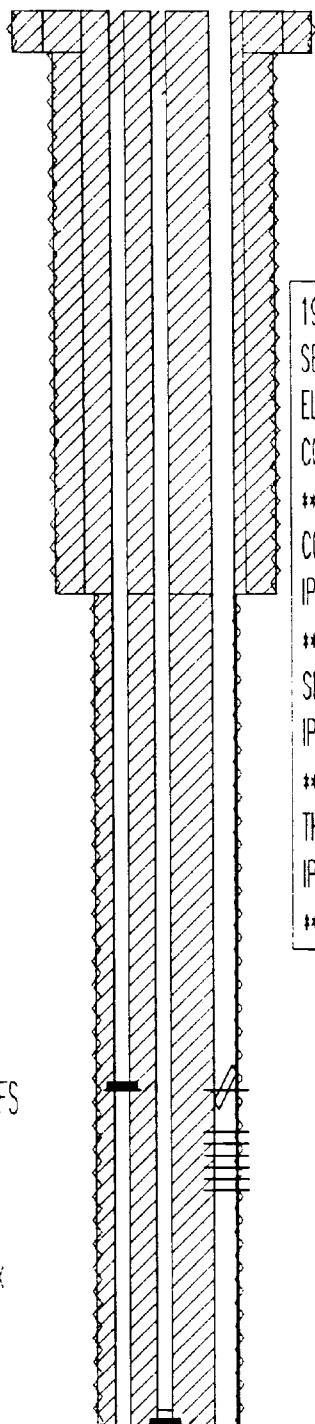
0 - 715' CEMENT PLUG 15 SX

0 - 4967' CEMENT 2175 sx

0 - 4967' 10.75" OD INT CSG  
360 - 4967' 14.75" OD HOLE

9115 - 9185' ABANDONED PERFS

0 - 12080' CEMENT 4460 sx  
0 - 12080' 2.875" OD TBG  
0 - 12080' 2.875" OD TBG  
4967 - 12080' 9.5" OD HOLE



C - 360 20" OD HOLE

1980 FSL & 860 FWL  
SEC 36, TWN 17 S, RANGE 34 E  
ELEVATION: 4001' ES  
COMPLETION DATE: 08-12-64

\*\*\*\*  
COMPLETION INTERVAL: 9115 - 9185 (ABO )  
IP: 179 BOPD, 0 MCFD, 0 BWPD (FLOWING)

\*\*\*\*  
SECOND CMPL INTRVL: 11972 - 12028 (WNN)  
IP: 104 BOPD, 0 MCFD, 21 BWPD (FLOWING)

\*\*\*\*  
THIRD CMPL INTRVL: 9962 - 10032 (WFMP)  
IP: 211 BOPD, 0 MCFD, 4 BWPD (FLOWING)

9115 - 9185' PERFS ABO  
8962 - 9350' BAR FISH TBG & PMP  
9442 - 10032' PERFS WFMP

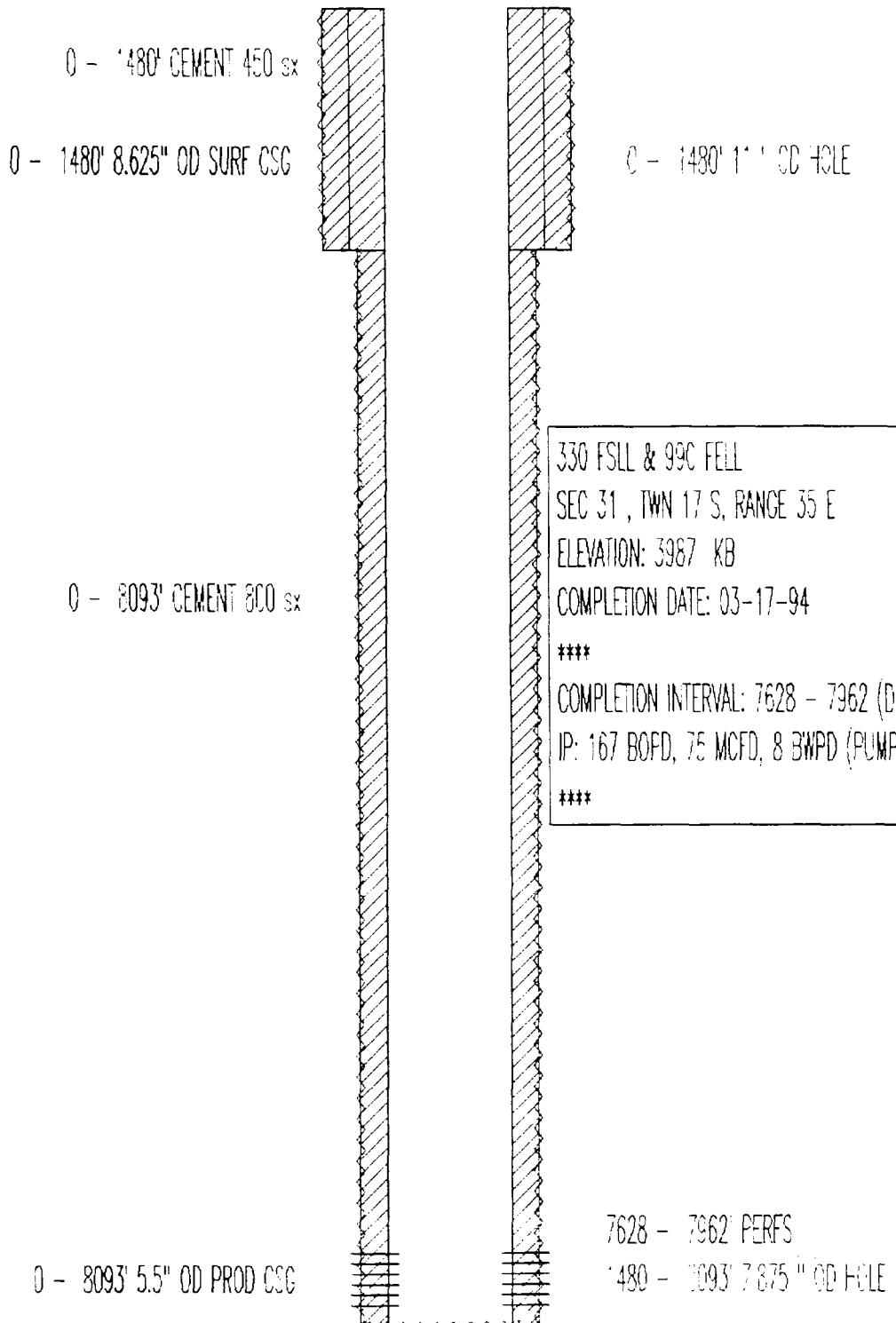
11895 - 11896' CIBP CMT CAP  
11972 - 12028' ABANDONED PERFS

