

CAMPBELL, CARR, BERGE
& SHERIDAN, P.A.
LAWYERS

MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
MARK F. SHERIDAN
MICHAEL H. FELDEWERT
ANTHONY F. MEDEIROS
PAUL R. OWEN

JACK M. CAMPBELL
OF COUNSEL

JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
FACSIMILE: (505) 983-6043
E-MAIL: ccbspa@ix.netcom.com

December 23, 1997

HAND DELIVERED

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, New Mexico 87505

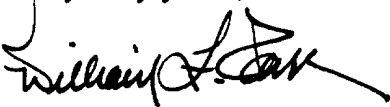
Re: *Application for Amendment of Division Order No. DD-167(H) for Directional Drilling-Horizontal, Non-Standard Spacing or Proration Unit, North Vacuum Abo West Unit Well No. 28, North Vacuum-Abo Pool, Lea County, New Mexico*

Dear Mr. LeMay:

Enclosed in duplicate is the application of Texaco Exploration and Production Inc. for Amendment of Division Order No. DD-167(H) to increase the producing area for the North Vacuum Abo West Unit Well No. 28 to permit the horizontal portion of the wellbore to be no closer than 460 feet from the outer boundary of the project area for this well.

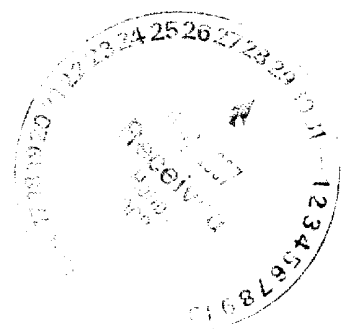
If you need any thing further from Texaco to proceed with your consideration of this application, please advise.

Very truly yours,



WILLIAM F. CARR
Attorney for Texaco Exploration and Production Inc.
cc: Michael E Stogner,
Chief Engineer

✓ Chris Williams, District Supervisor
Oil Conservation Division District I



CAMPBELL, CARR, BERGE
& SHERIDAN, P.A.
LAWYERS

MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
MARK F. SHERIDAN
MICHAEL H. FELDEWERT
ANTHONY F. MEDEIROS
PAUL R. OWEN

JACK M. CAMPBELL
OF COUNSEL

JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
FACSIMILE: (505) 983-6043
E-MAIL: ccbspa@ix.netcom.com

December 23, 1997

VIA HAND-DELIVERY

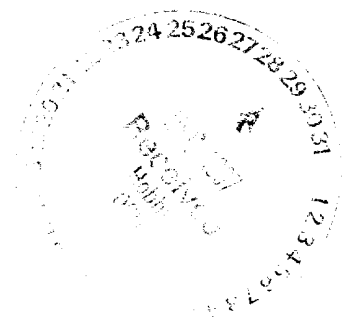
William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
2040 Pacheco Street
Santa Fe, New Mexico 87505

Attention: Michael E. Stogner

Re: ***Application for Amendment of Division Administrative
Order DD-167(H) for Directional Drilling-Horizontal
Non-Standard Spacing or Proration Unit
North Vacuum Abo West Unit Well No. 28
North Vacuum-Abo Pool
Lea County, New Mexico***

Gentlemen:

Texaco Exploration and Production Inc. hereby requests amendment of Division Administrative Order DD-167(H) which was entered on April 16, 1997. This Order authorized the initiation of a high angle/horizontal directional drilling project within a non-standard 160-acre oil spacing and proration unit comprising the SE/4 of Section 28, Township 17 South, Range 34 East, NMPM, North Vacuum-Abo Pool, North Vacuum Abo West Unit, of the North Vacuum Abo West Unit, North Vacuum Abo West Unit Waterflood Project Area, Lea County, New Mexico, by the drilling of the North Vacuum Abo West Unit Well No. 28 at a standard North Vacuum-Abo Pool surface oil well location 1980 feet from the South line and 760 feet from the East line (Unit I) of said Section 28, drill vertically to an approximate depth of 8,600 feet, kick-off in a southwesterly direction with a short radius wellbore (57.3 degree/100 feet), and drill in a somewhat horizontal fashion a lateral distance of approximately 1,800 feet through the Abo formation.



