

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II

P.O. Box Drawer DD, Artesia, NM 88211-0719

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-101

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

☐ AMENDED REPORT

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address TEXACO EXPLORATION & PRODUCTION INC. P.O. Box 3109, Midland Texas 79702		² OGRID Number 022351
		³ API Number 30-025-33987
⁴ Property Code 11123	⁵ Property Name NORTH VACUUM ABO WEST UNIT	⁶ Well No. 30

⁷ Surface Location

UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
K	15	17-S	34-E		1880	SOUTH	1980	WEST	LEA

⁸ Proposed Bottom Hole Location If Different From Surface

UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
M	15	17-S	34-E		560	SOUTH	560	WEST	LEA

⁹ Proposed Pool 1

VACUUM ABO, NORTH

¹⁰ Proposed Pool 2

¹¹ Work Type Code N	¹² WellType Code O	¹³ Rotary or C.T. ROTARY	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4047'
¹⁶ Multiple No	¹⁷ Proposed Depth 10675 MD	¹⁸ Formation ABO	¹⁹ Contractor NABORS	²⁰ Spud Date 6/1/97

²¹ Proposed Casing and Cement Program

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11	8 5/8	24#	1660'	600 SACKS	SURFACE
7 7/8	5 1/2	17#	8880'	1400 SACKS	SURFACE

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone.

Describe the blowout prevention program, if any. Use additional sheets if necessary.

DD-172 <H>

CEMENTING PROGRAM:

SURFACE CASING: 450 SACKS CLASS C w/ 4% GEL, 2% CC (13.5 PPG, 1.74 CF/S, 9.1 GW/S). F/B 150 SACKS CLASS C w/ 2% CC (14.8 PPG, 1.34 CF/S, 6.3 GW/S).

PRODUCTION CASING: 1300 SACKS 35/65 POZ H w/ 6% GEL, 5% SALT, 1/4# FC (12.4 PPG, 2.14 CF/S, 11.9 GW/S). F/B 100 SACKS CLASS H (15.6 PPG, 1.18 CF/S, 5.2 GW/S).

HORIZONTAL WELL, NON-STANDARD PRORATION UNIT EXCEPTION HAS BEEN APPLIED FOR. (COPY ATTACHED).

TOTAL DEPTH: 8880' TVD, 10675' MD.

Permit Expires 1 Year From Approval
Date Unless Drilling Underway

²³ I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature

C. Wade Howard

Printed Name

C. Wade Howard

Title Eng. Assistant

Date 5/21/97

Telephone 688-4606

OIL CONSERVATION DIVISION

Approved By:

Orig. Signed by
Paul Kautz
Geologist

Title:

Approval Date: MAY 28 1997 Expiration Date:

Conditions of Approval:
Attached ☐

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

DISTRICT IV
P. O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease-4 copies
Fee Lease-3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

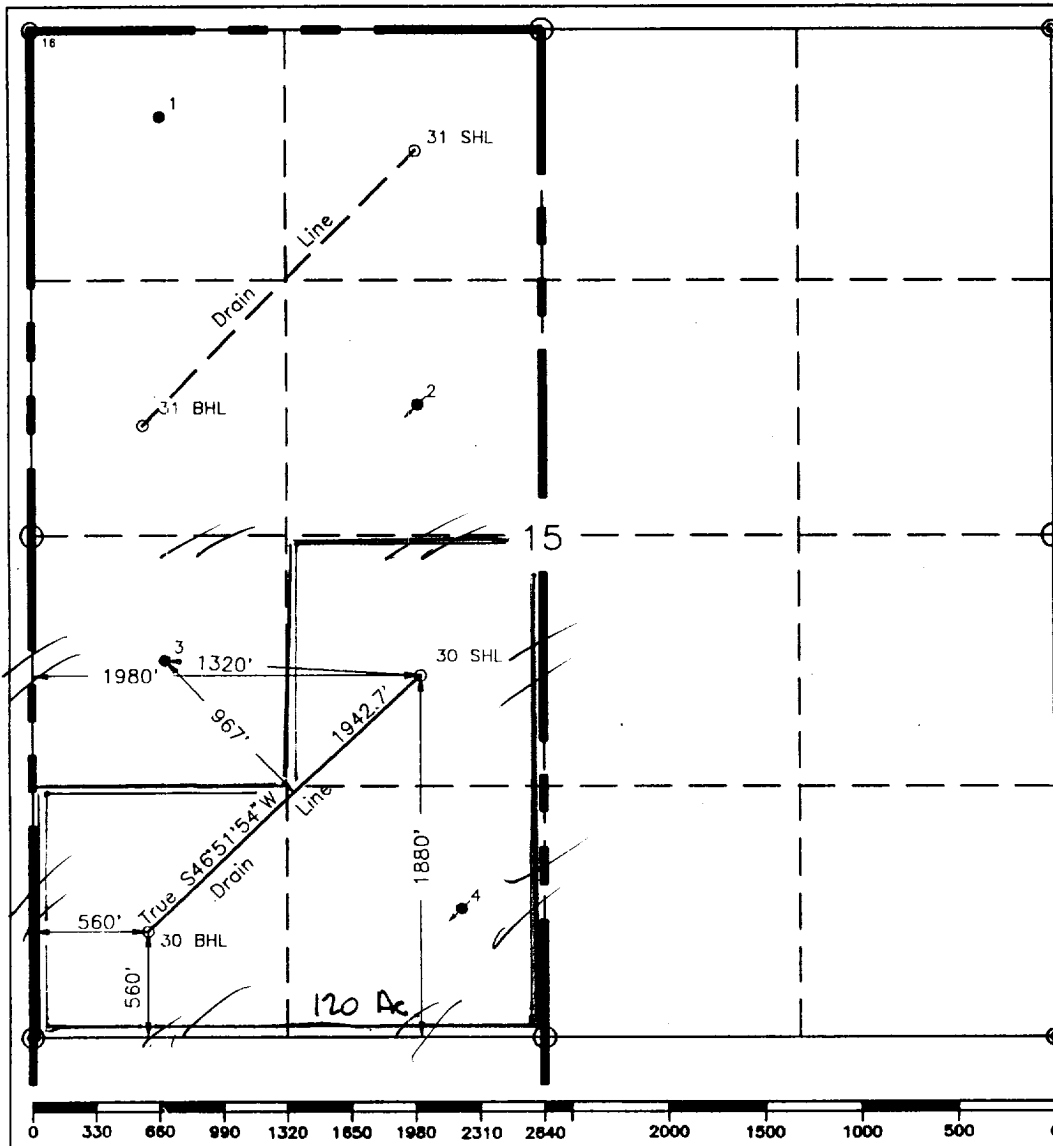
¹ API Number 30-025-33987		² Pool Code 61760		³ Pool Name Vacuum Abo, North	
⁴ Property Code 11123		⁵ Property Name North Vacuum Abo West Unit			⁶ Well Number 30
⁷ GRID No. 22351		⁸ Operator Name TEXACO EXPLORATION & PRODUCTION, INC.			⁹ Elevation 4047'