0 - 10222' 4.5" OD TBG

KB ELEV: 4001'  
PBTID: 11895'  
TD: 12080'

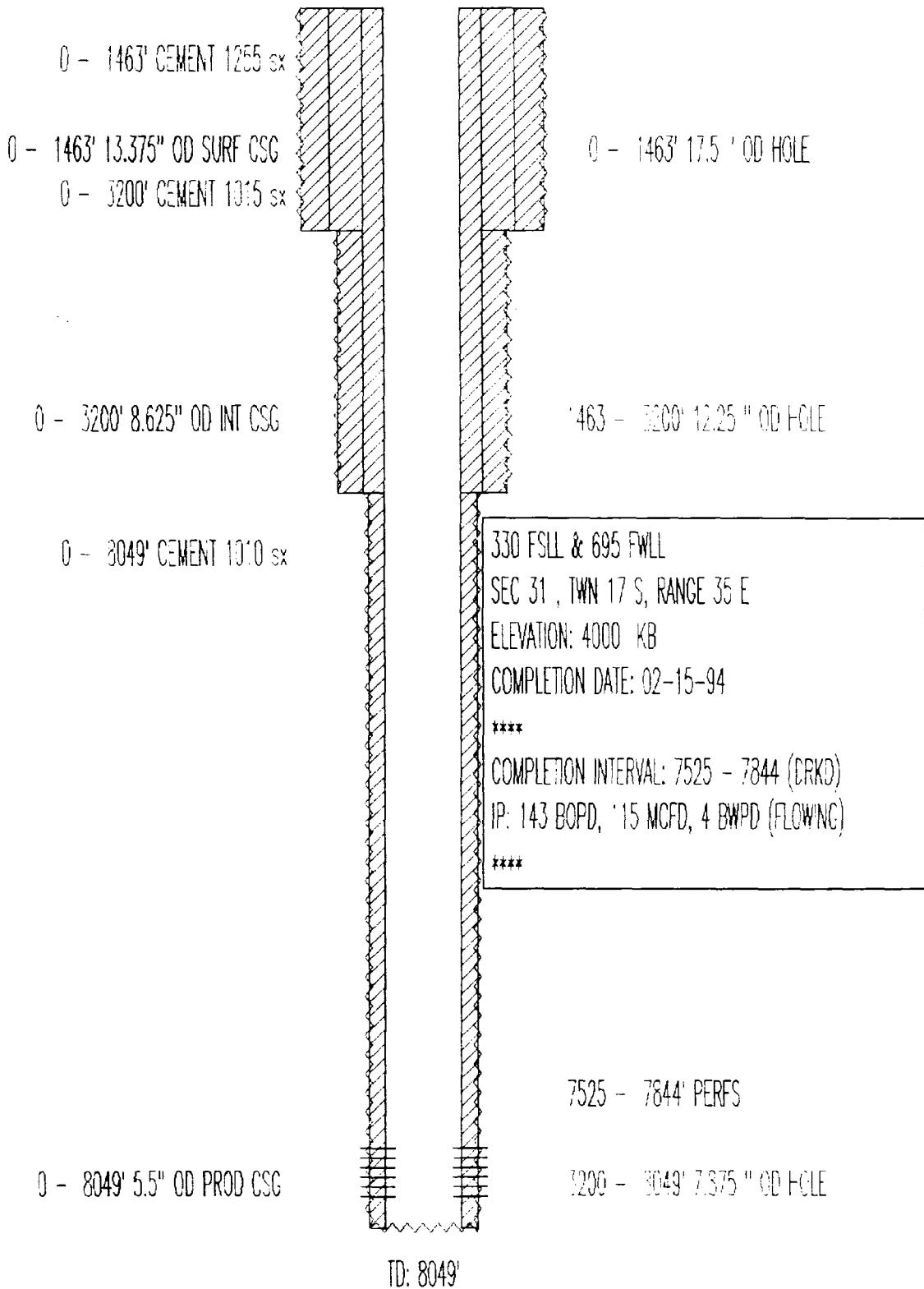
PRODUCING  
DRINKARD

MOBIL PRODUCING TX & NM  
STATE "K" NO. 12  
API# 3002532413



PRODUCING  
DRINKARD

SHELL WESTERN EXPL & PROD  
STATE "D" NO. 3  
API# 3002532298



PRODUCING  
DRINKARD

SHELL OIL  
STATE "E" NO. 2  
API# 3002520823

0 - 332' 13.375" OD SURF CSG

0 - 332' CEMENT 300 sx

0 - 332' 17.5" OD HOLE

332 - 3284' 12.25" OD HOLE

0 - 3284' 9.625" OD INT CSG

0 - 3284' CEMENT 574 sx

660 FSL & 1700 FWL

SEC 31, TWN 17 S, RANGE 35 E

ELEVATION: 3984 GR

COMPLETION DATE: 05-11-64

\*\*\*

COMPLETION INTERVAL: 5999 - 6101 (PDK)

TRT: 1500 GALS ACID ( 5999 - 6101 )

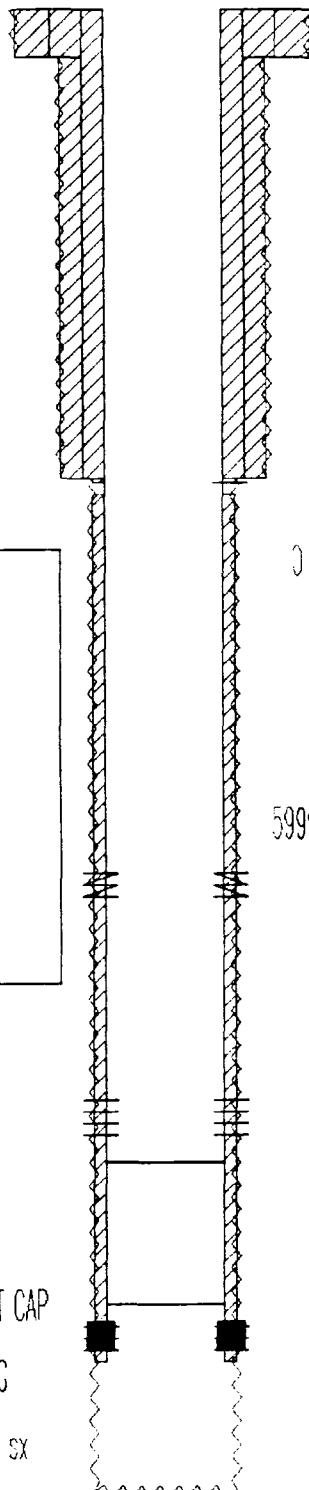
IP: 120 BOPD, 0 MCFD, 7 BWPD (FLOWING)

\*\*\*\*

9096 - 9100' CIBP 1 SK CMT CAP

0 - 9505' 7" OD PROD CSG

3400 - 9505' CEMENT 1800 sx



KB ELEV: 3996'  
PBTD: 8095'  
TD: 10406'

0 - 3320' CEMENT SQZ TO SURF W/ 1260 SX

5999 - 6223' SQUEEZE PERFS SQZD W/150 SX (PDK)

