



RECEIVED
OIL CONSERVATION DIVISION

FEB 8 35

February 2, 1994

State of New Mexico
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. box 2088
Santa Fe, NM 87504-2088

10948

Gentlemen:

SUBJECT: APPLICATION FOR EXPANSION OF WATERFLOOD
RHODES COOP WATERFLOOD
RHODES YATES SEVEN RIVERS POOL
LEA COUNTY, NM

We request administrative approval to expand the waterflood on the Rhodes Yates Unit. Order No. R-2748, dated July 29, 1964, authorized Texaco to institute a waterflood project.

Six wells will be converted to injection on the W.H. Rhodes B Fed NCT-1, W.H. Rhodes B Fed NCT-2, and W.H. Rhodes A Fed leases. Form C-108 and attachments are enclosed.

Copies of this application with attachments have been sent to the offset operators.

If any additional information is needed, contact Darlene de Aragao at (505) 397-0424.

Sincerely,

T.L. Frazier
Hobbs Area Manager

ddd

Attachments

Case 10948

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Texaco Exploration & Production Inc.

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

Contact party: Darlene de Aragao Phone: 505-397-0424

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 see attachment
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: Terry L. Frazier Title Area Manager

Signature: [Signature] Date: 1/27/94

* 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. see attachment

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.

**SUMMARY OF ORDER NUMBERS FOR
RHODES COOP**

R-2748	07-29-64	INSTITUTE THE COOP WATERFLOOD
R-2748-A	02-18-93	EXPANSION
WFX-454	08-02-77	EXPANSION
R-9847	02-17-93	EXPANSION
WFX-645	06-17-93	EXPANSION

NEW MEXICO OIL CONSERVATION DIVISION - Form c-108, cont'd

**Conversion of the following wells to injection
Rhodes Yates Seven Rivers**

W.H. Rhodes B Fed NCT-1

#11 1980' FSL, 1980' FWL, 26-26S-37E, UNIT E

#12 660' FSL, 1980' FEL, 26-26S-37E, UNIT O

W.H. Rhodes B Fed NCT-2

#5 1980' FSL, 1980' FEL, 28-26S-37E, UNIT J

#6 660' FSL, 1880' FEL, 28-26S-37E, UNIT O

W.H. Rhodes A Fed

#3 660' FSL, 660' FWL, 22-26S-37E, UNIT M

#5 555' FSL, 2085' FWL, 22-26S-37E, UNIT O

III. See attached injection well data sheets.

IV. Expansion of existing project order No. R-2748

V. See attached map.

VI. See attached well information and schematics.

VII. 1). Average injection rate - 400 BWPD

Maximum injection rate - 600 BWPD

2). Closed injection system

3). Average injection pressure 1100 psi

Initial maximum injection pressure - 600 psi (0.2
psi/ft).

Maximum injection pressure - 2000 psi (possible after
step rate tests).

4). Yates Seven Rivers produced water

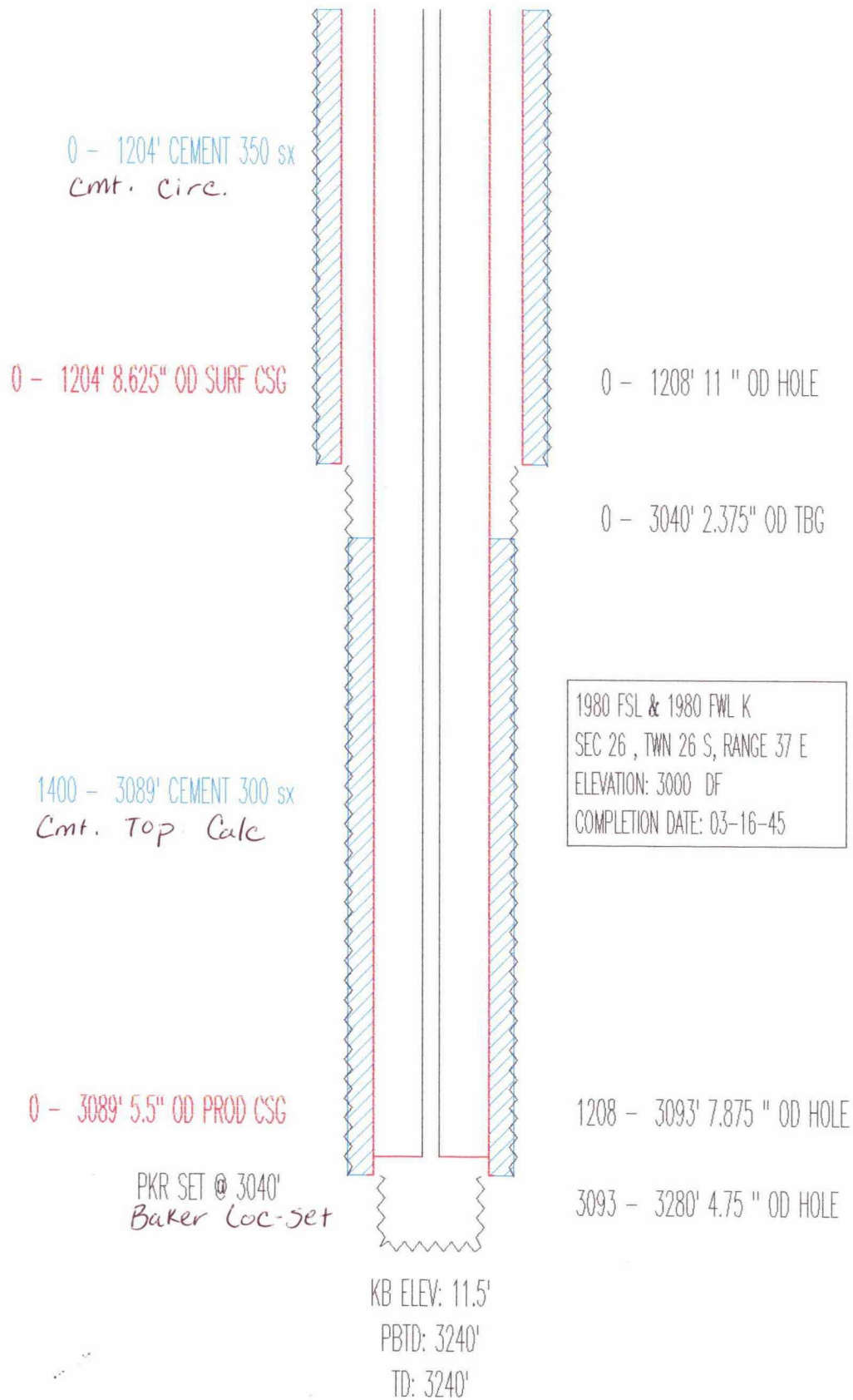
Santa Rosa and Ogallala fresh water for make-up.