¹⁰ Surface Location									
UL or lot no. K	Section 15	Township 17-S	Range 34-E	Lot Idn	Feet from the 1880'	North/South line South	Feet from the 1980'	East/West line West	⁷ County Lea

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. M	Section 15	Township 17-S	Range 34-E	Lot Idn	Feet from the 560'	North/South line South	Feet from the 560'	East/West line West	⁷ County Lea

¹² Dedicated Acres 120	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. DD-172(H)
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION.



¹⁷OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

C. Wade Howard

Printed Name

C. Wade Howard

Position

Engineer's Assistant

Company

Texaco Expl. & Prod. Inc.

Date

April 7, 1997

¹⁸SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

April 2, 1997

Signature & Seal of
Professional Surveyor

John S. Piper

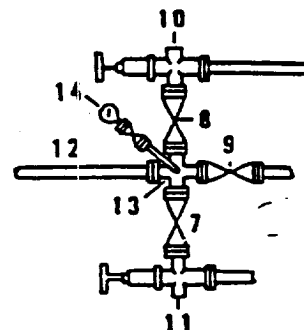
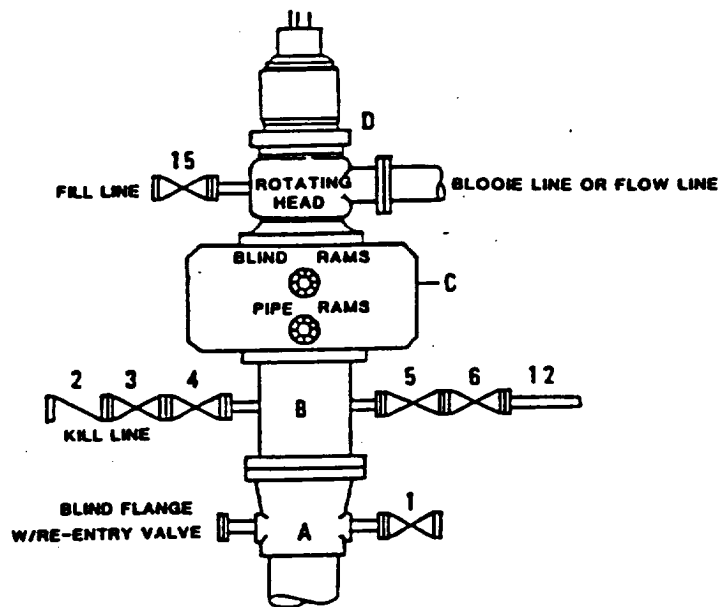
Certificate No.

7254 John S. Piper

Sheet

**DRILLING CONTROL
CONDITION II-B 3000 WP
FOR AIR DRILLING OR
WHERE NITROGEN OR AIR BLOWS ARE EXPECTED**

H₂S TRIM REQUIRED
YES _____ NO _____



DRILLING CONTROL

MATERIAL LIST - CONDITION II - B

- | | |
|----------------|--|
| A | Texaco Wellhead |
| B | 3000# W.P. drilling spool with a 2" minimum flanged outlet for kill line and 3" minimum flanged outlet for choke line. |
| C | 3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where substructure height is adequate, 2 - 3000# W.P. single ram type preventers may be utilized). |
| D | Rotating Head with fill up outlet and extended Blooe Line. |
| 1,3,4,
7,8, | 2" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve. |
| 2 | 2" minimum 3000# W.P. back pressure valve. |
| 5,6,9 | 3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve. |
| 12 | 3" minimum schedule 80, Grade "B", seamless line pipe. |
| 13 | 2" minimum x 3" minimum 3000# W.P. flanged cross. |
| 10,11 | 2" minimum 3000# W.P. adjustable choke bodies. |
| 14 | Cameron Mud Gauge or equivalent (location optional in choke line). |
| 15 | 2" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Torc Plug valve. |



