

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 11071  
Order No. R-10201**

**APPLICATION OF MOBIL EXPLORATION &  
PRODUCING U.S. INC. FOR A HIGH ANGLE/  
HORIZONTAL DIRECTIONAL DRILLING PROJECT,  
SPECIAL OPERATING RULES THEREFOR, A NON-  
STANDARD OIL SPACING AND PRORATION UNIT,  
AND A SPECIAL PROJECT ALLOWABLE AND  
TESTING PERIOD, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on August 18, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of September, 1994, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Mobil Exploration & Producing U.S. Inc., seeks authority to initiate a high angle/horizontal directional drilling project in the Drinkard formation within the following described project areas:

- a) the NW/4 SW/4 of Section 33, Township 17 South, Range 35 East, NMPM, forming a standard 40-acre oil spacing and proration unit to be dedicated to the proposed State "O" Well No. 3 to be drilled from a standard surface location 1846 feet from the South line and 330 feet from the West line (Unit L);

- b) the N/2 NW/4 of Section 34, Township 17 South, Range 35 East, NMPM, forming a non-standard 80-acre oil spacing and proration unit to be dedicated to the proposed State "M" Well No. 17 to be drilled from a standard surface location 809 feet from the North line and 1813 feet from the West line (Unit C);
- c) the S/2 NW/4 of Section 34, Township 17 South, Range 35 East, NMPM, forming a non-standard 80-acre oil spacing and proration unit to be dedicated to the proposed State "M" Well No. 16 to be drilled from a standard surface location 2075 feet from the North line and 330 feet from the West line (Unit E).

(3) The applicant further seeks authority to horizontally drill the proposed State "O" Well No. 3 and State "M" Well Nos. 16 and 17 in the following unconventional manner:

Drill vertically and set casing as follows:

Drill 11 inch hole to 1,585 feet, set 8 5/8-inch casing at this depth and cement to surface; Drill 7 7/8-inch hole to 7,950 feet, set 5 1/2-inch casing at a depth of 7,500 feet and cement to a depth of approximately 3,700 feet;

State "O" Well No. 3

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a northeasterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 800 feet.

State "M" Well No. 16

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a northeasterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 1200 feet.

State "M" Well No. 17

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a southwesterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 1000 feet.

(4) The applicant further seeks the adoption of special operating provisions and rules within the project areas including the designation of a prescribed area limiting the horizontal or producing portion of the wellbores such that the State "M" Well Nos. 16 and 17 can be no closer than 330 feet from the outer boundary of the NW/4 of Section 34, and the State "O" Well No. 3 can be no closer than 330 feet from the outer boundary of the NW/4 SW/4 of Section 33.

(5) The applicant further seeks:

- a) the assignment of a special oil allowable for the State "M" Well Nos. 16 and 17 equal to 374 barrels of oil per day, being two times the normal allowable for a standard 40-acre proration unit, and, the assignment of a standard oil allowable of 187 barrels of oil per day for the State "O" Well No. 3;
- b) a special production testing period of three months and special testing allowable. During this testing period the applicant proposes that the State "M" Well Nos. 16 and 17 be allowed to produce at a rate not to exceed 1122 barrels of oil per day, and that the State "O" Well No. 3 be allowed to produce at a rate not to exceed 561 barrels of oil per day;
- c) authority to make up all overproduction accrued during the special production testing period within one year after the end of such testing period.

(6) The State "O" Well No. 3 is located within one mile of the outer boundary of the Vacuum-Drinkard Pool which is currently governed by Statewide Rules and Regulations which require standard 40-acre spacing and proration units with wells to be located no closer than 330 feet from the outer boundary of the spacing unit, a standard oil allowable of 187 barrels of oil per day, and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(7) The State "M" Well Nos. 16 and 17 are located within one mile of the outer boundary of the proposed East Vacuum-Drinkard Pool which will also be governed by Statewide Rules and Regulations as described above.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed high angle/horizontal wellbores are designed so as to penetrate the oil column within the upper portion of the Drinkard formation above the oil/water contact. According to further evidence and testimony, this type of drilling and completion should delay water coning within the reservoir which should result in the recovery of a greater amount of oil and gas from the respective project areas, thereby preventing waste.

(9) Applicant further testified that the State "M" Well Nos. 16 and 17 should be at least as effective in draining their respective project areas as two vertical wellbores.

(10) Each of the respective project areas is comprised of a single state lease which is owned and operated 100 percent by Mobil Exploration & Producing U.S. Inc.

(11) No offset operator and/or interest owner appeared at the hearing in opposition to the proposed high angle/horizontal directional drilling projects.

(12) In the interest of conservation and prevention of waste, the application of Mobil Exploration & Producing U. S. Inc. for a high angle/horizontal drilling project within the project areas described above should be approved.

(13) The applicant should be required to determine the actual location of the kick-off point in each well prior to commencing directional drilling operations. Also, the applicant should be required to conduct a directional survey on the lateral portion of each wellbore during or after completion of drilling operations.

(14) The applicant should notify the supervisor of the Hobbs district office of the Division of the date and time of conductance of any directional surveys in order that the same may be witnessed.

(15) The applicant should be required to submit copies of all directional surveys conducted on the subject wells to both the Santa Fe and Hobbs offices of the Division.

(16) The proposed project allowables of 374 barrels of oil per day for the State "M" Well Nos. 16 and 17, and 187 barrels of oil per day for the State "O" Well No. 3 are in conformance with current Division policy, and should be approved, provided however that the assignment of such allowable should be contingent on a showing by the operator to the Division that the horizontal or producing portion of the State "M" Well No. 16 traverses all or part of the SE/4 NW/4, and the State "M" Well No. 17 traverses all or part of the NW/4 NW/4 of Section 34. Such showing should be by means of the directional survey as described in Finding No. (13) above.