IX. 15% HCL NEFE acid and fracturing.

XII. N/A

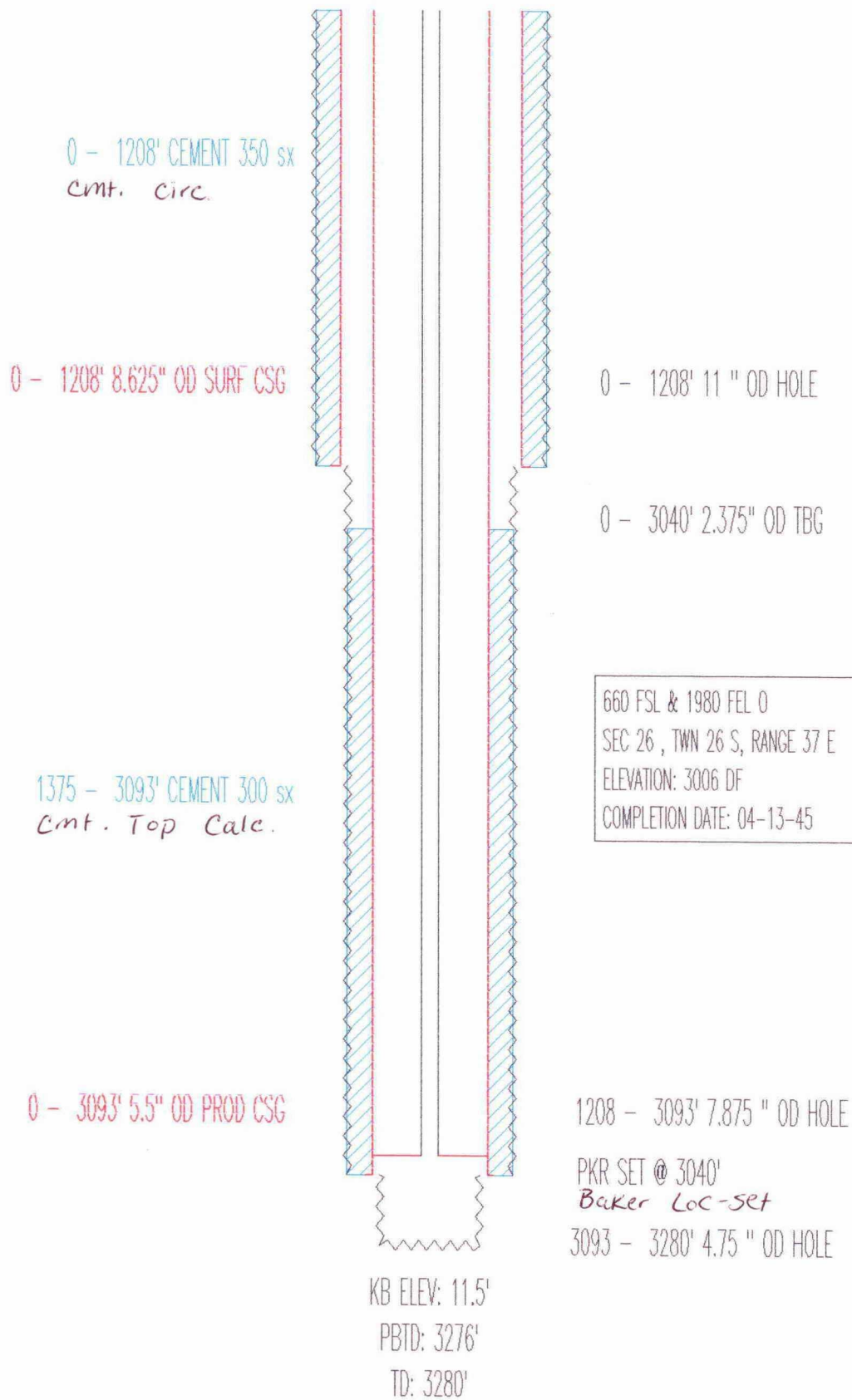
PROPOSED INJECTION WELL

TEXACO E&P
RHODES, W.H. B FED. NCT-1 #11
API# 3002512057



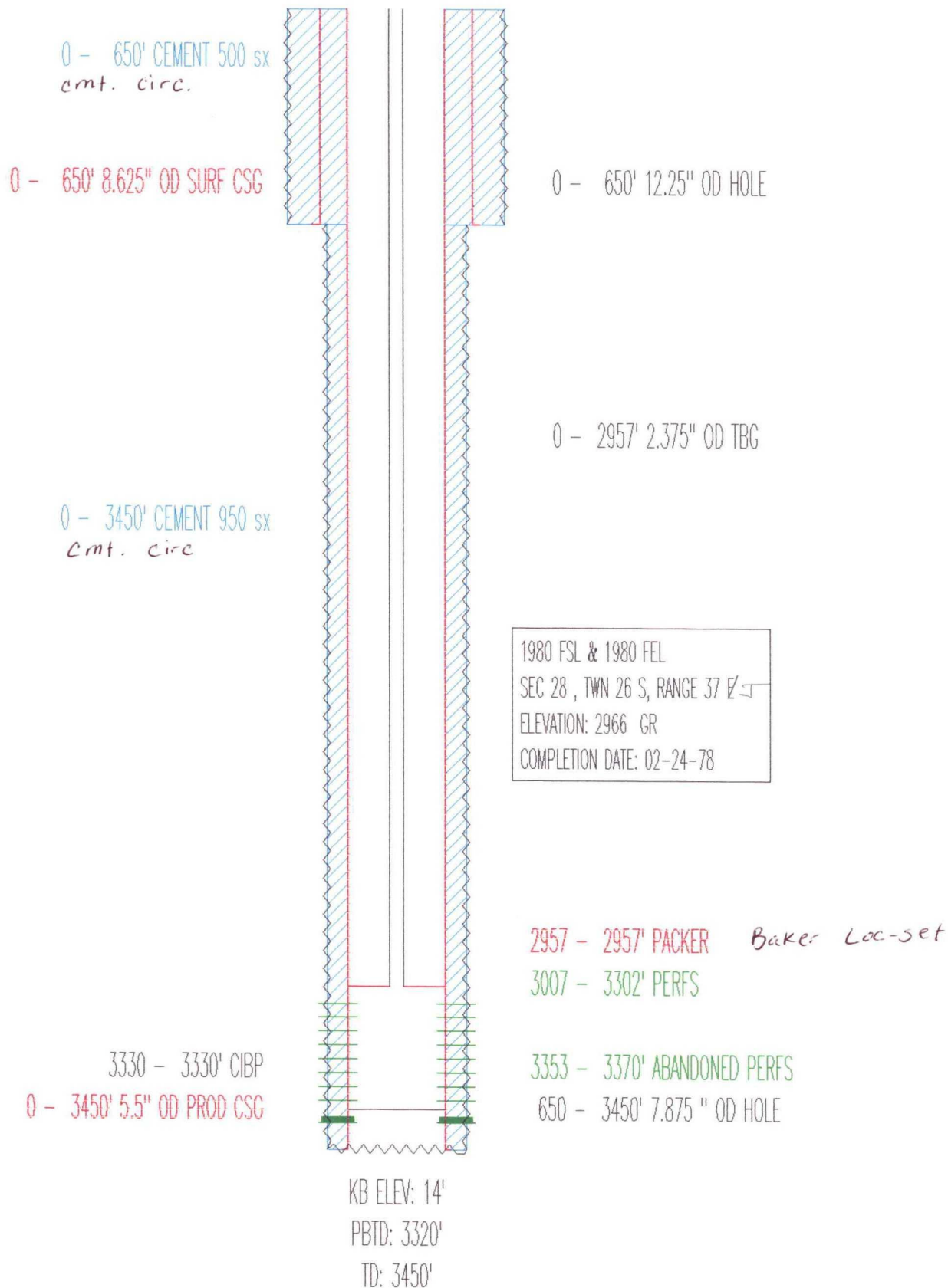
PROPOSED INJECTION WELL

TEXACO E&P