TEXACO, INC.
MIDLAND DIVISION
MIDLAND, TEXAS



SCALE	DATE	EST NO	DRG NO
DRAWN BY			
CHECKED BY			
APPROVED BY			

EXHIBIT C

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
 [DD-Directional Drilling] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☐ NSL ☒ NSP ☒ DD ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

C. WADE HOWARD
 Print or Type Name

C. Wade Howard
 Signature

ENGINEER ASSISTANT
 Title

4/21/97
 Date



Texaco Exploration
and Production Inc

501 North Lorenz
Midland, TX 79701

P.O. Box 3108
Midland TX 79702

April 17, 1997

GOV - STATE AND LOCAL GOVERNMENTS
Directional Drilling - Horizontal
Non-Standard Proration Unit
North Vacuum Abo West Unit Well No. 30
Vacuum Abo, North Field
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Attention: Mr. Michael E. Stogner

Gentlemen:

Administrative approval, Rule 104.D, and Rule 111.D, is requested to directionally drill a horizontal well in a non-standard proration unit in the Abo formation.

The North Vacuum Abo West Unit is a candidate for horizontal wells due to the heterogeneous nature of the reservoir. This Unit was designated a "Project Area" for horizontal drilling in 1996 (see Administrative Orders DD-153H and DD-154H). We have completed one successful horizontal well in this Unit (Well No. 26) and are currently completing second horizontal well (No. 27).

Attached for your information is a copy of our directional plans, a type log section, and Form C-102.

The "affected" offset operator to this well has been notified of this request. (See attached offset operator's list and certified mail receipts.)

Any questions concerning this request should be directed to me at (915) 688-4606.

Yours very truly,

C. W. Howard
Engineer Assistant

CWH:
CC: NMOCD, P. O. Box 1980, Hobbs, NM 88240
Attachments

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

DISTRICT IV
P. O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

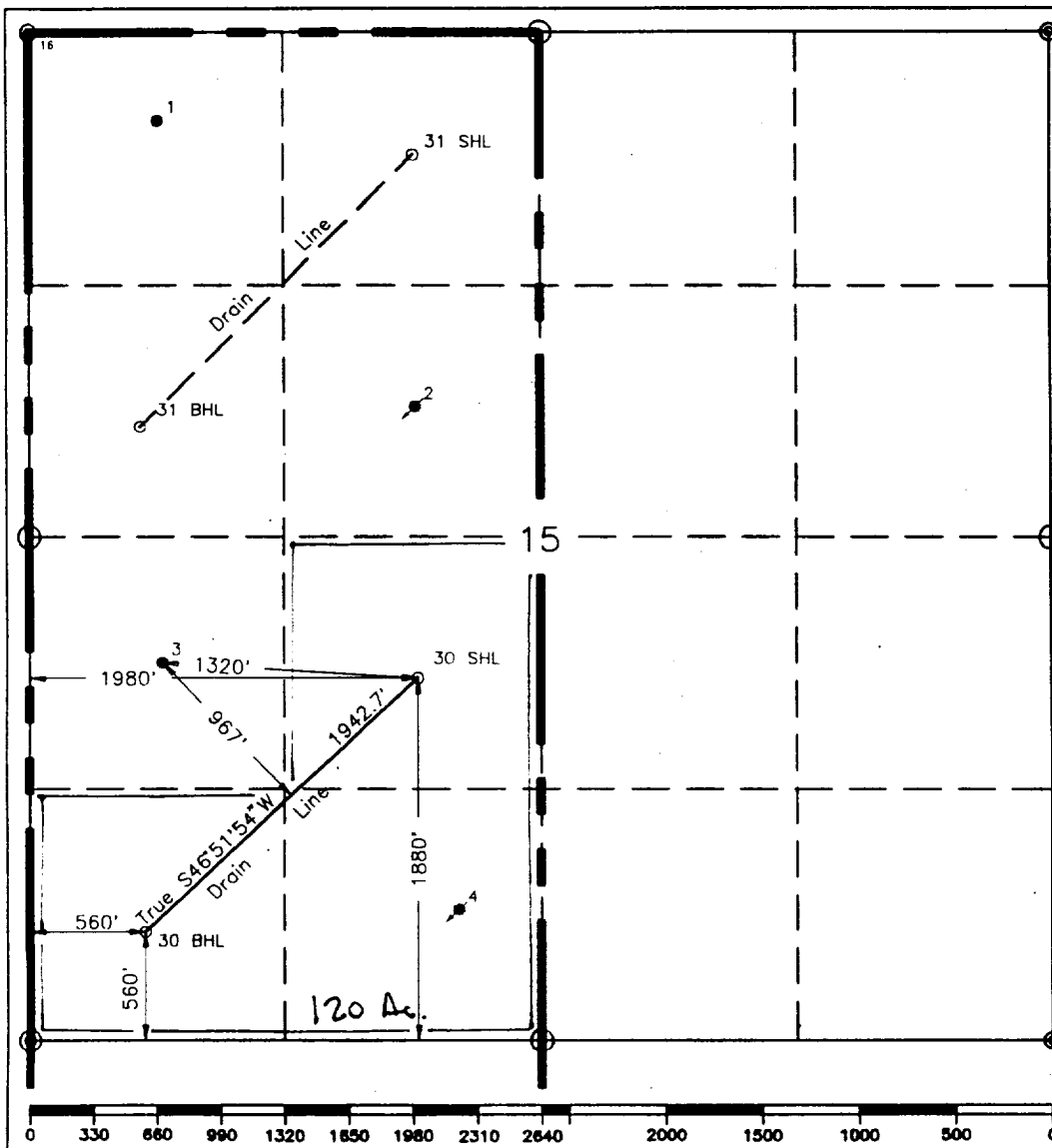
State Lease-4 copies
Fee Lease-3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 61760		³ Pool Name Vacuum Abo, North					
⁴ Property Code 11123		⁵ Property Name North Vacuum Abo West Unit						⁶ Well Number 30	
⁷ GRID No. 22351		⁸ Operator Name TEXACO EXPLORATION & PRODUCTION, INC.						⁹ Elevation 4047'	
¹⁰ Surface Location									
UL or lot no. K	Section 15	Township 17-S	Range 34-E	Lot Idn	Feet from the 1880'	North/South line South	Feet from the 1980'	East/West line West	County Lea
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. M	Section 15	Township 17-S	Range 34-E	Lot Idn	Feet from the 560'	North/South line South	Feet from the 560'	East/West line West	County Lea
¹² Dedicated Acres 120		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION.

