

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. 10844  
Order No. R-10001

APPLICATION OF MERIDIAN OIL INC.  
FOR A HIGH ANGLE/HORIZONTAL DIRECTIONAL  
DRILLING PILOT PROJECT, AN UNORTHODOX  
OIL WELL LOCATION, A NON-STANDARD OIL  
PRORATION UNIT, A SPECIAL PROJECT  
ALLOWABLE, AND SPECIAL OPERATING RULES  
THEREFOR, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 7, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanah.

NOW, on this 25th day of October, 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 Gallup formation, Undesignated Horseshoe-Gallup Oil Pool, underlying the W/2 of Section 8, Township 30 North, Range 15 West, NMPM, San Juan County, New Mexico.

(3) The applicant further seeks authority to drill its Black Diamond Com "8" Well No. 1 from a standard surface

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location 1065 feet from the North line and 330 feet from the West line (Unit D) of Section 8 in the following unconventional manner:

Drill vertically to a depth of approximately 3,705 feet and analyze pay zone. Plug back to a depth of approximately 3,104 feet and kick off from the vertical at this depth drilling in a southeasterly direction building angle to approximately 87 degrees. Penetrate the top of the "Waterflow" zone of the Niobrara member of the Gallup formation at a true vertical depth of approximately 3,581 feet. Continue drilling laterally a distance of approximately 3,550 feet and bottom said wellbore no closer than 330 feet from the outer boundary of the project area.

- (4) The applicant further seeks:
- a) 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 330 feet from the outer boundary of the project area.
  - b) approval of a 320-acre non-standard oil proration unit comprising the W/2 of Section 8.
  - c) a special project allowable equal to the standard depth bracket allowable for the Horseshoe-Gallup Oil Pool (80 BOPD) times the number of standard 40-acre proration units contacted by the subject wellbore.

(5) The subject well is located within one mile of the outer boundary of the Horseshoe-Gallup Oil Pool which is currently governed by General Statewide Rules and Regulations, including standard 40-acre oil spacing and proration units

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with wells to be located no closer than 330 feet from the outer boundary of the proration unit, a gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil, and a daily oil and gas allowable of 80 barrels and 160 MCFG, respectively.

(6) The Niobrara member of the Gallup formation is the potentially productive zone within the pilot project area and is characterized by low permeability and interconnected fracture systems.

(7) Vertical wells drilled to the Niobrara member in this area seldom intersect significant natural fractures, and as a result, they are not generally commercially successful.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed horizontal wellbore should encounter a substantially greater number of natural fractures within the Niobrara member 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) According to applicant's testimony, the proposed project area is comprised of two separate Federal leases.

(10) According to further testimony, the interests within the proposed project area will be voluntarily consolidated by virtue of a communitization agreement.

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

(12) In the interest of conservation and prevention of waste, the application of Meridian Oil Inc. for a high angle/horizontal directional drilling project, non-standard oil proration unit, unorthodox oil well location, special project allowable and special operating rules therefor should be approved.

(13) According to applicant's evidence and testimony, the subject well, if drilled as proposed, should traverse five standard 40-acre proration units within the project area. The subject well and project area should tentatively be assigned

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an oil allowable of 400 barrels of oil per day, provided however, such allowable may be administratively adjusted by the Division Director based upon the results of the directional survey performed on the subject well.

(14) 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.

(15) 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.

(16) 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.

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 the W/2 of Section 8, Township 30 North, Range 15 West, NMPM, Undesignated Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, by drilling its Black Diamond Com "8" Well No. 1 from a standard surface location 1065 feet from the North line and 330 feet from the West line (Unit D) of Section 8, in the following unconventional manner:

Drill vertically to a depth of approximately 3,705 feet and analyze pay zone. Plug back to a depth of approximately 3,104 feet and kick off from the vertical at this depth drilling in a southeasterly direction building angle to approximately 87 degrees. Penetrate the top of the "Waterflow" zone of the Niobrara member of the Gallup formation at a true vertical depth of approximately 3,581 feet. Continue drilling laterally a distance of approximately 3,550 feet and bottom

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said wellbore no closer than 330 feet from the outer boundary of the project area.

PROVIDED HOWEVER THAT, no portion of the horizontal portion of the wellbore shall be located closer than 330 feet from the outer boundary of the project area.

(2) The W/2 of Section 8 shall be dedicated to the above-described well forming a non-standard 320-acre oil spacing and proration unit, also hereby approved.

(3) The subject well and project area are hereby assigned an oil allowable of 400 barrels of oil per day, provided however, such allowable may be administratively adjusted by the Division Director based upon the results of the directional survey performed on the subject well.

(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.

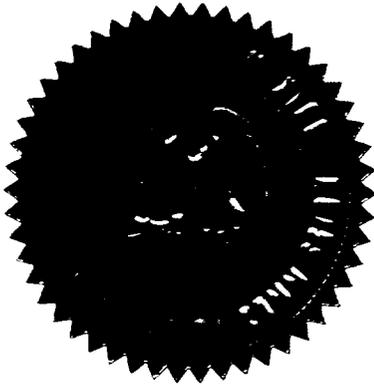
(5) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time of conductance of any directional surveys in order that the same may be witnessed.

(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) Jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

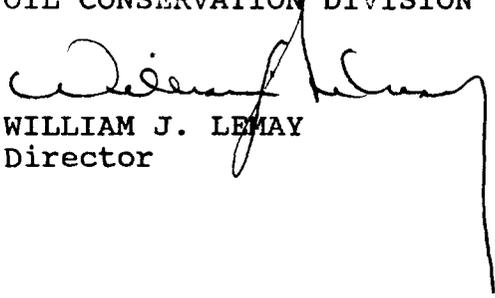
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DONE at Santa Fe, New Mexico, on the day and year  
hereinabove designated.



S E A L

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director