RHODES, W.H. B FED. NO. 12
API# 3002511980



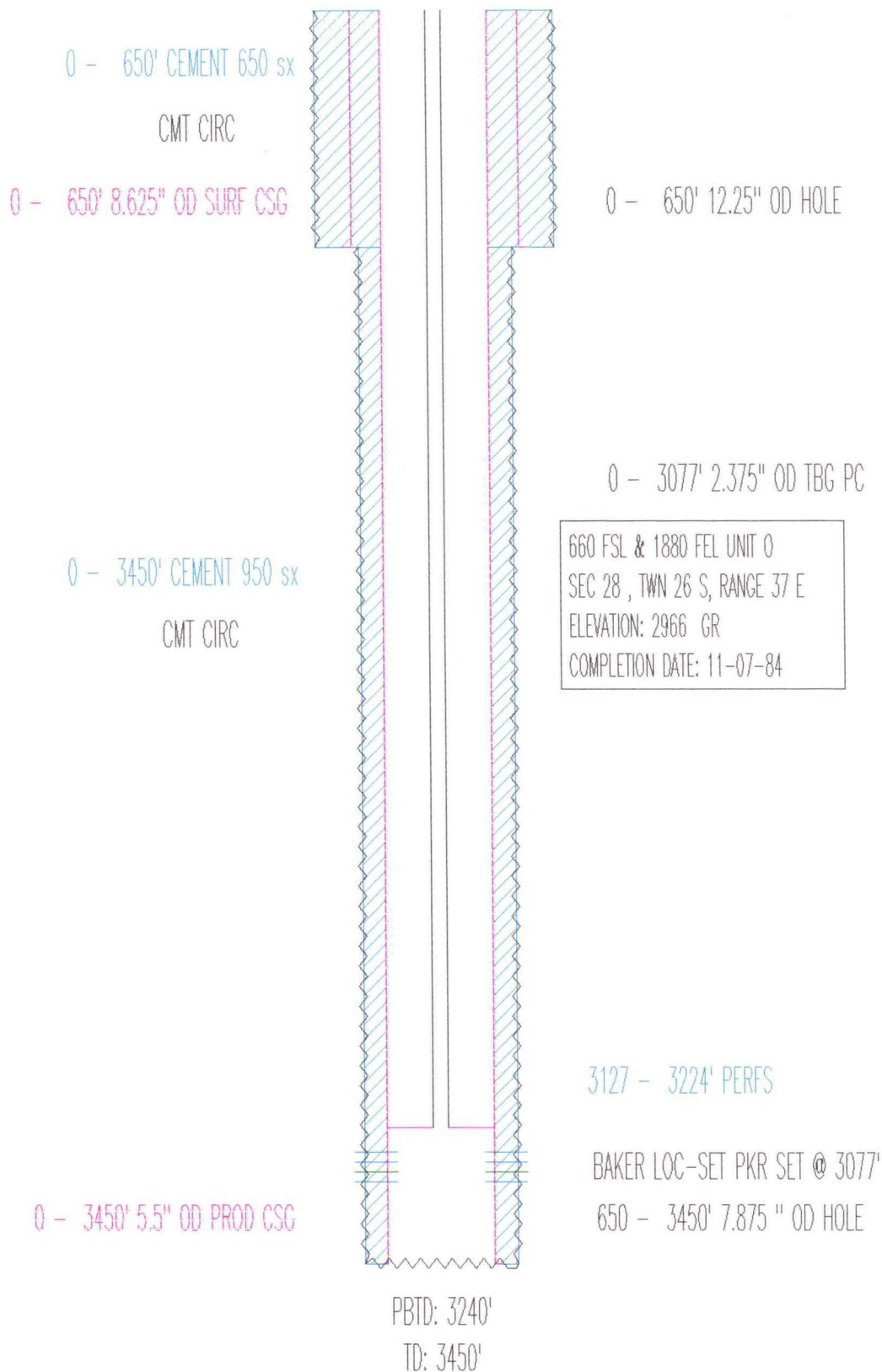
PROPOSED INJECTION WELL

TEXACO E&P
RHODES W.H. B FED NCT-2 NO. 5
API# 3002525692



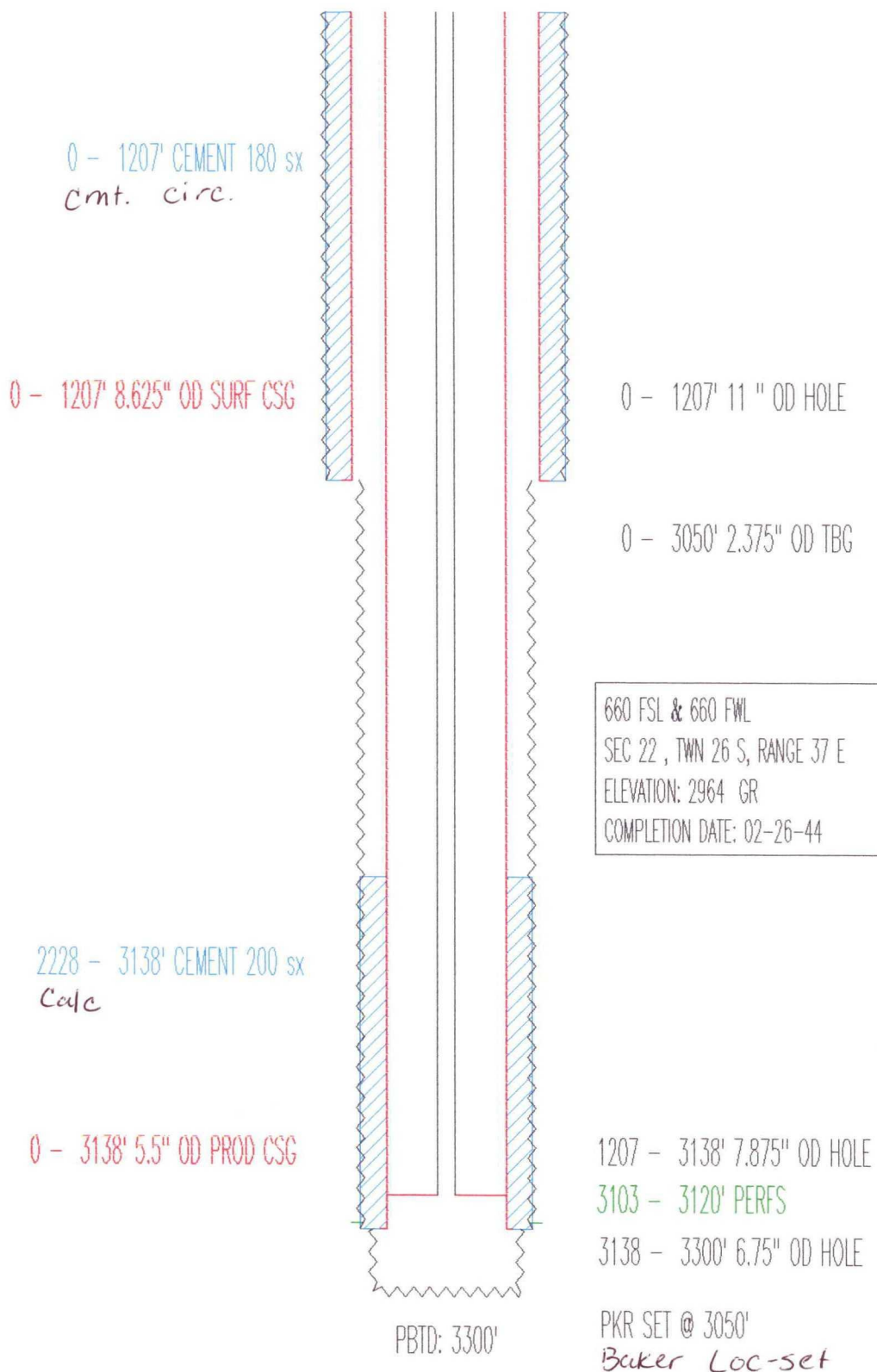
PROPOSED INJECTION WELL

TEXACO INC
RHODES, W.H. B FED NCT-2 #6
