



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

March 21, 1996

Texaco Exploration and Production, Inc.
c/o Hinkle, Cox, Eaton, Coffield & Hensley, L.L.P.
P. O. Box 2068
Santa Fe, New Mexico 87504-2068
Attention: James Bruce

Administrative Order DD-133(H)
High Angle/Horizontal

Dear Mr. Bruce:

Reference is made to your application on behalf of Texaco Exploration and Production, Inc. dated February 19, 1996 for authorization to initiate a high angle/horizontal directionally drilling project in the Sand Dunes-Bone Spring Pool on two federal tracts in a portion of Section 18, Township 23 South, Range 32 East, NMPM, Lea County, New Mexico.

The Division Director Finds That:

- (1) The application on behalf of Texaco Exploration and Production, Inc. ("Texaco") 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) All of said Section 18 is within the horizontal limits of the Sand Dunes-Bone Spring Pool, said pool is subject to the statewide rules and regulations, as promulgated by Rule 104.C(1)(a), which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of a single 40-acre oil spacing and proration unit;
- (3) Pursuant to Division General Rule 505.A the depth bracket oil allowable assigned the Sand Dunes-Bone Spring Pool is 230 barrels of oil per day per 40-acre unit, its gas-oil ratio limit is 2,000 cubic feet of gas per barrel of oil, the resulting casinghead gas allowable is 460 MCF per day for each 40-acre unit;
- (4) Within the Upper Bone Spring formation there exists a massive sand interval 10 to 50 feet thick with porosity ranging from 10 to 19 percent, and corresponding permeability values average less than one millidarcy. Reservoir simulation and production histories indicate high decline, inefficient drainage, and corresponding low recovery rates in vertical wells drilled in this reservoir. These same simulations indicate that a horizontal well in this sand interval can serve to maximize drainage and recover reserves that would otherwise remain in the ground thereby preventing waste;
- (5) The "project area" proposed by Texaco would consist of an over-sized spacing unit comprising 160 acres underlying the W/2 E/2 of said Section 18 and will be assigned an acreage factor of 4.0 for allowable purposes;

- (6) It is Texaco's intent to place its Sand "18" Federal Com Well No. 2(H) at a standard surface oil well location 330 feet from the South line and 2110 feet from the East line (Unit O) of said Section 18, drill vertically to an approximate depth of 8133 feet, kick-off in a northerly direction with a minimum radius wellbore (12 degrees/100 feet), and drill horizontally a lateral distance of approximately 4,300 feet;
- (7) As required by Division General Rules 104.F(1) and 111.D(1)(b) and to assure that the correlative rights of off-set operators are adequately protected from any adverse effects caused by the drilling of the subject lateral wellbore, the applicable "drilling window" or "producing area" for said horizontal well bore should include that area within the W/2 E/2 of said Section 18 that is no closer than 330 feet from the outer boundary of proposed 160-acre "non-standard" oil spacing and proration unit; and,
- (8) 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 W/2 E/2 of Section 18, Township 23 South, Range 32 East, NMPM, Sand Dunes-Bone Spring Pool, Lea County, New Mexico, by drilling its Sand "18" Federal Com Well No. 2(H) at a standard surface oil well location 330 feet from the South line and 2110 feet from the East line (Unit O) of said Section 18, drill vertically to an approximate depth of 8133 feet, kick-off in a northerly direction with a minimum radius wellbore (12 degrees/100 feet), and drill horizontally a lateral distance of approximately 4,300 feet through the Upper Bone Spring interval in said pool.

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 oversized 160-acre non-standard oil spacing and proration unit comprising the W/2 E/2 of said Section 18.

(4) Said non-standard 160-acre unit shall be assigned an acreage factor of 4.0.

(5) The "producing area" for said horizontal wellbore shall include that area within the W/2 E/2 of said Section 18 that is no closer than 330 feet from the outer boundary of proposed 160-acre "non-standard" oil spacing and proration unit.

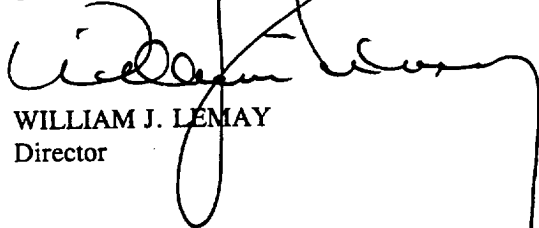
(6) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F.

(7) 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).

(8) 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

S E A L

cc: Oil Conservation Division - Hobbs ✓
U. S. Bureau of Land Management - Carlsbad
Joe W. Hammond, Santa Fe Energy Resources, Inc. - Midland, Texas