7618 - 7904' PERFS DRINKARD

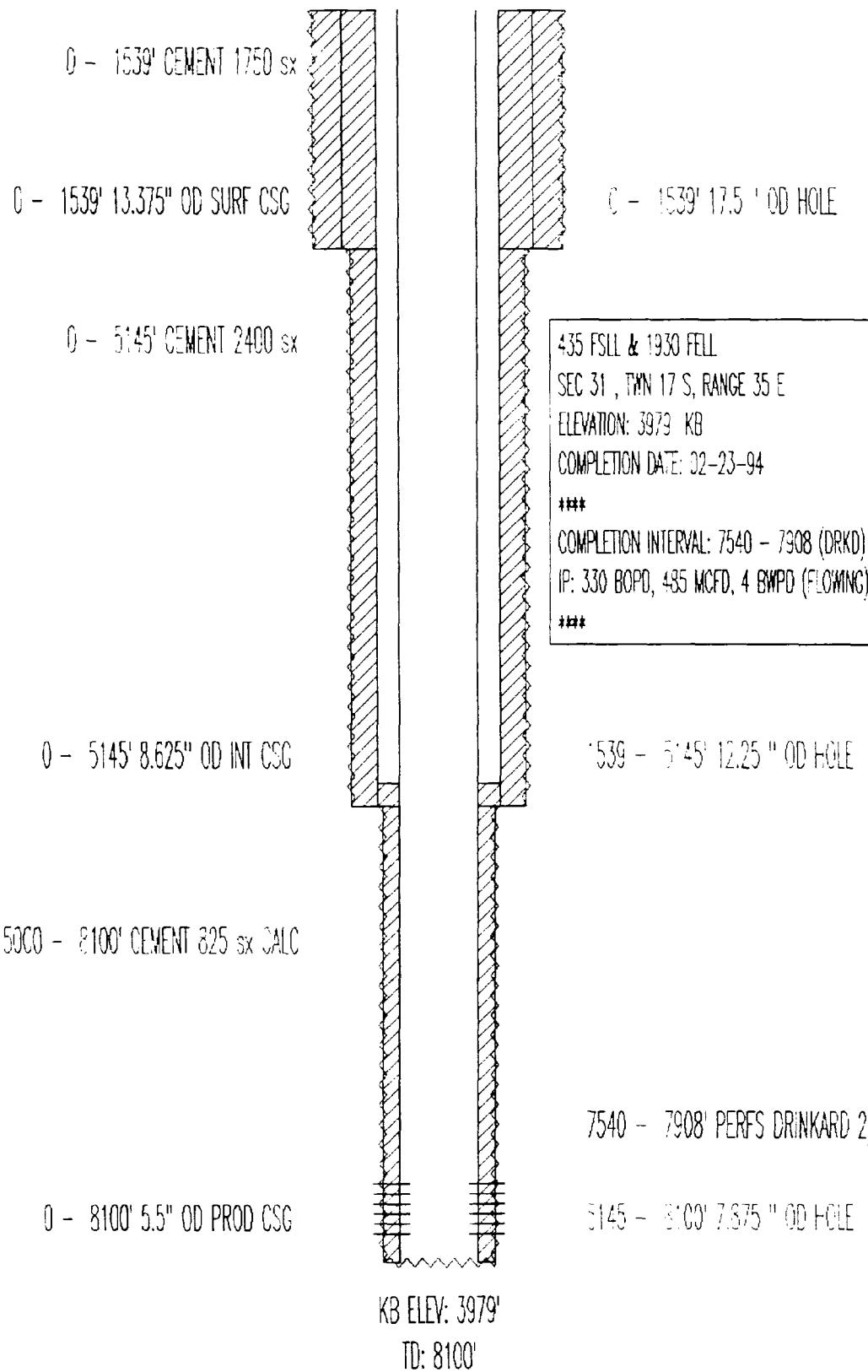
8095 - 8098' CIBP

9218 - 9418' ABANDONED PERFS WOLFCAMP

3284 - 10406' 8.5" OD HOLE

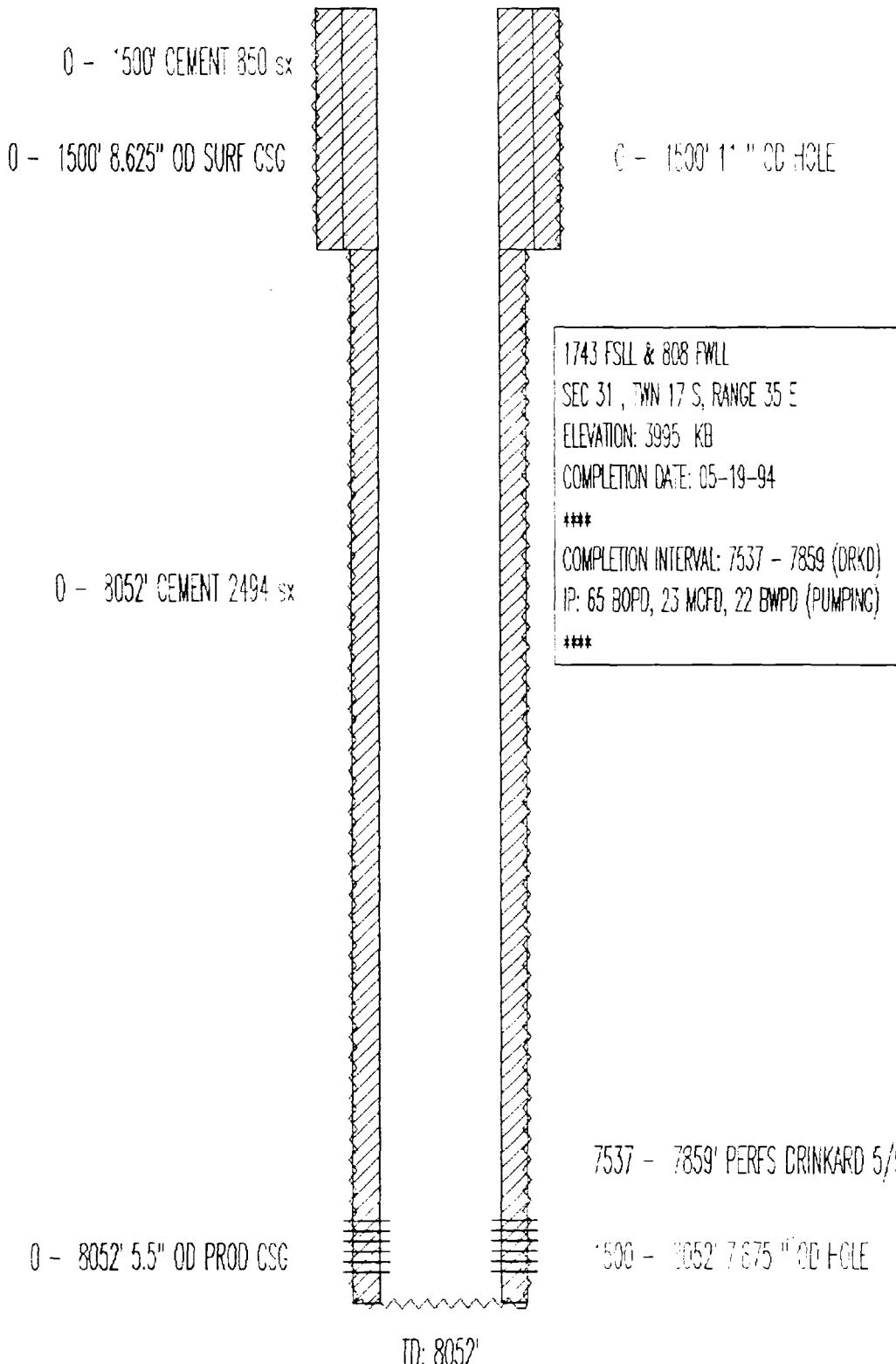
PRODUCING  
DRINKARD

PHILLIPS PET  
SANTA FE NO. 133  
API# 3002532333



PRODUCING  
DRINKARD

PHILLIPS PET  
SANTA FE NO. 135  
API# 3002532438





Unichem International

UNICHEM

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Company : Marathon Oil  
Date : 8-2-1994  
Location: ~~Waukesha~~ drinkard (on 8-1-1994)

### Sample 1

1.082

114514

5.60

2.306

## CATIONS;

Calcium	(Ca+2)	80.0	1600
Magnesium	(Mg+2)	400	4860
Sodium	(Na+1)	1540	35300
Dissolved Iron	(Fe+2)	0.004	0.100

## ANIONS:

<b>ANIONS:</b>			
Bicarbonate	(HCO <sub>3</sub> -1)	1.40	85.4
Carbonate	(CO <sub>3</sub> -2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO <sub>4</sub> -2)	96.8	4650
Chloride	(Cl-1)	1920	68000

## DISSOLVED GASES

Carbon Dioxide (CO<sub>2</sub>) 30.0  
Hydrogen Sulfide (H<sub>2</sub>S) 0

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SCALING INDEX (positive value indicates scale)

Scaling Index (positive value indicates scale)			
Temperature		Calcium Carbonate	Calcium Sulfate
86°F	30°C	-1.9	-20
110°F	43°C	-1.1	-20
130°F	54°C	-0.78	-20