API# 3002528911



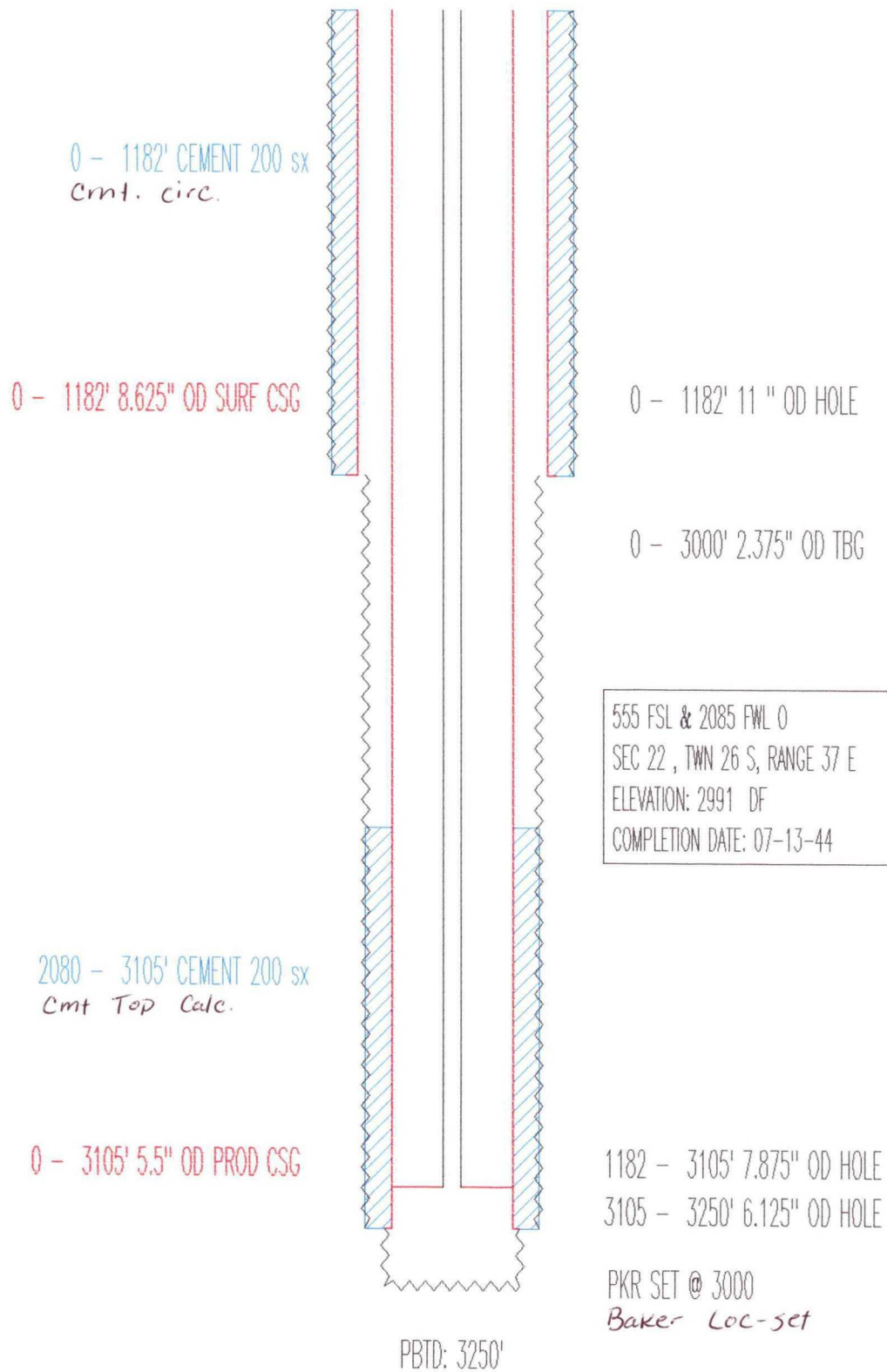
PROPOSED INJECTION WELL

TEXACO E&P
RHODES, W.H. A FED. #3
API# 3002512035



PROPOSED INJECTION WELL

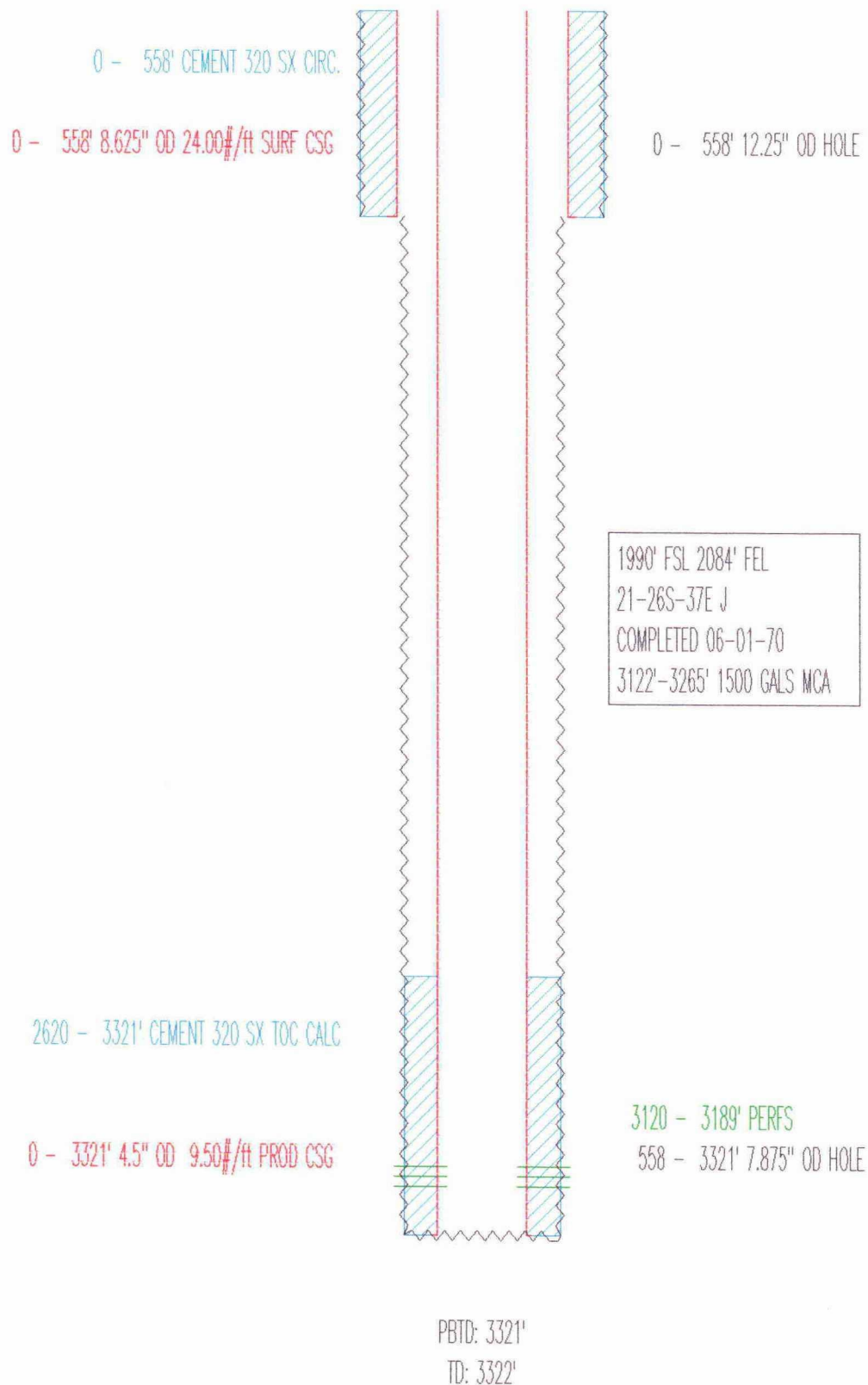
TEXACO E&P
RHODES, W.H. A FED. #5
API# 3002512037