	¹⁶ OPERATOR CERTIFICATION	
	I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
	Signature <i>C. Wade Howard</i>	
	Printed Name C. Wade Howard	
	Position Engineer's Assistant	
	Company Texaco Expl. & Prod. Inc.	
	Date April 7, 1997	
	¹⁷ SURVEYOR CERTIFICATION	
	I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.	
	Date Surveyed April 2, 1997	
Signature & Seal of Professional Surveyor <i>John S. Piper</i>		
Certificate No. 7254 John S. Piper		
Sheet		

○ = Staked Location ● = Producing Well ✕ = Injection Well ◊ = Water Supply Well ⊕ = Plugged & Abandon Well



Texaco Exploration
and Production Inc

P.O. Box 310
Midland TX 79702

P.O. Box 310
Midland TX 79702

April 17, 1997

GOV - STATE AND LOCAL GOVERNMENTS
Directional Drilling - Horizontal
Non-Standard Location
North Vacuum Abo West Unit Well No. 30
Sec. 15, T-17-S, R-34-E
Lea County, New Mexico

TO THE OFFSET OPERATORS:

Gentlemen:

As an offset operator to the captioned unit, you are being furnished with a copy of our Application to directionally drill a horizontal well. If you have no objection, please sign the waiver at the bottom of this letter and return in the enclosed envelope.

Any questions concerning this request should be directed to me at (915) 688-4606.

Yours very truly,

C. Wade Howard

C. W. Howard
Engineer Assistant

CWH:cwh

File

WAIVER APPROVED:

COMPANY: _____

BY: _____

DATE: _____

OFFSET OPERATOR'S LIST
North Vacuum Abo West Unit Well No. 30
LEA COUNTY, NEW MEXICO

Mobil Exploration and Producing US Inc.
P. O. Box 633
Midland, Texas 79702

Mack Energy Corporation
P. O. Box 1767
Artesia, NM 88211

Chevron USA Inc.
P. O. Box 1150
Midland, Texas 79702

Mack C. Chase &
Chase Oil Corporation
P. O. Box 1767
Artesia, New Mexico 88211

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete Items 1 and/or 2 for additional services.
- Complete Items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mobil Exploration and
Producing US Inc.
P. O. Box 633
Midland, TX 79702

4a. Article Number

P 497 363 312

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

APR 18 1987

5. Received By: (Print Name)

6. Signature (Addressee or Agent)

X *[Signature]*

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete Items 1 and/or 2 for additional services.
- Complete Items 3, 4a, and 4b.
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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mack Energy Corporation
P. O. Box 1767
Artesia, NM 88211