Although the Special Pool Rules for the North Vacuum-Abo Pool provide for wells within 200 feet of the center of a governmental quarter-quarter section (460 foot set backs), Texaco requested and Order DD-167(H) provides for a "producing area" for this horizontal wellbore that shall include that area within the SE/4 of said Section 28 that is no closer than 660 feet from the outer boundary of said quarter section. (Order paragraph 4). While drilling the horizontal portion of this wellbore, the quality of the Abo reservoir improved as Texaco approached the 660 foot set back authorized by Order DD-167(H). Due to the improvement in the geologic characteristics of the reservoir which were discovered after the commencement of the project, Texaco continued drilling to a point 544 feet from the South line and 2,084 feet from the East line of said Section 28. Although this point is within the project area at a point where a vertical wellbore can be drilled and produced in conformity with the setback requirements from the outer boundary of a standard spacing and proration unit of the Special Pool Rules and Regulations for the North Vacuum-Abo Pool (Order No. R-2421), it extends beyond the boundary of the "producing area" approved by Order DD-167 (H).

Texaco therefore makes application for Amendment of Order Paragraph 4 of Order DD-167(H) to provide for a producing area that is no closer than 460 feet from the outer boundary of said quarter section.

In support of this application Texaco states:

- A. The surface location of the North Vacuum Abo West Unit Well No. 28 is within the boundaries of the project area which consists of two drilling units, substantially in the form of a square, being a legal subdivision of the U. S. Public Land Survey.
- B. The producing interval in this well will be totally confined to the amended producing area with the measured distance from the North, South, East and West boundaries of the project area inside of which a vertical wellbore can be drilled and produced in conformity with the setback requirements from the outer boundary of a standard spacing and proration unit for the North Vacuum-Abo Pool.



- C. The project area includes multiple contiguous drilling units.
- D. The subject well includes a single lateral which will conform to the requirements of this order as amended.

The North Vacuum-Abo West Unit is a candidate for horizontal drilling due to the heterogeneous nature of the reservoir where vertical segregation is common and horizontal wells can drain laterally discontinuous lenses that would not otherwise be exploited without dense vertical well spacing. The Unit was designated a "Project Area" for horizontal drilling in 1996 [see Administrative Orders DD-153(H) and DD-154(H)] and the type log for the pool was presented at that time. Texaco has successfully completed other horizontal wells in this pool.

Attached hereto as Exhibit A is a plat indicating the Section, Township and Range in which this well is located which shows the well's project area (SE/4 of Section 28), the well's surface location, the horizontal plan view for the well, and the producing area for the project well (460 foot set back from the outer boundary of the project area).

Exhibit B to this administrative application is a plat showing existing wells in the North Vacuum-Abo Pool in the project area, all offset drilling units in the North Vacuum-Abo Pool, the Abo wells located on these offsetting units and the operators thereof. Exhibit C is a vertical plan view for the well (cross-sectional view) which shows all information required by Division Rule 111.D. (2) (c) and (d).

Attached as Exhibit D is a list of all offsetting operators of spacing units in the West Vacuum-Abo Pool. On or before the date this application was submitted to the Division, each of these operators was notified of this application to amend Order DD-167(H) by submitting a copy of this application to each of them by Certified Mail, Return Receipt Requested. Each was advised that if they have an objection to this application it must be filed with the Division's Santa Fe Office in writing within twenty days of the date of the Certified Letter.



William J. LeMay, Director
Oil Conservation Division
December 23, 1997
Page 4

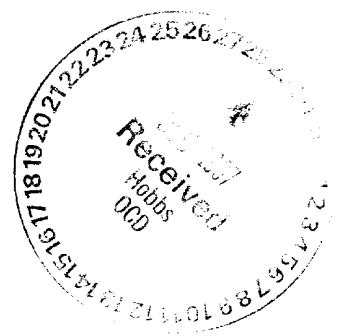
Your attention to this application is appreciated.