WELLS WITHIN AREA OF REVIEW THAT HAVE NOT BEEN SUBMITTED IN PAST

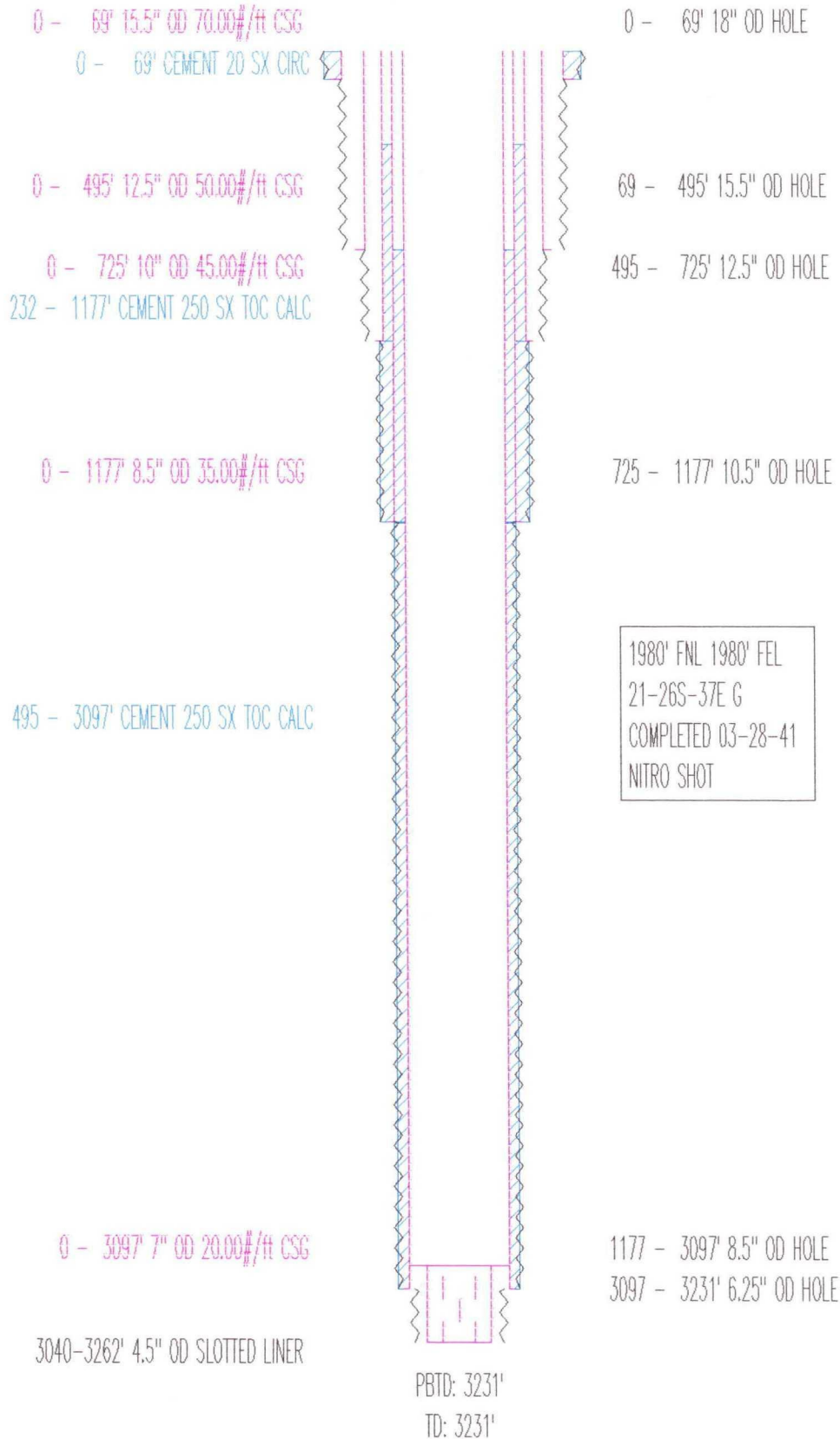
LEASE NAME	WELL TYPE	STATUS	OPERATOR
=====			
MOBERLY RHODES WATERFLOOD #4	OIL		MERIDIAN OIL INC
MOBERLY RHODES WATERFLOOD #5	OIL		MERIDIAN OIL INC
MOBERLY #1	OIL	P&A	KRUPP & FLAHERLY
WILLS FEDERAL #4	OIL		SEA LAND OIL CO.
WILLS FEDERAL #7	INJ		SEA LAND OIL CO.
RHODES, W.H. A FEDERAL #6	INJ		TEXACO E&P