140°F	60°C	-0.59	-20
160°F	71°C	-0.19	-17

**Comments:**

cc: Jay Brown  
Joe Hay



**Unichem International**

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-2-1994  
Location: Consolidated (on 8-1-1994)

## Sample 1

1.081

112779

5.50

2.207

## CATIONS:

Calcium	(Ca+2)	132	2640
Magnesium	(Mg+2)	264	3210
Sodium	(Na+1)	1570	36100
Dissolved Iron	(Fe+2)	0.007	0.200

## ANTONS:

ANION		1.40	85.4
Bicarbonate	(HCO <sub>3</sub> -1)		
Carbonate	(CO <sub>3</sub> -2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO <sub>4</sub> -2)	77.0	3700
Chloride	(Cl-1)	1890	67000

## DISSOLVED GASES

Carbon Dioxide (CO<sub>2</sub>) 550  
Hydrogen Sulfide (H<sub>2</sub>S) 0

SCALING INDEX (positive value indicates scale)

Scaling Index (positive value indicates scale)			
Temperature		Calcium Carbonate	Calcium Sulfate
86[F	30[C	-1.8	-6.6
110[F	43[C	-1.0	-6.6
130[F	54[C	-0.69	-6.6
140[F	60[C	-0.50	-6.6
160[F	71[C	-0.10	-2.9

### Comments:

cc: Jay Brown  
Joe Hay



Unichem International

707 North Leech

P.O. Box 1499

Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-2-1994  
Location: Vaccination West, (on 8-1-1994)

### Sample 1

1.149

208467

6.90

3.827

## CATIONS:

Calcium	(Ca+2)	284	5680
Magnesium	(Mg+2)	128	1560
Sodium	(Na+1)	3180	73200
