

**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. 10922
Order No. R-10082**

**APPLICATION OF MARATHON OIL COMPANY
FOR A HIGH ANGLE/HORIZONTAL DIRECTIONAL
DRILLING PILOT PROJECT AND SPECIAL
OPERATING RULES THEREFOR, LEA COUNTY,
NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 3, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 15th day of March, 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, Marathon Oil Company, seeks authority to initiate a high angle/horizontal directional drilling pilot project in the Denton-Devonian Pool underlying the SW/4, N/2 SE/4 and SE/4 SE/4 of Section 11, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) The applicant further seeks authority to utilize its existing J. M. Denton Well No. 5, located at a standard surface location 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 11, and horizontally drill in the following unconventional manner:

Squeeze perforations from approximately 11,390 feet to 11,476 feet. Mill casing from a depth of 11,370 feet to 11,420 feet. Set cement plug and kick off from the vertical at a depth of approximately 11,400 feet and drill in a northeast direction building angle to approximately 90 degrees so as to penetrate the upper portion of the Devonian formation at a depth of 11,445 feet. Continue drilling horizontally a distance of approximately 500 feet so as to bottom said wellbore at an unorthodox bottomhole location 1154 feet from the South line and 2305 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 special oil allowable provisions and the establishment of an administrative procedure for obtaining authorization to horizontally drill additional wells within the pilot project area.

(5) The proposed well is located within the Denton-Devonian 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 365 barrels of oil per day, and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(6) The evidence presented indicates that the J. M. Denton Well No. 5 was originally drilled and completed in the Denton-Devonian Pool in 1951. The subject well cumulatively produced 1,142,977 barrels of oil from said pool until it was temporarily abandoned in 1974.

(7) According to Division records, the J. M. Denton Well No. 5 was temporarily abandoned due to excessive water production.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed high angle wellbore, which is experimental in nature, is designed to penetrate the upper portion of the Devonian formation above the oil-water contact, thereby allowing the recovery of additional oil reserves underlying the project area, thereby preventing waste.

(9) All of the proposed project area is a single fee lease that is commonly owned throughout.

(10) The affected offset acreage, being the NE/4 SW/4 of Section 11, is within the project area.

(11) The SW/4 SE/4 of Section 11 contains a Devonian producing well which is currently being operated by Dinero Operating Company.

(12) No other offset operator and/or interest owner appeared at the hearing in opposition to the application.

(13) In the interest of conservation and prevention of waste, the application of Marathon Oil Company for a high angle/horizontal directional drilling project should be approved.

(14) According to applicant's evidence and testimony, there are four additional wells located within the project area which are active producing wells in the Denton-Devonian Pool. These wells are the Marathon Oil Company J. M. Denton Well Nos. 3, 4, 6 and 7 located, respectively, in Units J, K, P and I.

(15) According to further testimony, the J. M. Denton Well Nos. 3, 4, 6 and 7 are all candidates for horizontal drilling if the pilot well proves successful.

(16) The applicant requested that an administrative procedure be established in order to secure Division approval to horizontally drill additional wells within the project area.

(17) Prior to the establishment of field or project specific administrative procedures, the Division should analyze and evaluate additional information regarding horizontal drilling mechanics, reservoir characteristics, drainage characteristics, etc., obtained from actual pilot wells.

(18) The applicant's request for the establishment of an administrative procedure should therefore be denied.

(19) The applicant requested that the project area not be assigned a special project allowable, and that each 40-acre proration unit within the project area maintain its own oil allowable of 365 barrels of oil per day.

(20) This request is reasonable and should be granted.

(21) According to applicant's testimony, a directional survey has been run on the J. M. Denton Well No. 5. This survey indicates that at the kick-off point of 11,400 feet, the wellbore location is approximately 683 feet from the South line and 2033 feet from the West line of Section 11.

(22) The applicant should be required to conduct a directional survey on the lateral portion of the wellbore during or after completion of drilling operations in order to verify that the bottomhole location is in compliance with the terms of this order.

(23) 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.

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

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Marathon Oil Company, is hereby authorized to initiate a high angle/horizontal directional drilling pilot project in the Denton-Devonian Pool underlying the SW/4, N/2 SE/4 and SE/4 SE/4 of Section 11, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) The applicant is further authorized to utilize its existing J. M. Denton Well No. 5, located at a standard surface location 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 11, and horizontally drill in the following unconventional manner:

Squeeze perforations from approximately 11,390 feet to 11,476 feet. Mill casing from a depth of 11,370 feet to 11,420 feet. Set cement plug and kick off from the vertical at a depth of approximately 11,400 feet and drill in a northeast direction building angle to approximately 90 degrees so as to penetrate the upper portion of the Devonian formation at a depth of 11,445 feet. Continue drilling horizontally a distance of approximately 500 feet so as to bottom said wellbore at an unorthodox bottomhole location 1154 feet from the South line and 2305 feet from the West line (Unit N) of Section 11.

(3) The applicant shall conduct a directional survey on the lateral portion of the wellbore during or after completion of drilling operations in order to verify that the bottomhole location is in compliance with the terms of this order.

(4) 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.

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

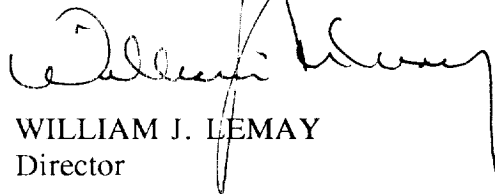
(6) Each 40-acre proration unit within the project area shall maintain its own oil allowable of 365 barrels of oil per day in the Denton-Devonian Pool.

(7) The applicant's request to establish an administrative procedure in order to secure Division approval to horizontally drill additional wells within the project area is hereby denied.

(8) 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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