MOBERLY RHODES WATERFLOOD 4
MERIDIAN OIL INC.
INJECTOR



MOBERLY RHODES WATERFLOOD 5

MERIDIAN
PRODUCER



MOBERLY 1
KRUPP & FLAHERTY
P&A

21-26S-37E J
COMPLETED 9-26-40

0 - 58' 15.5" OD 70.00#/ft SURF CSG
0 - 58' CEMENT 20 SX CIRC

NO RECORD OF HOW WELL WAS P&A

0 - 58' 18" OD HOLE

0 - 470' 12.5" OD 50.00#/ft CSG
0 - 683' 10" OD 45.00#/ft CSG
356 - 1183' CEMENT 200 SX TOC CALC

58 - 470' 15.5" OD HOLE
470 - 683' 12.5" OD HOLE

0 - 1183' 8.25" OD 35.00#/ft INT CSG

683 - 1183' 10" OD HOLE

988 - 3070' CEMENT 200 SX TOC CALC

0 - 3070' 7" OD 20.00#/ft PROD CSG

1183 - 3070' 8.5" OD HOLE

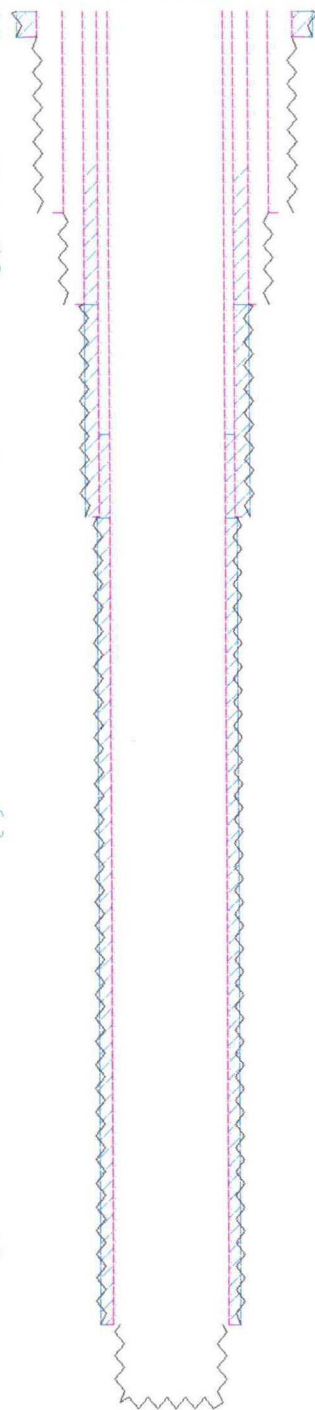
3070 - 3254' 6.25" OD HOLE

HOLE SIZE UNKNOWN

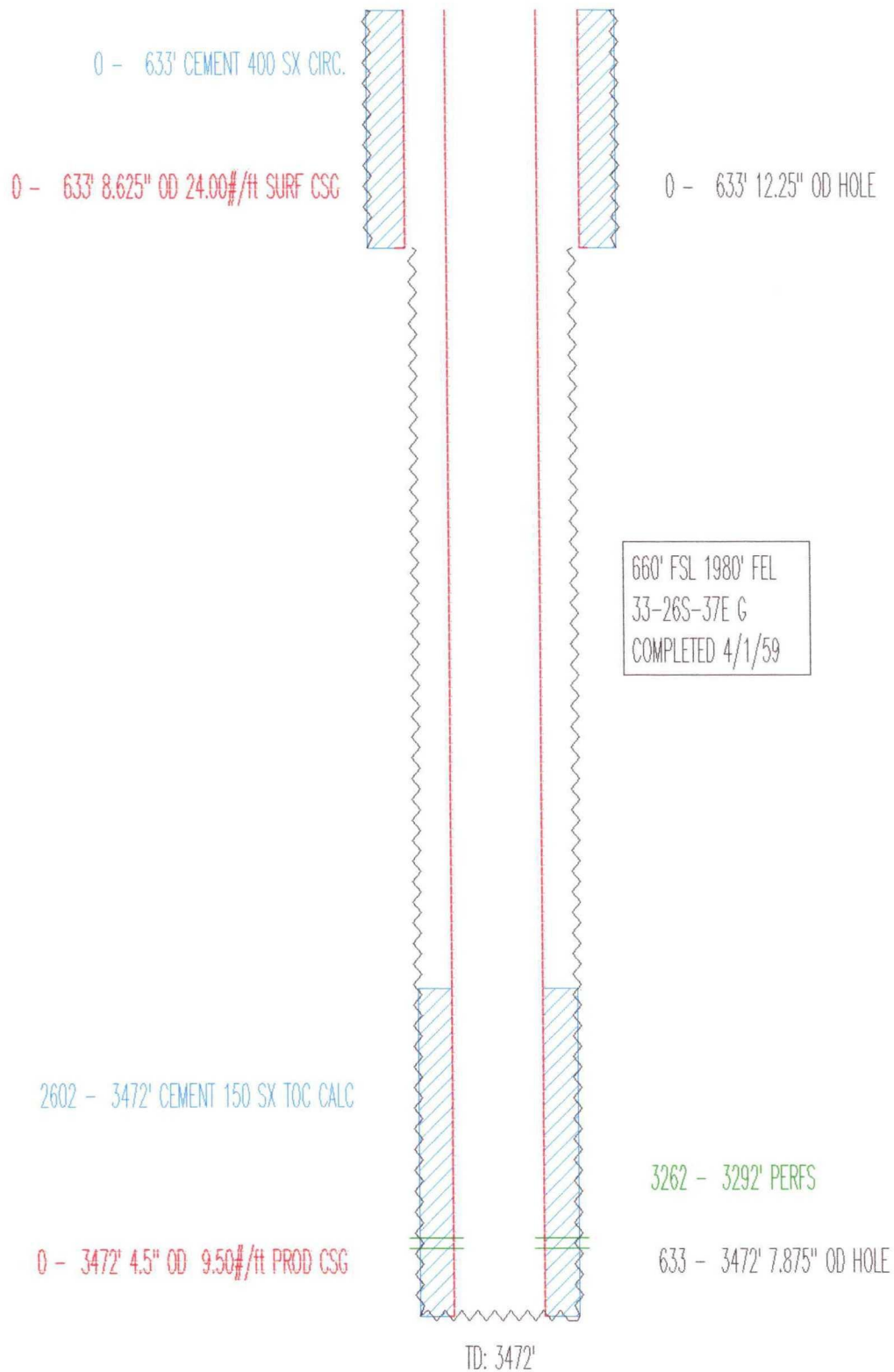
NITRO SHOT

PBTD: 3254'

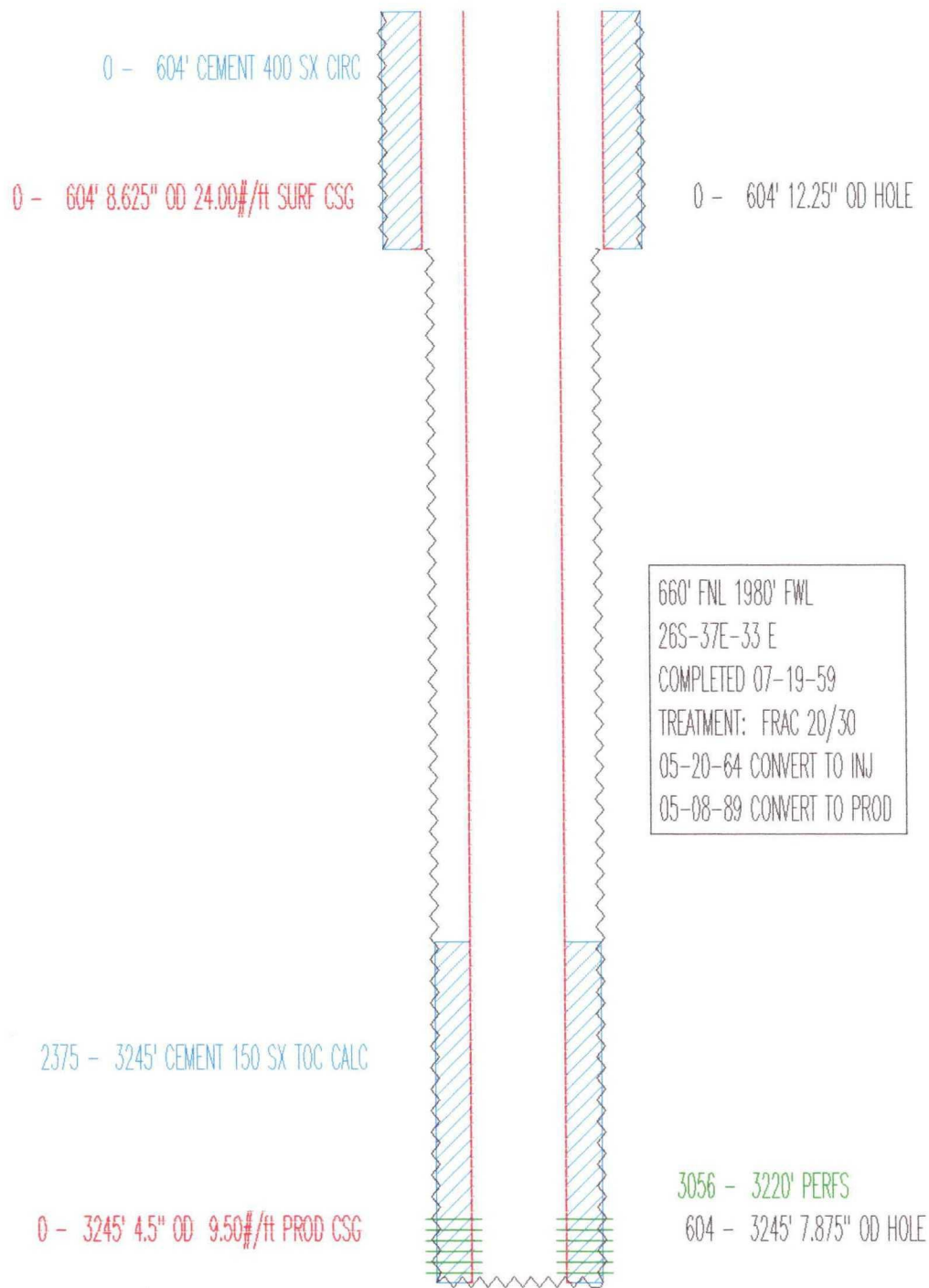
TD: 3254'