4a. Article Number

P 497 362 859

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

4-18-87

5. Received By: (Print Name)

6. Signature (Addressee or Agent)

X *[Signature]*

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

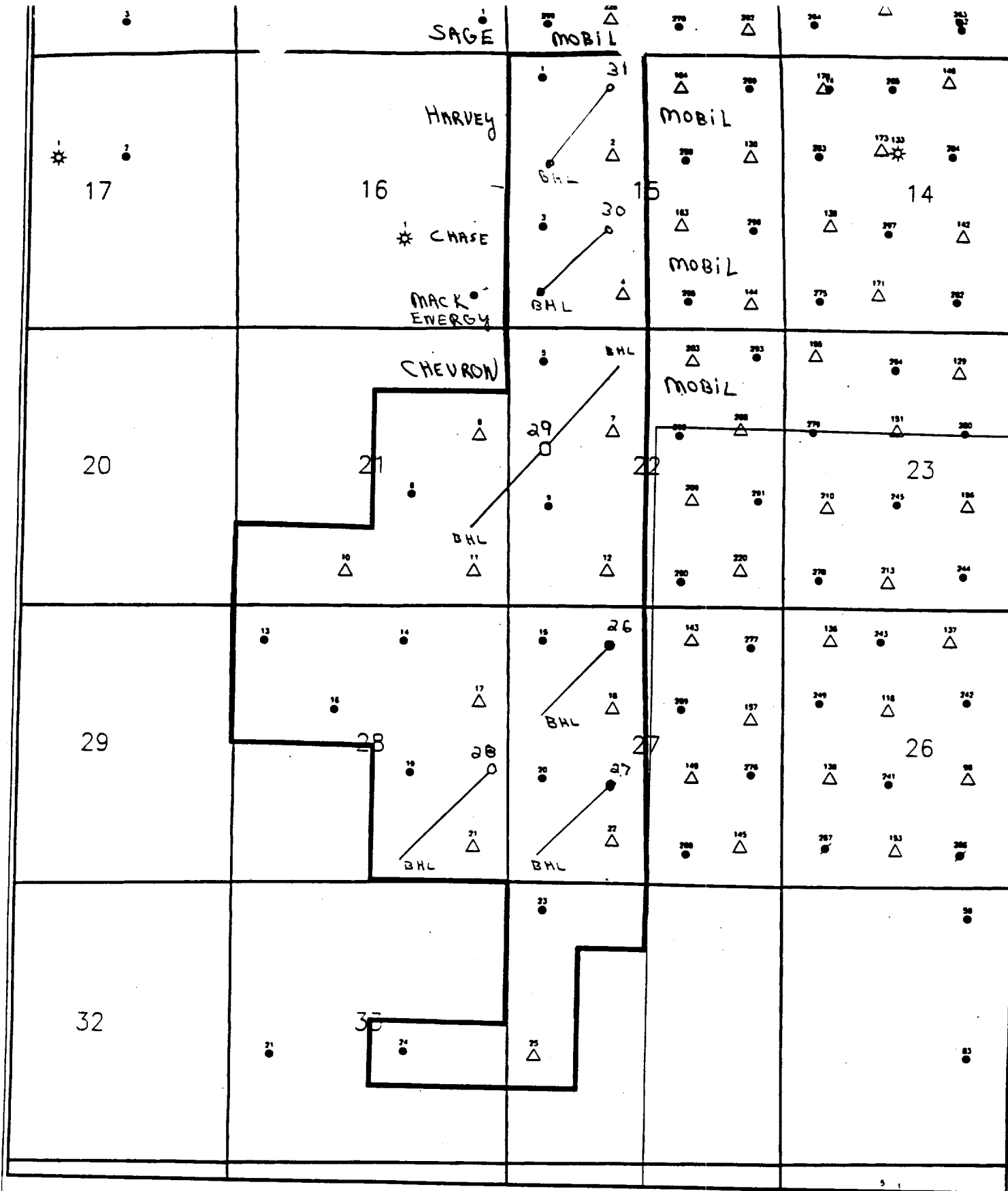
Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

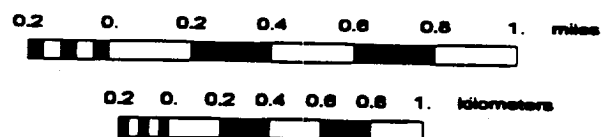
SENDER: ■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ Print your name and address on the reverse of this form so that we can return this card to you. ■ Attach this form to the front of the mailpiece, or on the back if space does not permit. ■ Write "Return Receipt Requested" on the mailpiece below the article number. ■ The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. ☐ Addressee's Address 2. ☐ Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: Mack C. Chase & Chase Oil Corporation P. O. Box 1767 Artesia, NM 88211	4a. Article Number P 497 362 884	Thank you for using Return Receipt Service.
	4b. Service Type ☐ Registered ☒ Certified ☐ Express Mail ☐ Insured ☒ Return Receipt for Merchandise ☐ COD	
	7. Date of Delivery 4-18-97	
5. Received By: (Print Name) Sylvia Henisley	8. Addressee's Address (Only if requested and fee is paid)	
6. Signature: (Addressee or Agent) X <i>Sylvia Henisley</i>		
PS Form 3811, December 1994		Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

SENDER: ■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ Print your name and address on the reverse of this form so that we can return this card to you. ■ Attach this form to the front of the mailpiece, or on the back if space does not permit. ■ Write "Return Receipt Requested" on the mailpiece below the article number. ■ The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. ☐ Addressee's Address 2. ☐ Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: Chevron USA Inc. P. O. Box 1150 Midland, TX 79702	4a. Article Number P 497 362 883	Thank you for using Return Receipt Service.
	4b. Service Type ☐ Registered ☒ Certified ☐ Express Mail ☐ Insured ☒ Return Receipt for Merchandise ☐ COD	
	7. Date of Delivery APR 18 1997	
5. Received By: (Print Name) BOB BERT	8. Addressee's Address (Only if requested and fee is paid)	
6. Signature: (Addressee or Agent) X <i>Bob Bert</i>		
PS Form 3811, December 1994		Domestic Return Receipt