Dissolved Iron	(Fe+2)	0.286	8.00

## ANIONS:

Bicarbonate	(HCO3-1)	1.80	110
Carbonate	(CO3-2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO4-2)	40.1	1930
Chloride	(Cl-1)	3550	126000

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86°F	30°C	0.70	-1.2
110°F	43°C	1.4	-1.1
130°F	54°C	1.8	-1.1
140°F	60°C	2.0	-1.1
160°F	71°C	2.4	-1.9

**Comments:**

cc: Jay Brown  
Joe Hay



Unichem International

707 North Leech P.O.Box 1499

Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-2-1994  
Location: WGS AU - Well 12, (on 8-1-1994)

### Sample 1

1.083

116583

6.70

2.120

## CATIONS:

CATIONS.		mc/liter	mg/liter
Calcium	(Ca+2)	164	3280
Magnesium	(Mg+2)	36.0	437
Sodium	(Na+1)	1800	41300

## ANTONS:

<b>ANIONS:</b>				
Bicarbonate	(HCO <sub>3</sub> -1)		10.4	634
Carbonate	(CO <sub>3</sub> -2)		0	0
Hydroxide	(OH-1)		0	0
Sulfate	(SO <sub>4</sub> -2)		40.1	1930
Chloride	(Cl-1)	1950		69000

## DISSOLVED GASES

~~MISSING~~ GASES  
Carbon Dioxide (CO<sub>2</sub>) 70.0  
Hydrogen Sulfide (H<sub>2</sub>S) 119

SCALING INDEX (positive value indicates scale)

SCHELING INDEX (positive value indicates scale)			
Temperature		Calcium Carbonate	Calcium Sulfate
86°F	30°C	0.38	-22
110°F	43°C	1.1	-22
130°F	54°C	1.5	-22
140°F	60°C	1.6	-22
160°F	71°C	2.0	-18