WILLS FEDERAL 4
SEA SAND OIL COMPANY
PRODUCER

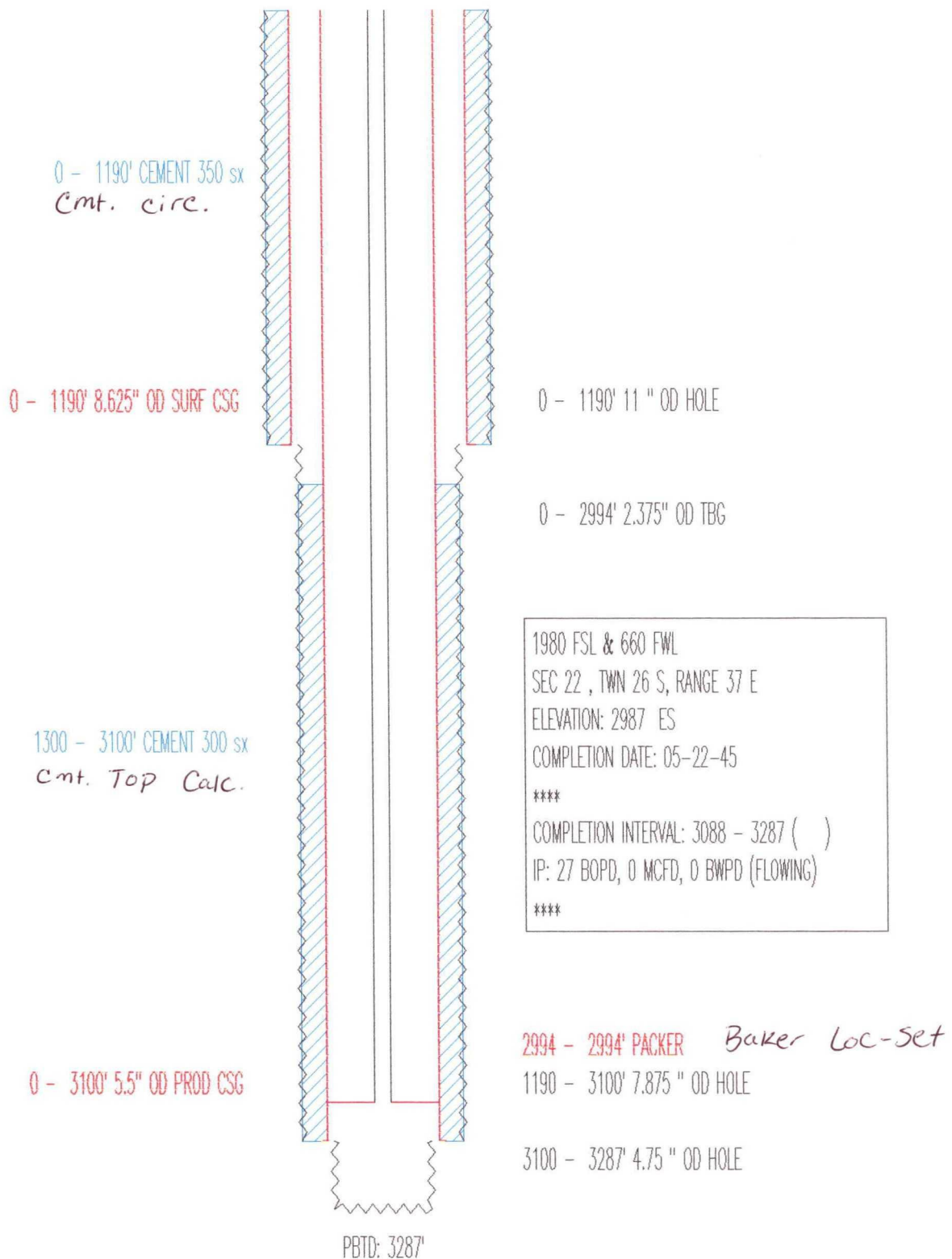


WILLS FEDERAL 7
SEA SAND OIL COMPANY
PRODUCER



TD: 3245'