Very truly yours,

A handwritten signature in black ink, appearing to read "William F. Carr", with a long, sweeping horizontal line extending to the right.

WILLIAM F. CARR

WFC:mlh
Enclosures



DISTRICT I
P. O. Box 1580, Hobbs, NM 88240
DISTRICT II
P. O. Drawer 00, 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

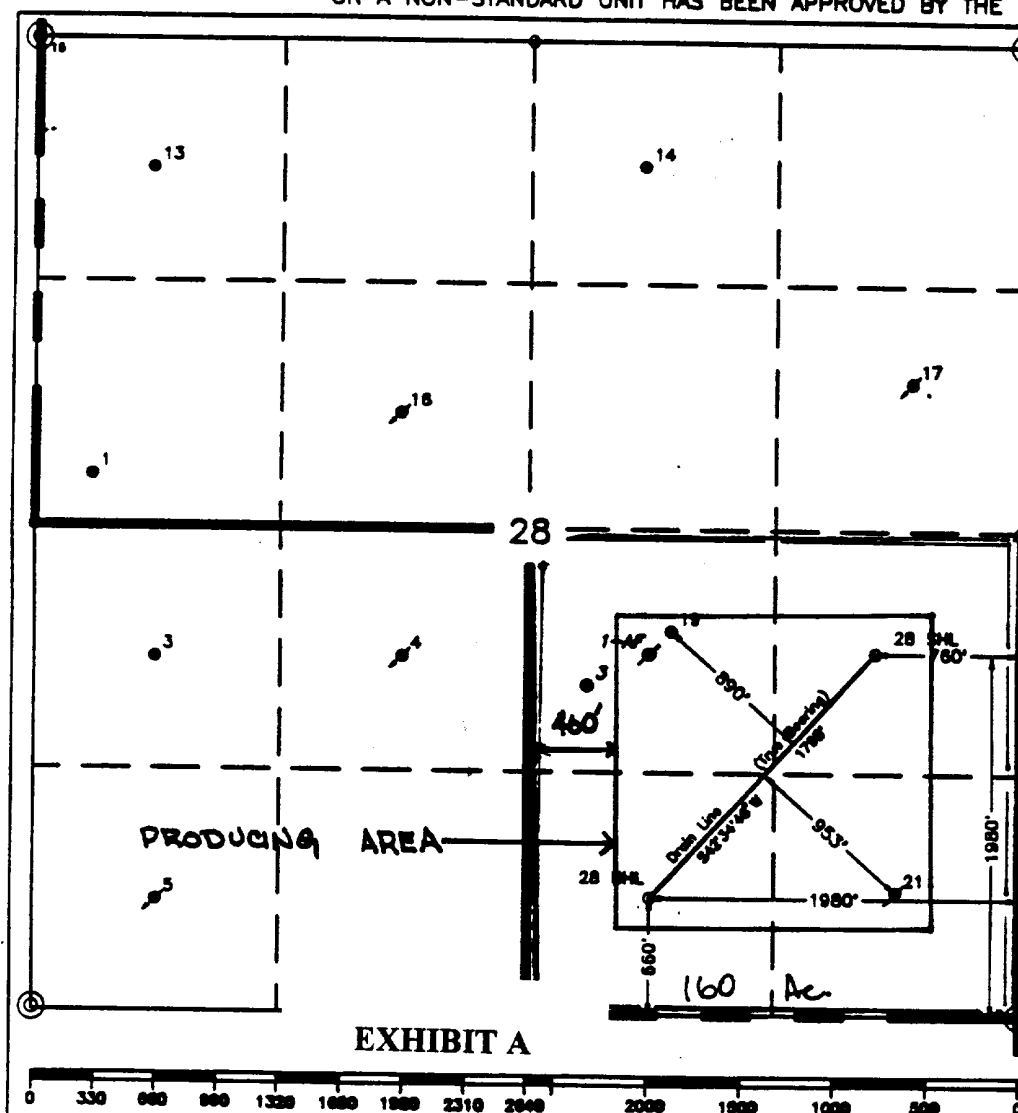
State Lease-4 copies
Fee Lease-3 copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