#### **Comments:**

cc: Jay Brown  
Joe Hay



Unichem International

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-3-1994  
Location: Compatability (on 7-28-1994)

### Sample 1

1.082

114681

6.10

2.163

### CATIONS:

		μg/100 ml	μg/100 ml
Calcium	(Ca+2)	148	2960
Magnesium	(Mg+2)	150	1820
Sodium	(Na+1)	1680	38700
Dissolved Iron	(Fe+2)	0.004	0.100

ANTONS:

Bicarbonate	(HC03-1)	5.90	360
Carbonate	(CO3-2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO4-2)	58.6	2810
Chloride	(Cl-1)	1920	68000

## DISSOLVED GASES

Carbon Dioxide (CO <sub>2</sub> )	310
Hydrogen Sulfide (H <sub>2</sub> S)	59.5
Oxygen (O <sub>2</sub> )	0

ว่าด้วยการจัดการความเสี่ยงในชีวิตประจำวัน

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86[F	30[C	-0.50	-13
110[F	43[C	0.23	-13
130[F	54[C	0.57	-13
140[F	60[C	0.76	-13
160[F	71[C	1.2	-9.4

**Comments:**

Ratio: Consol - Prinkard = 50% and VGS AU = 50%

cc: Jay Brown

Joe Hay



Unichem International

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-3-1994  
Location: Compatability (on 7-28-1994)

### Sample 1

1.081

113647

5.55

2.256

## CATTONS:

		ppm, 1955	ppm, 1961
Calcium	(Ca+2)	106	2120
Magnesium	(Mg+2)	332	4030
Sodium	(Na+1)	1550	35700
Dissolved Iron	(Fe+2)	0.005	0.150

ANTONS:

Bicarbonate	(HCO3-1)	1.40	85.4
Carbonate	(CO3-2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO4-2)	86.9	4180
Chloride	(Cl-1)	1900	67500

## DISSOLVED GASES

Carbon Dioxide (CO <sub>2</sub> )	290
Hydrogen Sulfide (H <sub>2</sub> S)	0
Oxygen (O <sub>2</sub> )	0

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86[F	30[C	-1.8	-12
110[F	43[C	-1.1	-12
130[F	54[C	-0.72	-12
140[F	60[C	-0.53	-12
160[F	71[C	-0.13	-8.4

#### Comments:

Ratio: Warm St. - Drinkard = 50% and Consol. Drinkard = 50%

cc: Jay Brown  
Joe Hay



Unichem International

707 North Leech P.O. Box 1499  
Hobbs, New Mexico 88240

company : Texaco Inc.  
ate : 8-3-1994  
ample 1: Compatability (on 7-28-1994)  
ample 2: (on )

	Sample 1	Sample 2
Pecific Gravity:	1.081	1.081
Total Dissolved Solids:	113213	114080
H:	5.53	5.57
ONIC STRENGTH:	2.231	2.281

## CATIONS:

CATIONS.		me/liter	mg/liter	me/liter	mg/liter
Calcium	(Ca+2)	119	2380	93.0	1860
Magnesium	(Mg+2)	298	3620	366	4450
Sodium	(Na+1)	1560	35900	1550	35500
Dissolved Iron	(Fe+2)	0.006	0.175	0.004	0.125

ANTONS:

		1.40	85.4	1.40	85.4
Bicarbonate	(HCO <sub>3</sub> -1)				
Carbonate	(CO <sub>3</sub> -2)	0	0	0	0
Hydroxide	(OH-1)	0	0	0	0
Sulfate	(SO <sub>4</sub> -2)	82.0	3940	91.9	4410
Chloride	(Cl-1)	1900	67300	1910	67800

## DISSOLVED GASES

DISSOLVED GASES

Carbon Dioxide (CO <sub>2</sub> )	420	160
Hydrogen Sulfide (H <sub>2</sub> S)	0	0
Oxygen (O <sub>2</sub> )	0	0

SCALING INDEX (positive value indicates scale)

Scaling Index (positive value indicates scale)		Calcium Carbonate	Calcium Sulfate	Calcium Carbonate	Calcium Sulfate
Temperature					
86[F	30[C	-1.8	-8.9	-1.8	-16
110[F	43[C	-1.0	-8.9	-1.1	-16
130[F	54[C	-0.70	-8.9	-0.75	-16
140[F	60[C	-0.51	-8.9	-0.56	-16
160[F	71[C	-0.11	-5.3	-0.16	-12

#### Comments:

Ratio: Consol. Drinkard = 75% and Warn St. Drinkard = 25%  
Consol. Drinkard = 25% and Warn St. Drinkard = 75%

cc: Jay Brown and Joe Hay



Unichem International

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

ompany : Texaco Inc.  
ate : 8-3-1994  
ocation: Compatability (on 7-28-1994)

### Sample 1

1.082

114681

6.10

2.163

## CATIONS:

Calcium	(Ca+2)	148	2960
Magnesium	(Mg+2)	150	1820
Sodium	(Na+1)	1680	38700
Dissolved Iron	(Fe+2)	0.004	0.100

## ANIONS:

Bicarbonate	(HCO <sub>3</sub> -1)	5.90	360
Carbonate	(CO <sub>3</sub> -2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO <sub>4</sub> -2)	58.6	2810
Chloride	(Cl-1)	1920	68000

## DISSOLVED GASES

Carbon Dioxide (CO <sub>2</sub> )	310
Hydrogen Sulfide (H <sub>2</sub> S)	59.5
Oxygen (O <sub>2</sub> )	0

.....

