

**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. 11014
Order No. R-10158**

**APPLICATION OF PHILLIPS PETROLEUM COMPANY
FOR A HORIZONTAL/HIGH ANGLE DIRECTIONAL
DRILLING PILOT PROJECT, SPECIAL OPERATING
RULES THEREFOR, A NON-STANDARD OIL
PRORATION UNIT, AN UNORTHODOX OIL WELL
LOCATION AND SPECIAL PROJECT OIL ALLOWABLE
AND PRODUCTION TESTING PERIOD, EDDY COUNTY,
NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 7, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of July, 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, Phillips Petroleum Company, seeks authority to initiate a high angle/horizontal directional drilling pilot project in the Cherry Canyon member of the Delaware formation, Cabin Lake-Delaware Pool, within a proposed project area comprising the SE/4 SW/4 and the S/2 SE/4 of Section 11, Township 22 South, Range 30 East, NMPM, Eddy County, New Mexico, thereby creating a non-standard 120-acre oil spacing and proration unit for said pool.

(3) The applicant further seeks authority to horizontally drill its James "E" Well No. 9 from an unorthodox surface location 1060 feet from the South line and 10 feet from the East line (Unit P) of Section 11 in the following unconventional manner:

Drill vertically as follows: 17 1/2-inch hole to 475 feet, set 13 3/8-inch casing, cement to surface; 12 1/4-inch hole to 3,700 feet, set 9 5/8-inch casing, cement to surface; 8 1/2-inch hole to approximately 5,124 feet. Kick off from the vertical at this depth and drill in a southwesterly direction building angle to approximately 87 degrees so as to penetrate the Cherry Canyon member of the Delaware formation at a true vertical depth of approximately 5,768 feet. Continue drilling horizontally a distance of approximately 2,166 feet so as to bottom said wellbore at an estimated bottomhole location 400 feet from the South line and 2540 feet from the West line (Unit N) of Section 11.

(4) The applicant further seeks the adoption of special operating provisions and rules within the pilot project area including the designation of a prescribed area limiting the horizontal or producing portion of the wellbore such that it can be no closer than 330 feet from the outer boundary of the project area.

(5) The applicant further seeks:

- a) the assignment of a special oil allowable for the subject well equal to 561 barrels of oil per day, being three times the normal allowable for a standard 40-acre proration unit;
- b) a special production testing period of one year. During this testing period the applicant proposes that the subject well be allowed to produce as follows:

1,683 barrels of oil per day for the 1st 6 month period
841.5 barrels of oil per day for the 2nd 6 month period
- c) authority to make up all overproduction accrued during the special production testing period by the end of the well's second year of production.

(6) The proposed well is located within the Cabin Lake-Delaware 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) According to applicant's evidence and testimony, the proposed James "E" Well No. 9 is located within the "Potash Area" as described within Division Order No. R-111-P. Due to drilling constraints within this area, the applicant proposes to utilize horizontal drilling technology to effectively limit the number of vertical wellbores which would otherwise be needed to drain the proposed project area.

(8) Applicant testified that it has not received any objection to its proposed high angle/horizontal drilling pilot project from the two affected potash companies in this area.

(9) Through its evidence and testimony, the applicant demonstrated that the proposed high angle/horizontal wellbore should be at least as effective in draining the oil and gas reserves underlying the SE/4 SW/4 and S/2 SE/4 than would three conventional vertical wellbores located within the project area.

(10) The proposed high angle wellbore should recover oil and gas reserves from the project area which may otherwise not be recovered due to drilling constraints in this area, thereby preventing waste.

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

(12) In the interest of conservation and prevention of waste, the application of Phillips Petroleum Company for a high angle/horizontal drilling pilot project should be approved.

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

(14) The applicant should notify the supervisor of the Artesia 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 well to both the Santa Fe and Artesia offices of the Division.

(16) The proposed project allowable of 561 barrels of oil per day is in conformance with current Division policy, 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 James "E" Well No. 9 traverses all or part of the SE/4 SW/4, SW/4 SE/4 and the SE/4 SE/4 of Section 11. Such showing should be by means of the directional survey as described in Finding No. (12) above.

