

**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. 10744  
Order No. R-9919**

**APPLICATION OF MERIDIAN OIL INC. FOR  
A HIGH ANGLE/HORIZONTAL DIRECTIONAL  
DRILLING PILOT PROJECT AND SPECIAL  
OPERATING RULES THEREFOR, RIO ARRIBA  
COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on June 17, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of July, 1993, 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, Meridian Oil Inc., seeks authority to initiate a high angle/horizontal directional drilling pilot project in the Gavilan-Mancos Oil Pool underlying all of Section 17, Township 26 North, Range 2 West, NMPM, Rio Arriba County, New Mexico, being a standard 640-acre spacing and proration unit for said pool.

(3) The applicant further seeks authority to drill its proposed Cheney Federal Well No. 4 located at a tentative standard surface location 1700 feet from the North line and 835 feet from the East line (Unit H) of Section 17 and drill in the following unconventional manner:

Drill vertically to a depth of approximately 6,597 feet. Kick off from the vertical at this depth and drill in an estimated northwesterly direction building angle to approximately 84 degrees so as to penetrate the top of the Niobrara "B" interval at a true vertical depth of 7,035 feet. Continue drilling a distance of 3,150 feet at such an angle so as to bottom said wellbore at the base of the Niobrara "C" interval at a true vertical depth of 7,360 feet.

(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 displacement of said well's producing interval such that it can be no closer than 790 feet from the outer boundary of the project area.

(5) At the hearing the applicant testified that the proposed surface location for the Cheney Federal Well No. 4 has not, as of yet, been approved by the Bureau of Land Management. The applicant further requested that the Division allow the flexibility of re-locating the subject wellbore, if necessary, to anywhere within the drilling/producing window proposed in Finding No. (4) above.

(6) The subject well is located within the Gavilan-Mancos Oil Pool and is therefore subject to the special rules and regulations for said pool as promulgated by Division Order No. R-7407, as amended, which require standard 640-acre spacing and proration units with wells to be located no closer than 790 feet from the outer boundary of the spacing unit nor closer than 330 feet from any governmental quarter-quarter section line. The rules further provide for a daily oil allowable of 800 barrels and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(7) The Niobrara "B" and "C" members of the Gallup formation are the potentially productive zones within the pilot project area and are characterized by low permeability and interconnected fracture systems.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed high angle wellbore should encounter a substantially greater number of natural fractures within the Niobrara "B" and "C" members of the Gallup formation than would a conventional wellbore, which should substantially increase the productivity of the subject well and which should ultimately result in the recovery of a greater amount of oil and gas from the proposed project area, thereby preventing waste.

(9) All of Section 17 is owned and controlled solely by Meridian Oil Inc.

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

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

(12) 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.

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

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

(15) Subsequent to drilling the subject well, the applicant should file a new Form C-102 (Acreage dedication plat) with the Aztec district office of the Division showing the direction, extent and terminus of the horizontal wellbore.

(16) Should the relocation of the subject wellbore be necessary, the applicant should notify the supervisor of the Aztec district office of the Division of such location change.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Meridian Oil Inc., is hereby authorized to initiate a high angle/horizontal directional drilling pilot project in Section 17, Township 26 North, Range 2 West, NMPM, Gavilan-Mancos Oil Pool, Rio Arriba County, New Mexico, by drilling its Cheney Federal Well No. 4, located at a tentative standard surface location 1700 feet from the North line and 835 feet from the East line (Unit H) of Section 17, in the following unconventional manner:

Drill vertically to a depth of approximately 6,597 feet. Kick off from the vertical at this depth and drill in an estimated northwesterly direction building angle to approximately 84 degrees so as to penetrate the top of the Niobrara "B" interval at a true vertical depth of 7,035 feet. Continue drilling a distance of 3,150 feet at such an angle so as to bottom said wellbore at the base of the Niobrara "C" interval at a true vertical depth of 7,360 feet.

(2) All of Section 17 shall be dedicated to the above-described well forming a standard 640-acre spacing and proration unit in the Gavilan-Mancos Oil Pool.

(3) The horizontal or producing portion of the subject wellbore shall be located no closer than 790 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 Aztec 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 Aztec offices of the Division.

(7) Subsequent to drilling the subject well, the applicant shall file a new Form C-102 (Acreage dedication plat) with the Aztec district office of the Division showing the direction, extent and terminus of the horizontal wellbore.

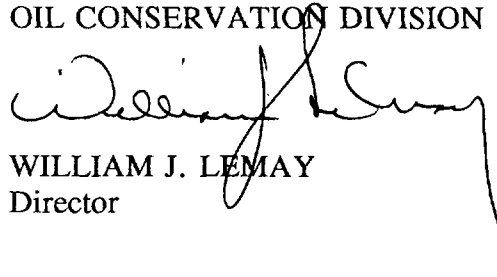
(8) Should the relocation of the subject wellbore be necessary, the applicant shall notify the supervisor of the Aztec district office of the Division of such location change.

(9) Jurisdiction 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