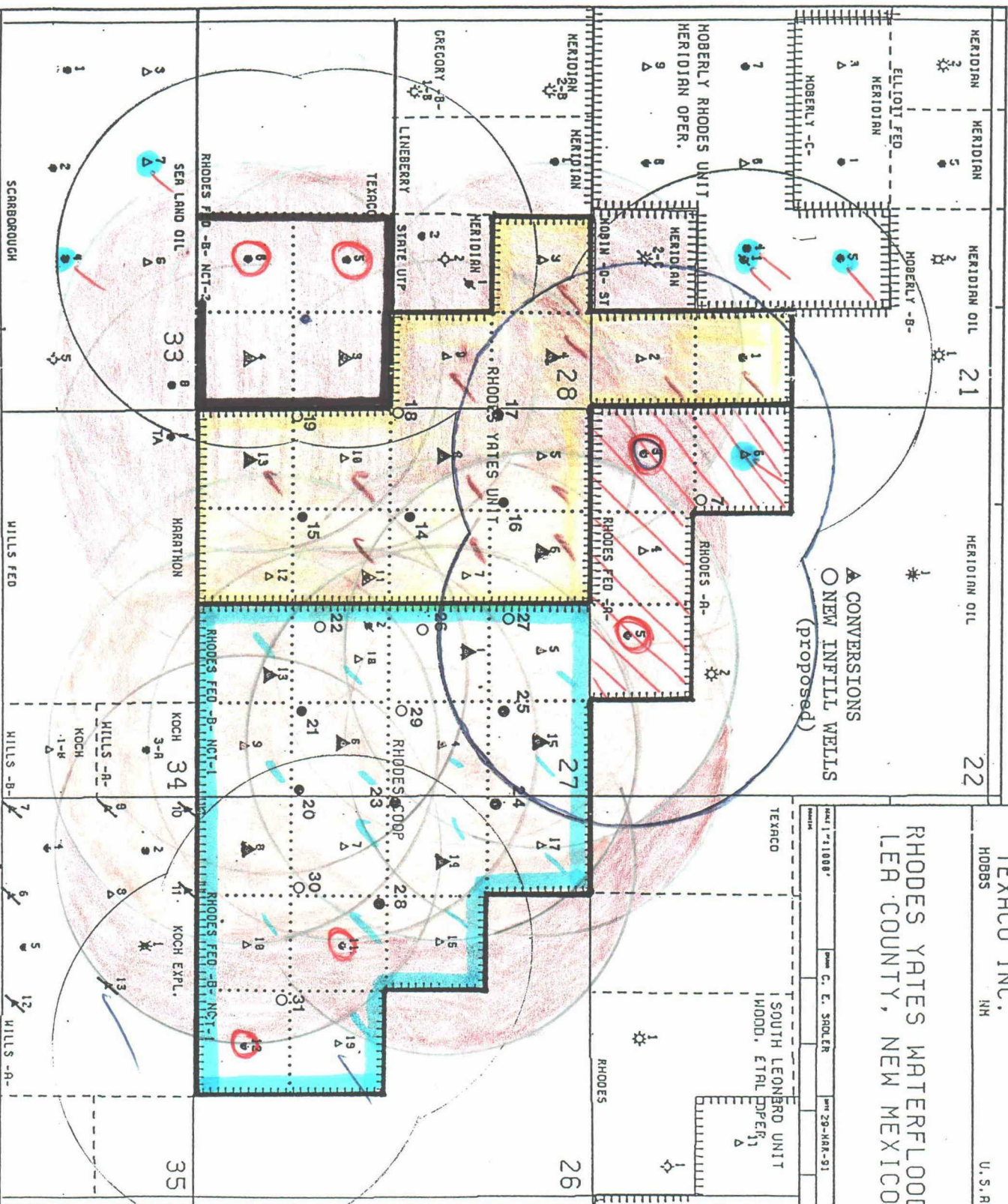
TEXACO E&P
RHODES, W.H. A FED. NO. 6
API# 3002512038



TEXACO INC.
HOBBS NM U.S.A.
RHODES YATES WATERFLOOD
LEA COUNTY, NEW MEXICO

Scale 1" = 1000'
Drawn by C. E. SPOILER
Date 29-MAR-51

▲ CONVERSIONS
○ NEW INFILL WELLS
(proposed)



WFR-454
645

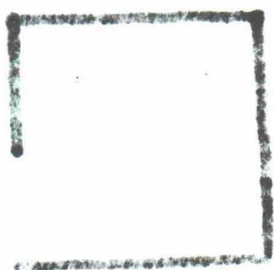
265
37E



COFX-454
A.H. Photo B. Fed NET-1 No. 16, 17, 19

H, D, J

Sec 26



Z 004 855 462

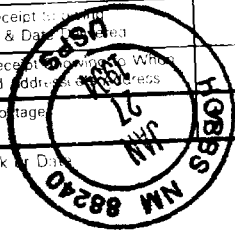


Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Bureau of Land Management</i>	
Street and No. <i>PO Box 27115</i>	
P.O., State and ZIP Code <i>Santa Fe, NM 87502-0115</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993



Z 004 855 459

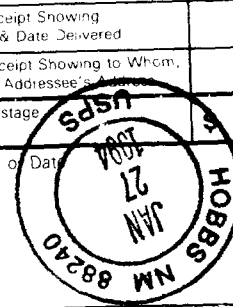


Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Amerada Hess Corp</i>	
Street and No. <i>PO Box 2040</i>	
P.O., State and ZIP Code <i>Tulsa, OK 74102</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993



Z 004 855 461

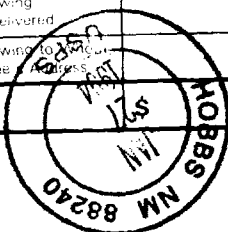


Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Tom + Evelyn Lineberry</i>	
Street and No. <i>802 S Main</i>	
P.O., State and ZIP Code <i>Midland, TX 79701</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993



Z 004 855 458

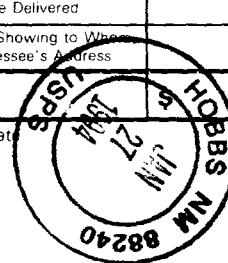


Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Doyle Hartman</i>	
Street and No. <i>PO Box 10426</i>	
P.O., State and ZIP Code <i>Midland, TX 79702</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993



Z 004 855 419



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Meridian Oil Inc.</i>	
Street and No. <i>P.O. Box 51810</i>	
P.O., State and ZIP Code <i>Midland, TX 79710</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993

Z 004 855 453



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Oxy USA Inc.</i>	
Street and No. <i>P.O. Box 300</i>	
P.O., State and ZIP Code <i>Tulsa, OK 74102</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993

Z 004 855 454



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Smith & Marrs Inc.</i>	
Street and No. <i>1110 N. Big Spring</i>	
P.O., State and ZIP Code <i>Midland, TX 79701</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993

Z 004 855 455



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Mack Energy Corp.</i>	
Street and No. <i>P.O. Box 276</i>	
P.O., State and ZIP Code <i>Artesia, NM 88211</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	
Postmark or Date	

PS Form 3800, March 1993

Z 004 855 456



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, March 1993

Sent to	
Marathon Oil Co.	
PO Box 552	
Midland, TX 79702	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

Z 004 855 460



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, March 1993

Sent to	
Sea Sand Oil Co.	
PO Box 101777	
Ft. Worth, TX 76185	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

General Manager

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of _____

_____ one _____ weeks.

Beginning with the issue dated

_____ January 28, 1994

and ending with the issue dated

_____ January 28, 1994

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 31 day of

January, 1994

Charlene Perrin

Notary Public.

My Commission expires

March 15, 1997

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

January 28, 1994

Notice is hereby given of the application of Texaco Exploration and Production Inc., Attention: Terry L. Frazier, Area Manager, P.O. Box 730, Hobbs, New Mexico, 88240, Telephone (505) 393-7191, to the New Mexico Oil Conservation Commission, Energy and Minerals Department, for approval of the following wells to be converted to injection for the purpose of expanding waterflood.

Lease/Unit Name: Rhodes Yates Unit #1 Lea Co., NM
1980' FSL, 660' FEL 21-26S-37E UNIT I

Lease/Unit Name: W.H. Rhodes B Fed. NCT-1 Lea

Co., NM
#11 1980' FSL, 1980' FWL 26-26S-37E Unit K
#12 660' FSL, 1980' FEL 26-26S-37E Unit O

Lease/Unit Name: W.H. Rhodes A Fed. Lea Co., NM
#3 660' FSL, 660' FWL 22-26S-37E Unit E
#5 555' FSL, 2085' FWL 22-26S-37E Unit O

Lease/Unit Name: W.H. Rhodes B Fed. NCT-2 Lea Co., NM
#5 1980' FSL, 1980' FEL 28-26S-37E Unit J
#6 660' FSL, 1880' FEL 28-26S-37E Unit O

The injection formation is the Rhodes Yates Seven Rivers at a depth of 3000' below the surface of the

ground. Expected maximum injection rate is 600 BPD, and expected maximum injection pressure is 2000 psi. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen days of this publication.