(17) According to applicant's evidence and testimony, the purpose of the proposed special testing period is to conduct rate/time analysis on the subject well 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) Applicant further testified that due to the potentially damaging effects of stimulation and/or treatment on the wellbore, it is imperative that it obtain the necessary data in order to make an informed decision on such treatment.

(19) Applicant's evidence and testimony does not indicate that the ultimate recovery of oil and gas from the subject well may be reduced if it is not allowed to conduct rate/time analysis as proposed.

(20) Bass Enterprises Production Company (Bass), an offset operator to the proposed high angle/horizontal drilling pilot project, appeared through counsel at the hearing and presented a letter of objection to the applicant's proposed special production test period. Such objection is based on Bass's contention that:

- a) "due to the close proximity of the proposed wellbore to Bass's leases, the test allowable creates an undue hardship upon Bass to avoid competitive drainage and satisfy its obligations of the leases offsetting the proposed wellbore"; and,
- b) "according to the proposed test well allowable, Bass cannot effectively protect its leasehold from offset drainage, even with the drilling of three vertical wells".

(21) Applicant's proposed special production test period and method of making up overproduction does not fully and adequately establish that the correlative rights of offset operators, including Bass Enterprises Production Company, will be protected.

(22) Applicant's evidence does not establish that ultimate recovery from the subject well will be reduced or otherwise waste occur if the special production test period is not approved.

(23) Applicant's request for a special production test period and corresponding special test allowable for the subject well should be denied.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Phillips Petroleum Company, is hereby authorized to initiate a high angle/horizontal directional drilling pilot project in the Cherry Canyon member of the Delaware formation, Cabin Lake-Delaware Pool, within a project area comprising the SE/4 SW/4 and the S/2 SE/4 of Section 11, Township 22 South, Range 30 East, NMPM, Eddy County, New Mexico, thereby creating a non-standard 120-acre oil spacing and proration unit for said pool, also hereby approved.

(2) The applicant is further authorized to horizontally drill its James "E" Well No. 9 from an unorthodox surface location 1060 feet from the South line and 10 feet from the East line (Unit P) of Section 11 in the following unconventional manner:

Drill vertically as follows: 17 1/2-inch hole to 475 feet, set 13 3/8-inch casing, cement to surface; 12 1/4-inch hole to 3,700 feet, set 9 5/8-inch casing, cement to surface; 8 1/2-inch hole to approximately 5,124 feet. Kick off from the vertical at this depth and drill in a southwesterly direction building angle to approximately 87 degrees so as to penetrate the Cherry Canyon member of the Delaware formation at a true vertical depth of approximately 5,768 feet. Continue drilling horizontally a distance of approximately 2,166 feet so as to bottom said wellbore at an estimated bottomhole location 400 feet from the South line and 2540 feet from the West line (Unit N) of Section 11.

(3) The horizontal or producing portion of the wellbore shall be located no closer than 330 feet from the outer boundary of the project area.

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

(5) The applicant shall notify the supervisor of the Artesia 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 well to both the Santa Fe and Artesia offices of the Division.

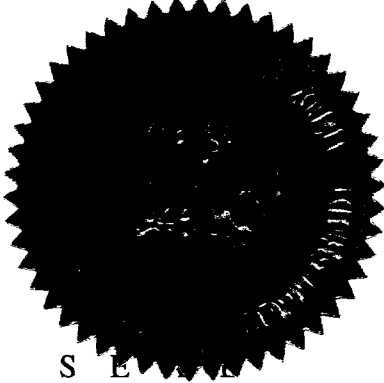
(7) The allowable assigned to the project area in the Cabin Lake-Delaware Pool shall be equal to 561 barrels of oil per day provided that the horizontal or producing portion of the wellbore traverses all or part of the SE/4 SW/4, SW/4 SE/4 and the SE/4 SE/4 of Section 11 as determined from directional surveys.

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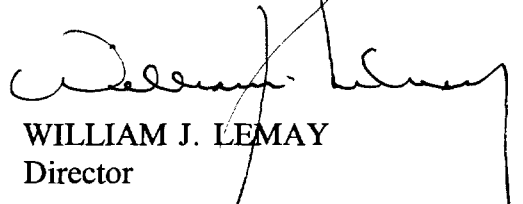
(8) The applicant's request for a special production test period and corresponding special test allowable for the James "E" Well No. 9 is hereby denied.

(9) 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