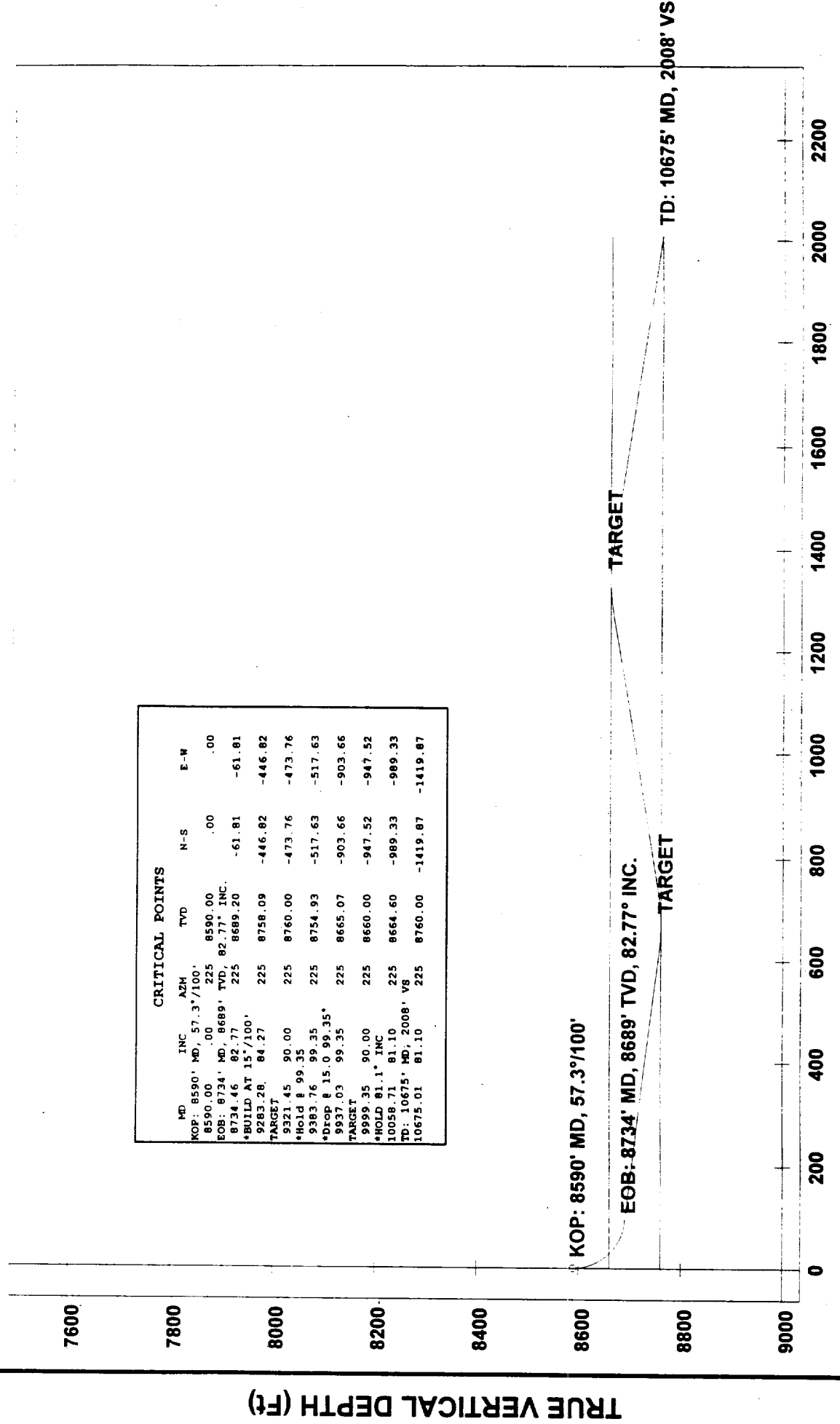


Scale 1:30000.



Texaco Exploration & Production, Inc.		
North Vacuum Abo West Unit Base Map, Wells > 8,000' TD		
		01/00
		Scale 1:30000

Company: TEXACO E & P, INC.
 Lease/Well: NVAWU #30
 Location: LEA CO., NEW MEXICO
 Declination:
 File name: C:\WINSERVE\NVAWU30.SVY
 Date/Time: 15-Apr-97 / 16:59





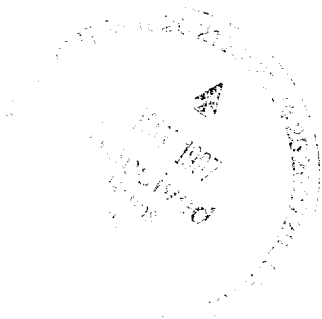
Job Number:
Company: TEXACO E & P, INC.
Lease/Well: NVAWU #30
Location: LEA CO., NEW MEXICO
Rig Name:
RKB:
G.L. or M.S.L.:

State/Country:
Declination:
Grid:
File name: C:\WINSERVE\NVAWU30.SVY
Date/Time: 15-Apr-97 / 16:59
Curve Name: PRELIMINARY WELL PLAN

PHOENIX DRILLING SERVICES, INC.