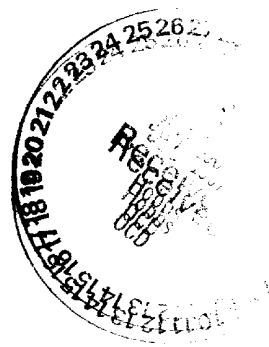
☐ AMENDED REPORT

1 API Number 30-025-33926		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 28			
7 GRID No. 22351		8 Operator Name TEXACO EXPLORATION & PRODUCTION, INC.				9 Elevation 4033'			
10 Surface Location									
UL or lot no. 1	Section 28	Township 17-S	Range 34-E	Lot Idn	Feet from the 1980'	North/South line South	Feet from the 780'	East/West line East	County Lea
11 Bottom Hole Location If Different From Surface									
UL or lot no. 0	Section 28	Township 17-S	Range 34-E	Lot Idn	Feet from the 660'	North/South line South	Feet from the 1980'	East/West line East	County Lea
12 Dedicated Acres 160		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 DMSION.



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 February 24, 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 February 21, 1997	
Signature & Seal of Professional Surveyor <i>John S. Piper</i>	
Certificate No. 7234 John S. Piper	
Sheet	



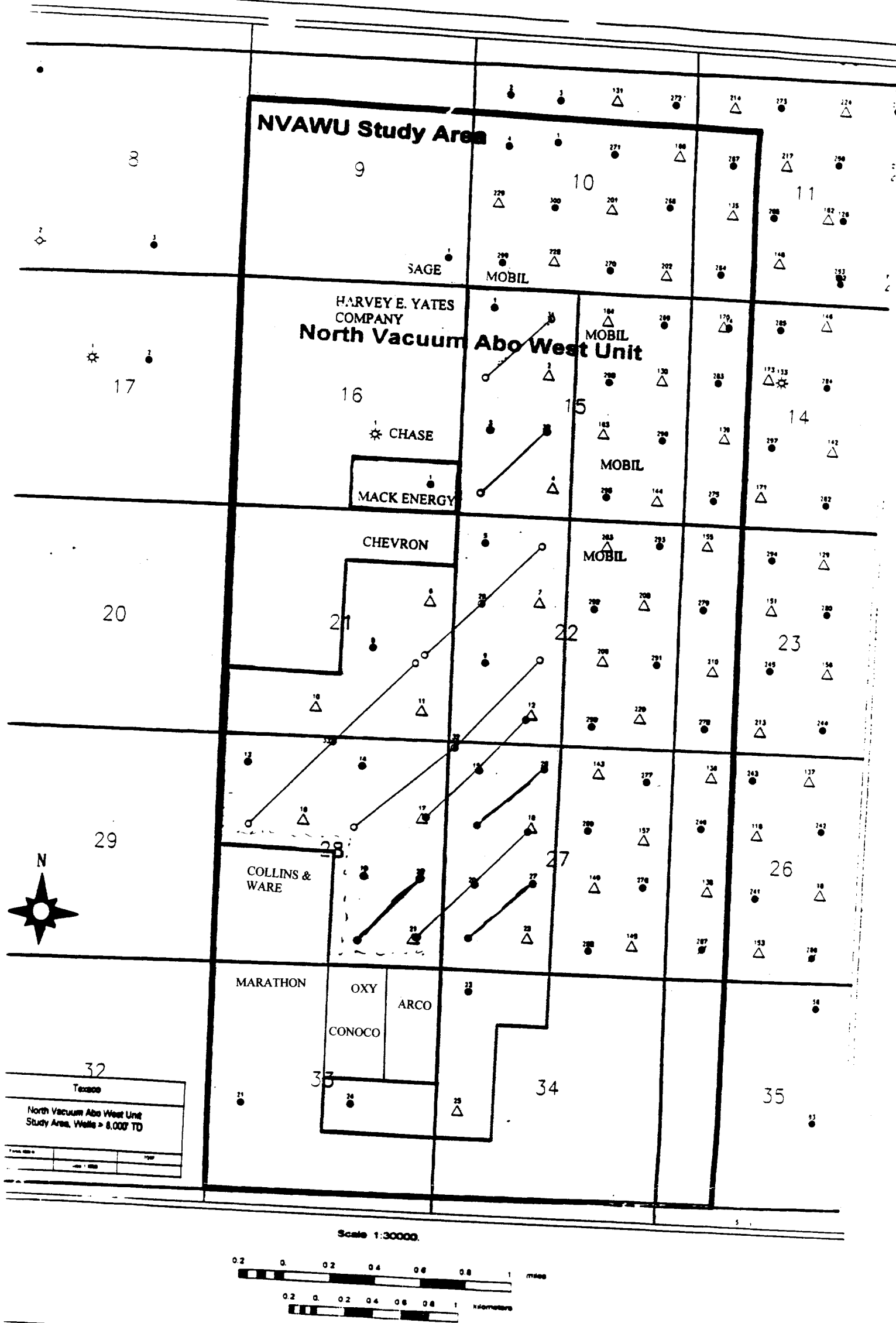
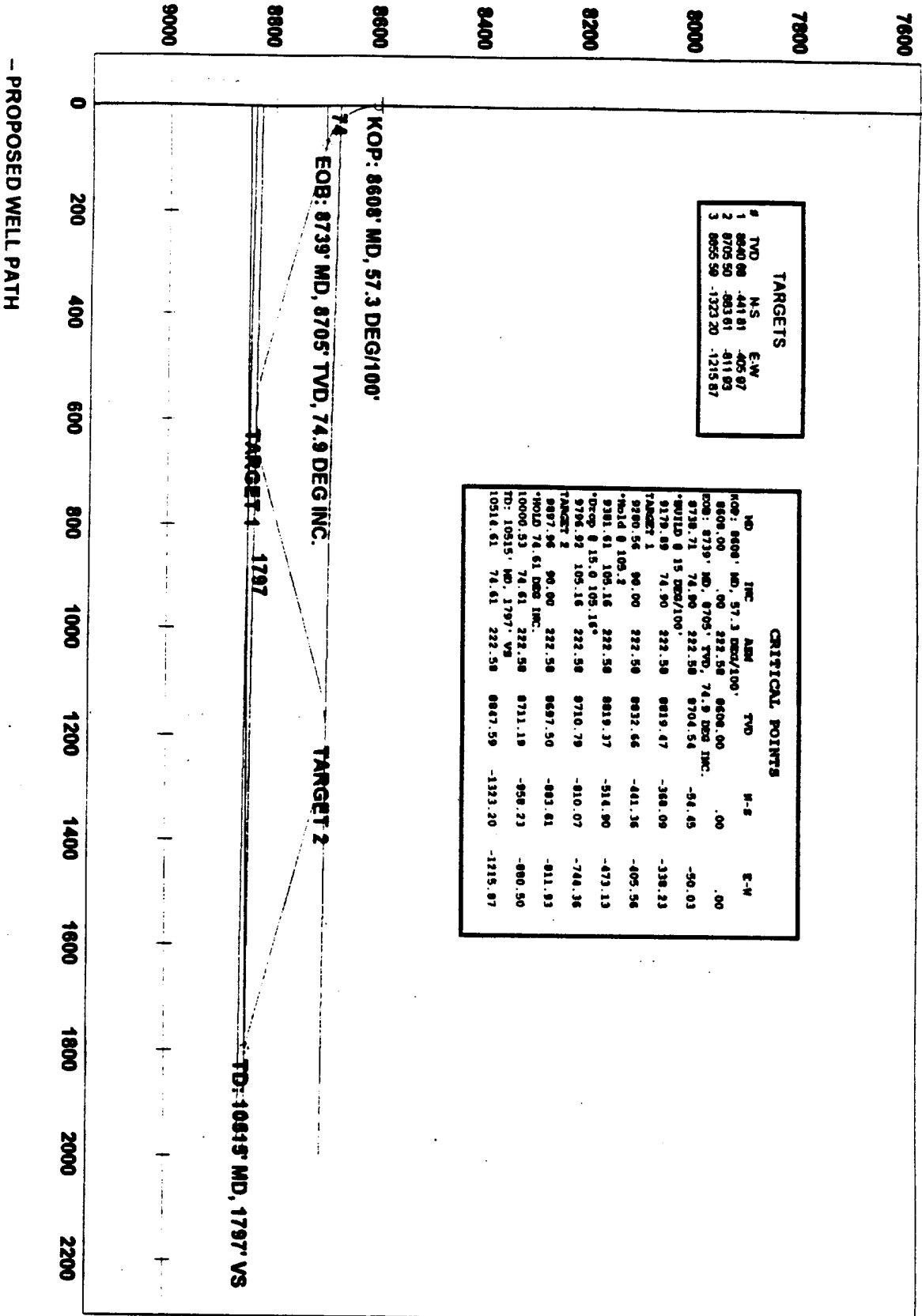