(17) According to applicant's evidence and testimony, the purpose of the proposed special production testing period is to conduct rate/time analysis on the subject wells primarily to determine permeability and skin damage. This data, according to the applicant, will be utilized primarily to determine if well stimulation or treatment is necessary.

(18) The evidence and testimony further indicate that this data is necessary in order to make an informed decision on well treatment, inasmuch as there are potentially damaging effects of stimulation and/or treatment on the wellbores.

(19) By Order No. R-10158 (currently under appeal) issued in Case No. 11014 on July 26, 1994, the Division denied Phillips Petroleum Corporation's request to conduct a similar type of production test on its proposed James "E" Well No. 9, however, Phillips' proposed production testing period was one year, and was objected to by Bass Enterprises Production Company, an offset operator.

(20) The special production testing period proposed by Mobil in this case represents a more reasonable time period to gather reservoir and wellbore data.

(21) No offset operator and/or interest owner appeared at the hearing in opposition to the proposed special production test.

(22) The applicant's request to conduct a three month special production test should be approved. During this special testing period, the State "M" Well Nos. 16 and 17 should be allowed to produce at a rate not to exceed 1122 barrels of oil per day, and the State "O" Well No. 3 should be allowed to produce at a rate not to exceed 561 barrels of oil per day, provided however, that any overproduction accrued during this special test period should be made up within one year of the end of the test period.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Mobil Exploration & Producing U.S. Inc., is hereby authorized to initiate a high angle/horizontal directional drilling project in the Drinkard formation within the following described project areas:

- a) the NW/4 SW/4 of Section 33, Township 17 South, Range 35 East, NMPM, forming a standard 40-acre oil spacing and proration unit to be dedicated to the State "O" Well No. 3 to be drilled from a standard surface location 1846 feet from the South line and 330 feet from the West line (Unit L);
- b) the N/2 NW/4 of Section 34, Township 17 South, Range 35 East, NMPM, forming a non-standard 80-acre oil spacing and proration unit, also hereby approved, to be dedicated to the State "M" Well No. 17 to be drilled from a standard surface location 809 feet from the North line and 1813 feet from the West line (Unit C);
- c) the S/2 NW/4 of Section 34, Township 17 South, Range 35 East, NMPM, forming a non-standard 80-acre oil spacing and proration unit, also hereby approved, to be dedicated to the State "M" Well No. 16 to be drilled from a standard surface location 2075 feet from the North line and 330 feet from the West line (Unit E).

(2) The applicant is further authorized to horizontally drill the State "O" Well No. 3 and State "M" Well Nos. 16 and 17 in the following unconventional manner:

Drill vertically and set casing as follows:

Drill 11 inch hole to 1,585 feet, set 8 5/8-inch casing at this depth and cement to surface; Drill 7 7/8-inch hole to 7,950 feet, set 5 1/2-inch casing at a depth of 7,500 feet and cement to a depth of approximately 3,700 feet;

State "O" Well No. 3

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a northeasterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 800 feet.

State "M" Well No. 16

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a northeasterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 1200 feet.

State "M" Well No. 17

Kick off from the vertical at a depth of approximately 7,600 feet and drill in a southwesterly direction building angle to approximately 90 degrees so as to penetrate the targeted portion of the Drinkard formation at a depth of approximately 7,762 feet. Continue drilling horizontally a distance of approximately 1000 feet.

(3) The horizontal or producing portion of the State "M" Well Nos. 16 and 17 shall be located no closer than 330 feet from the outer boundary of the NW/4 of Section 34, and the horizontal or producing portion of the State "O" Well No. 3 shall be located no closer than 330 feet from the outer boundary of the NW/4 SW/4 of Section 33.

(4) The applicant shall determine the actual location of the kick-off point in each well prior to commencing directional drilling operations. Also, the applicant shall conduct a directional survey on the lateral portion of each wellbore during or after completion of drilling operations.

(5) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time of conductance of any directional surveys in order that the same may be witnessed.

(6) The applicant shall submit copies of all directional surveys conducted on the subject wells to both the Santa Fe and Hobbs offices of the Division.

(7) The allowable assigned to the State "M" Well Nos. 16 and 17 in the East Vacuum-Drinkard Pool shall be 374 barrels of oil per day provided that the horizontal or producing portion of the State "M" Well No. 16 traverses all or part of the SE/4 NW/4, and the horizontal or producing portion of the State "M" Well No. 17 traverses all or part of the NW/4 NW/4 of Section 34. Such showing shall be by means of the directional survey as described above. The State "O" Well No. 3 shall be assigned an allowable of 187 barrels of oil per day.

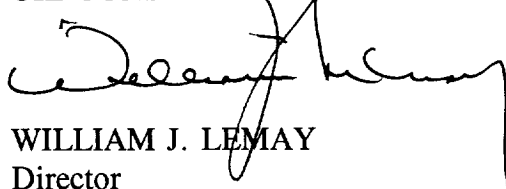
(8) The applicant is hereby authorized to conduct a three month special production test on the State "M" Well Nos. 16 and 17 and the State "O" Well No. 3. During the special production test period, the State "M" Well Nos. 16 and 17 shall be allowed to produce at a rate not to exceed 1122 barrels of oil per day, and the State "O" Well No. 3 shall be allowed to produce at a rate not to exceed 561 barrels of oil per day.

(9) Any overproduction accrued during the special production test period shall be made up within one year after the end of the test period. The operator shall consult with the supervisor of the Hobbs district office of the Division to create a schedule for makeup of such overproduction.

(10) Jurisdiction of this cause is hereby 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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