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 225.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
KOP: 8590' MD, 57.3°/100'										
8590.00	.00	225.00	8590.00	8590.00	.00	.00	.00	.00	.00	.00
8600.00	5.73	225.00	8599.98	8599.98	-35	-35	.50	.50	225.00	57.30
8610.00	11.46	225.00	8609.87	8609.87	-1.41	-1.41	1.99	1.99	225.00	57.30
8620.00	17.19	225.00	8619.55	8619.55	-3.16	-3.16	4.47	4.47	225.00	57.30
8630.00	22.92	225.00	8628.94	8628.94	-5.58	-5.58	7.89	7.89	225.00	57.30
8640.00	28.65	225.00	8637.94	8637.94	-8.66	-8.66	12.24	12.24	225.00	57.30
8650.00	34.38	225.00	8646.46	8646.46	-12.35	-12.35	17.47	17.47	225.00	57.30
8660.00	40.11	225.00	8654.42	8654.42	-16.63	-16.63	23.52	23.52	225.00	57.30
8670.00	45.84	225.00	8661.73	8661.73	-21.45	-21.45	30.33	30.33	225.00	57.30
8680.00	51.57	225.00	8668.33	8668.33	-26.76	-26.76	37.84	37.84	225.00	57.30
8690.00	57.30	225.00	8674.14	8674.14	-32.51	-32.51	45.97	45.97	225.00	57.30
8700.00	63.03	225.00	8679.12	8679.12	-38.64	-38.64	54.64	54.64	225.00	57.30