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86[F	30[C	-0.50	-13
110[F	43[C	0.23	-13
130[F	54[C	0.57	-13
140[F	60[C	0.76	-13
160[F	71[C	1.2	-9.4

**Comments:**

Ratio:  $\text{Gconsol} \gg \text{Drinkard} = 95\%$  and  $\text{VGSAU} = 25\%$   
 $\text{Gconsol} \gg \text{Drinkard} = 25\%$  and  $\text{VGSAU} = 75\%$

cc: Jay Brown and Joe Hay

Mr. Guy Brown and Mr. Ray

Unichem International

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-3-1994  
Location: Compatability (on 7-28-1994)

### Sample 1

1.115

160623

6.20

3.017

www.eebee.com

## CATIONS:

		AC, 1150	AB, 1150
Calcium	(Ca+2)	208	4160
Magnesium	(Mg+2)	196	2380
Sodium	(Na+1)	2380	54700
Dissolved Iron	(Fe+2)	0.147	4.10

## ANTONS:

<b>ANIONS:</b>			
Bicarbonate	(HCO <sub>3</sub> -1)	1.60	97.6
Carbonate	(CO <sub>3</sub> -2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO <sub>4</sub> -2)	58.6	2810
Chloride	(Cl-1)	2720	96500

## DISSOLVED GASES

Carbon Dioxide (CO <sub>2</sub> )	275
Hydrogen Sulfide (H <sub>2</sub> S)	0
Oxygen (O <sub>2</sub> )	0

SCALING INDEX (positive value indicates scale)

Calcium Carbonate	Calcium Sulfate
-0.52	-0.55
0.21	0.19
0.55	0.19
0.74	0.19
1.1	-0.25

**Comments:**

Ratio: Consol-Brinkard=50% and Vac-Glorietta West=50%

Racio: Connor  
GG: Jay Brown

**Joe Hay**

Unichem International

707 North Leech P.O.Box 1499  
Hobbs, New Mexico 88240

Company : Texaco Inc.  
Date : 8-3-1994  
Sample 1: Compatability (on 7-28-1994)  
Sample 2: (on )

		Sample 1		Sample 2
Specific Gravity:		1.098		1.132
Total Dissolved Solids:		136701		184545
pH:		5.85		6.55
IONIC STRENGTH:		2.612		3.422
"				
CATIONS:		me/liter	mg/liter	me/liter
Calcium	(Ca+2)	170	3400	246
Magnesium	(Mg+2)	230	2790	162
Sodium	(Na+1)	1980	45400	2780
Dissolved Iron	(Fe+2)	0.077	2.15	0.217
				6.05
"				
ANIONS:		mg/liter		mg/liter
Bicarbonate	(HCO3-1)	1.50	91.5	1.70
Carbonate	(CO3-2)	0	0	0
Hydroxide	(OH-1)	0	0	0
Sulfate	(SO4-2)	67.8	3260	49.3
Chloride	(Cl-1)	2310	81800	3140
				111000
DISSOLVED GASES				
Carbon Dioxide	(CO2)		413	138
Hydrogen Sulfide	(H2S)		0	0
Oxygen	(O2)		0	0

SCALING INDEX (positive value indicates scale)					
ature	Calcium	Calcium	Calcium	Calcium	Calcium
	Carbonate	Sulfate	Carbonate	Sulfate	
30[C	-1.1	-1.3	0.09	-0.30	
43[C	-0.41	-1.2	0.82	0.23	
54[C	-0.07	-1.2	1.2	0.23	
60[C	0.12	-1.2	1.4	0.23	
71[C	0.52	-3.1	1.8	-0.22	

