



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

May 15, 1997

Texaco Exploration and Production, Inc.  
P. O. Box 3109  
Midland, Texas 79702  
Attention: C. Wade Howard

*Administrative Order DD-172(H)*  
High Angle/Horizontal

Dear Mr. Howard:

Reference is made to your application dated April 17, 1997 for authorization to initiate a high angle/horizontal directionally drilling project within the SW/4 of Section 15, Township 17 South, Range 34 East, NMPM, North Vacuum-Abo Pool, North Vacuum Abo West Unit, Lea County, New Mexico.

**The Division Director Finds That:**

- (1) The application of Texaco Exploration and Production, Inc. ("Texaco") as operator of the North Vacuum Abo West Unit (approved by Division Order No. R-6822, dated November 18, 1981) has been duly filed under the provisions of Rule 111.D and E of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) The proposed high angle/horizontal directionally drilling project is within the applicant's North Vacuum Abo West Unit Waterflood Project Area (established by Division Order No. R-6857, as amended) and as such Division General Rule 701.G(4) applies, which states that wells within waterflood project areas are not subject to an oil allowable;
- (3) All of said Section 15 is within the horizontal limits of the North Vacuum-Abo Pool, said pool is subject to the "Special Rules and Regulations for the North Vacuum-Abo (Oil) Pool", as promulgated by Division Order No. R-2421, as amended, which provides for 80-acre oil spacing and proration units, or drilling units, and requires that wells be located within a 200 foot radius of the center of

a governmental quarter-quarter section or lot, provided that the first well on the 80-acre unit is located in either the NW/4 or SE/4 of a governmental quarter section;

- (4) Texaco is seeking to initiate a high angle/horizontal directional drilling project within this portion of the North Vacuum-Abo Pool, which is a heterogeneous reservoir where vertical segregation is common, in an attempt to drain laterally discontinuous lenses that would not otherwise be exploited without dense vertical well spacing [see files for Division Administrative Orders DD-153(H), DD-154(H), DD-167(H), and DD-168(H)];
- (5) Texaco is currently developing the North Vacuum-Abo Pool within the SW/4 of said Section 15 with water injection into its North Vacuum Abo West Unit Well No. 4 (API No. 30-025-23735), located at a standard Abo well location 660 feet from the South line and 2180 feet from the West line (Unit N) of said Section 15 and producing from its North Vacuum Abo West Unit Well No. 3 (API No. 30-025-24495), located within a standard 80-acre oil spacing and proration unit comprising the N/2 SW/4 of said Section 15 at a standard oil well location 1980 feet from the South line and 660 feet from the West line (Unit L) of said Section 15;
- (6) The "project area" proposed by Texaco would consist of an over-sized spacing unit comprising 160 acres (two standard lay-down 80-acre units) underlying the SW/4 of said Section 15;
- (7) It is Texaco's intent to place its North Vacuum Abo West Unit Well No. 30 at a standard North Vacuum-Abo Pool oil well location 1880 feet from the South line and 1980 feet from the West line (Unit K) of said Section 15, drill vertically to an approximate depth of 8,600 feet, kick-off in a southwesterly direction with a short radius wellbore (57.3 degrees/100 feet), and drill in a somewhat horizontal fashion a lateral distance of approximately 2,000 feet through the Abo formation;
- (8) The applicable drilling window or "producing area" for said wellbore should include that area within the SW/4 of said Section 15 that is no closer than 560 feet to the outer boundary of the 160-acre project area; and,
- (9) It appears the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E, the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

**IT IS THEREFORE ORDERED THAT:**

(1) Texaco Exploration and Production, Inc. ("Texaco") is hereby authorized to initiate a high angle/horizontal directional drilling project within a non-standard 160-acre oil spacing and proration unit comprising the SW/4 of Section 15, Township 17 South, Range 34 East, NMPM, North Vacuum-Abo Pool, North Vacuum Abo West Unit, North Vacuum Abo West Unit Waterflood Project Area, Lea County, New Mexico, by drilling its North Vacuum Abo West Unit **Well No. 30** at a standard North Vacuum-Abo Pool surface oil well location 1880 feet from the South line and 1980 feet from the West line (Unit K) of said Section 15, drill vertically to an approximate depth of 8,600 feet, kick-off in a southwesterly direction with a short radius wellbore (57.3 degrees/100 feet), and drill in a somewhat horizontal fashion a lateral distance of approximately 2,000 feet through the Abo formation;

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED FURTHER THAT** during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs District office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.

(3) The "project area" for said horizontal well shall consist of an oversized 160-acre non-standard oil spacing and proration unit for said pool comprising the SW/4 of said Section 15.

(4) The "producing area" for said horizontal wellbore shall include that area within the SW/4 of said Section 15 that is no closer than 560 feet from the outer boundary of said quarter section.

(5) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F.

(6) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth (TVD) in addition to measured depths (MVD).

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(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

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cc: Oil Conservation Division - Hobbs  
New Mexico State Land Office - Santa Fe