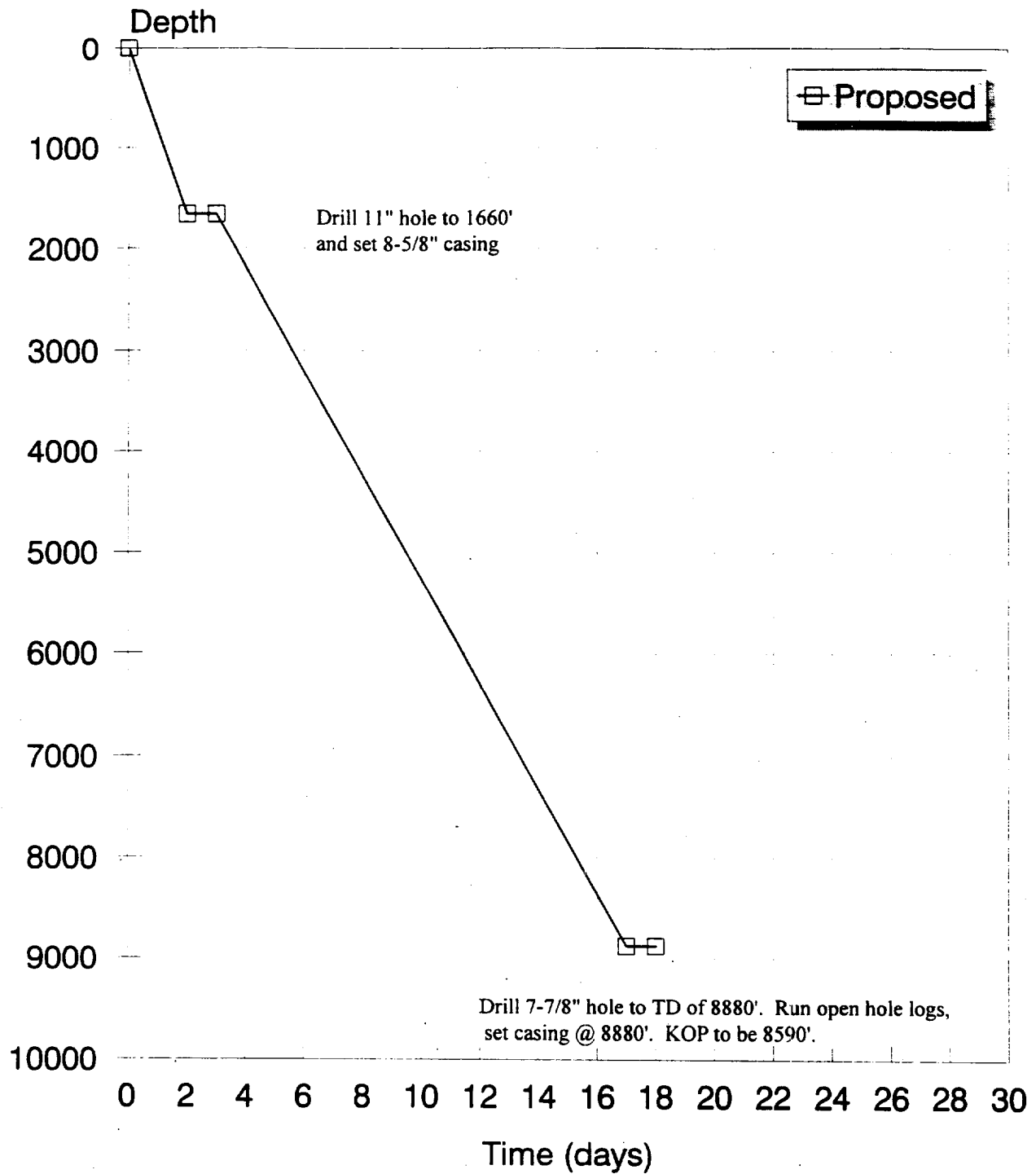


Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
8710.00	68.76	225.00	8683.20	8683.20	-45.09	-45.09	63.77	63.77	225.00	57.30
8720.00	74.49	225.00	8686.35	8686.35	-51.80	-51.80	73.25	73.25	225.00	57.30
8730.00	80.22	225.00	8688.54	8688.54	-58.70	-58.70	83.01	83.01	225.00	57.30
EOB: 8734' MD, 8689' TVD, 82.77° INC.										
8734.46	82.77	225.00	8689.20	8689.20	-61.81	-61.81	87.42	87.42	225.00	57.30
9273.28	82.77	225.00	8756.97	8756.97	-439.79	-439.79	621.96	621.96	225.00	.00
BUILD AT 15°/100'										
9283.28	84.27	225.00	8758.09	8758.09	-446.82	-446.82	631.89	631.89	225.00	15.00
9293.28	85.77	225.00	8758.96	8758.96	-453.86	-453.86	641.86	641.86	225.00	15.00
9303.28	87.27	225.00	8759.57	8759.57	-460.92	-460.92	651.84	651.84	225.00	15.00
9313.28	88.77	225.00	8759.91	8759.91	-467.99	-467.99	661.83	661.83	225.00	15.00
TARGET										
9321.45	90.00	225.00	8760.00	8760.00	-473.76	-473.76	670.00	670.00	225.00	15.00
9331.45	91.50	225.00	8759.87	8759.87	-480.83	-480.83	680.00	680.00	225.00	15.00
9341.45	93.00	225.00	8759.48	8759.48	-487.90	-487.90	689.99	689.99	225.00	15.00
9351.45	94.50	225.00	8758.82	8758.82	-494.95	-494.95	699.97	699.97	225.00	15.00
9361.45	96.00	225.00	8757.91	8757.91	-501.99	-501.99	709.93	709.93	225.00	15.00
9371.45	97.50	225.00	8756.73	8756.73	-509.02	-509.02	719.86	719.86	225.00	15.00
9381.45	99.00	225.00	8755.30	8755.30	-516.01	-516.01	729.75	729.75	225.00	15.00
Hold @ 99.35										
9383.76	99.35	225.00	8754.93	8754.93	-517.63	-517.63	732.04	732.04	225.00	15.00
9483.76	99.35	225.00	8738.69	8738.69	-587.40	-587.40	830.71	830.71	225.00	.00
9583.76	99.35	225.00	8722.45	8722.45	-657.17	-657.17	929.38	929.38	225.00	.00
9683.76	99.35	225.00	8706.21	8706.21	-726.94	-726.94	1028.05	1028.05	225.00	.00
9783.76	99.35	225.00	8689.96	8689.96	-796.72	-796.72	1126.73	1126.73	225.00	.00
9883.76	99.35	225.00	8673.72	8673.72	-866.49	-866.49	1225.40	1225.40	225.00	.00
Drop @ 15.0 99.35°										
9937.03	99.35	225.00	8665.07	8665.07	-903.66	-903.66	1277.96	1277.96	225.00	.00
9937.04	99.35	225.00	8665.07	8665.07	-903.66	-903.66	1277.97	1277.97	225.00	15.00
9939.35	99.00	225.00	8664.70	8664.70	-905.27	-905.27	1280.25	1280.25	225.00	15.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
9949.35	97.50	225.00	8663.27	8663.27	-912.27	-912.27	1290.14	1290.14	225.00	15.00
9959.35	96.00	225.00	8662.09	8662.09	-919.29	-919.29	1300.07	1300.07	225.00	15.00
9969.35	94.50	225.00	8661.18	8661.18	-926.33	-926.33	1310.03	1310.03	225.00	15.00
9979.35	93.00	225.00	8660.52	8660.52	-933.39	-933.39	1320.01	1320.01	225.00	15.00
9989.35	91.50	225.00	8660.13	8660.13	-940.45	-940.45	1330.00	1330.00	225.00	15.00
TARGET										
9999.35	90.00	225.00	8660.00	8660.00	-947.52	-947.52	1340.00	1340.00	225.00	15.00
10009.35	88.50	225.00	8660.13	8660.13	-954.59	-954.59	1350.00	1350.00	225.00	15.00
10019.35	87.00	225.00	8660.52	8660.52	-961.66	-961.66	1359.99	1359.99	225.00	15.00
10029.35	85.50	225.00	8661.18	8661.18	-968.71	-968.71	1369.97	1369.97	225.00	15.00
10039.35	84.00	225.00	8662.09	8662.09	-975.76	-975.76	1379.93	1379.93	225.00	15.00
10049.35	82.50	225.00	8663.27	8663.27	-982.78	-982.78	1389.86	1389.86	225.00	15.00
HOLD 81.1° INC										
10058.71	81.10	225.00	8664.60	8664.60	-989.33	-989.33	1399.12	1399.12	225.00	15.00
10158.71	81.10	225.00	8680.08	8680.08	-1059.19	-1059.19	1497.92	1497.92	225.00	.00
10258.71	81.10	225.00	8695.56	8695.56	-1129.05	-1129.05	1596.71	1596.71	225.00	.00
10358.71	81.10	225.00	8711.04	8711.04	-1198.91	-1198.91	1695.51	1695.51	225.00	.00
10458.71	81.10	225.00	8726.52	8726.52	-1268.76	-1268.76	1794.30	1794.30	225.00	.00
10558.71	81.10	225.00	8742.00	8742.00	-1338.62	-1338.62	1893.10	1893.10	225.00	.00
10658.71	81.10	225.00	8757.48	8757.48	-1408.48	-1408.48	1991.89	1991.89	225.00	.00
TD: 10675' MD, 2008' VS										
10675.01	81.10	225.00	8760.00	8760.00	-1419.87	-1419.87	2008.00	2008.00	225.00	.00

VERTICAL DRILLING CURVE

North Vacuum Abo West Unit # 30H, Lea Co., NM.



HORIZONTAL DRILLING CURVE

North Vacuum Abo West Unit 30H, Lea Co., NM.