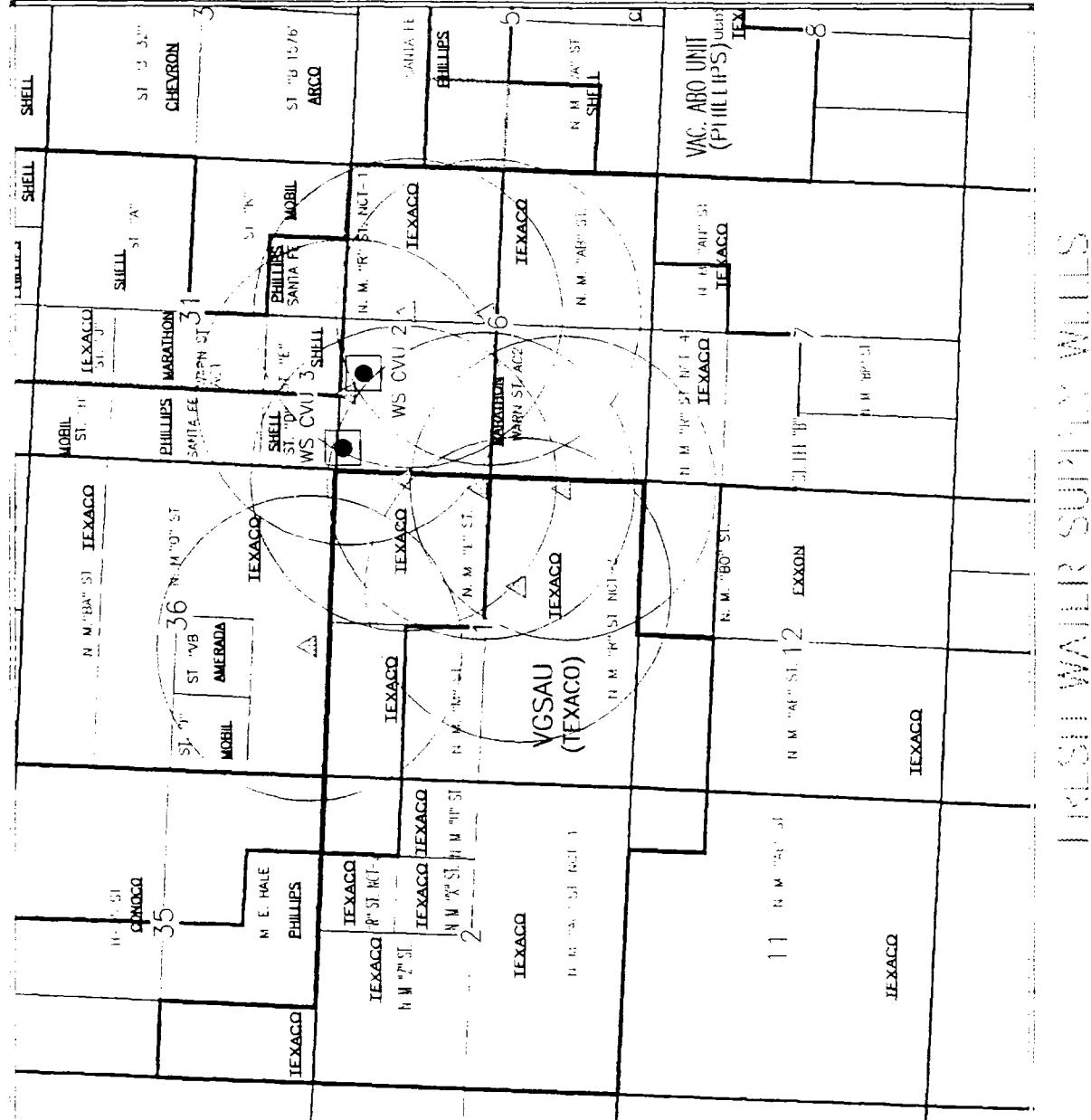
**Comments:**

Ratio: Consol. Drinkard = 75% and Vac. Glorieta West = 25%  
Consol. DRinkard = 25% and Vac. Glorieta West = 75%

cc: Jay Brown and Joe Hay

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ATTACHMENT XI



Texaco Exploration & Prod. Inc.

LEASLINE INJECTION WELLS  
VACUUM DRINKARD FIELD  
LEA COUNTY NEW MEXICO

四百五

Scale 1:36000



**Western Unichem**

Unichem International

797 North Leech

P.O. Box 1499

Hobbs, New Mexico 88240

**Company :** Texaco Inc.  
**Date :** 10-31-1994  
**Location:** CVU - WSW #2 (on 10-26-1994)

### Sample 1

1.000

97

6.50

0.014

## CATIONS:

Calcium	(Ca+2)	4.70	94.0
Magnesium	(Mg+2)	3.30	40.1
Sodium	(Na+1)	1.93	44.5
Iron (total)	(Fe+2)	0.007	0.200

## **ANIONS:**

Bicarbonate	(HCO <sub>3</sub> -1)	2.60	159
Carbonate	(CO <sub>3</sub> -2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(SO <sub>4</sub> -2)	0	0
Chloride	(Cl-1)	7.33	260

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86°F	30°C	-0.84	-18
110°F	43°C	-0.11	-18
130°F	54°C	0.24	-18
140°F	60°C	0.42	-18
160°F	71°C	0.82	-18

## Comments:

cc: Jay Brown  
Joe Hay

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Unichem International

707 North Leech P.O. Box 1499  
Hobbs, New Mexico 88240

**Company :** Texaco Inc.  
**Date :** 10-31-1994  
**Location:** CVU - WSW #3 (on 10-26-1994)

	Sample 1	
<b>Specific Gravity:</b>	1.001	
<b>Total Dissolved Solids:</b>	1944	
<b>pH:</b>	6.70	
<b>IONIC STRENGTH:</b>	0.043	
eeeeeeeeeee	eeeeeeeeeee	
<b>CATIONS:</b>	<b>me/liter</b>	<b>mg/liter</b>
Calcium (Ca+2)	9.00	180
Magnesium (Mg+2)	6.60	80.2
Sodium (Na+1)	17.7	406
Iron (total) (Fe+2)	0.014	0.400

ANIONS:				
Bicarbonate	(HCO <sub>3</sub> -1)		2.20	134
Carbonate	(CO <sub>3</sub> -2)		0	0
Hydroxide	(OH-1)		0	0
Sulfate	(SO <sub>4</sub> -2)		3.31	159
Chloride	(Cl-1)		27.8	984

SCALING INDEX (positive value indicates scale)

Temperature		Calcium Carbonate	Calcium Sulfate
86°F	30°C	-0.55	-14
110°F	43°C	0.18	-14
130°F	54°C	0.52	-14
140°F	60°C	0.71	-14
160°F	71°C	1.1	-14

### **Comments:**

cc: Jay Brown  
Joe Hay

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