EXHIBIT B



Lease/Well: NVAWU #28H
 Location: LEA COUNTY, NEW MEXICO
 Declination: 9.11 DEG EAST
 File name: C:\WINSERVER\NVAWU28.SVY
 Date/Time: Thursday, February 27, 1997

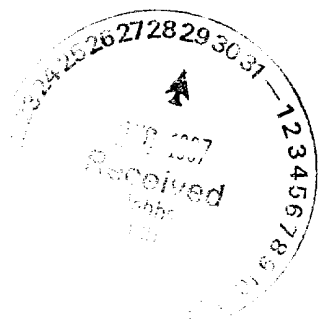
TRUE VERTICAL DEPTH (Ft)



TARGETS			
#	TVD	N-S	E-W
1	8640.00	-441.81	-405.87
2	8705.50	-683.61	-811.83
3	8855.59	-1323.20	-1215.87

CRITICAL POINTS					
NO	INC	ABW	TVD	N-S	E-W
KOP: 8608'	MD, 57.3 DEG/100°				
8608.00	00	222.58	8608.00	.00	.00
EOB: 8739'	MD, 8705' TVD, 74.9 DEG INC.				
8739.71	74.90	222.58	8704.54	-54.45	-50.03
"BUILT 8 15 DEG/100°					
8739.88	74.90	222.58	8819.47	-368.09	-338.23
TARGET 1					
8820.56	90.00	222.58	8832.66	-441.36	-405.56
"BOLD 8 105.2					
8981.61	105.16	222.58	8819.37	-514.90	-473.13
"BOLD 8 15.0 105.16°					
8794.92	105.16	222.58	8710.79	-810.07	-748.36
TARGET 2					
8887.96	90.00	222.58	8887.50	-883.61	-811.93
"BOLD 74.61 DEG INC.					
10006.53	74.61	222.58	8711.19	-958.73	-880.50
TD: 10615'	MD, 1797' VS				
10514.61	74.61	222.58	8867.59	-1323.20	-1215.87

VERTICAL SECTION (Ft) @ 222.58°



**OFFSET OPERATOR'S LIST
North Vacuum Abo West Unit Well No. 28
LEA COUNTY, NEW MEXICO**

Oxy USA Inc.
Post Office Box 50250
Midland, TX 79710

Conoco Inc.
10 Desta Drive West
Midland, TX 79705

Atlantic Richfield Company
Post Office Box 1610
Midland, TX 79702

Collins & Ware, Inc.
508 West Wall Avenue
Suite 1200
Midland, TX 79701

Marathon Oil Company
Post Office Box 552
Midland, TX 79702

