

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



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August 8, 1991

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Santa Fe, New Mexico 87504

RE: CASE NO. 10324
ORDER NO. R-9560

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

Florene Davidson
OC Staff Specialist

FD/sl

cc: BLM - Farmington
Sarah Smith
OCD Aztec Office
William Carr

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. 10324
ORDER NO. R-9560*

APPLICATION OF MERIDIAN OIL, INC. FOR
A HIGH ANGLE/HORIZONTAL DIRECTIONAL DRILLING
PILOT PROJECT, SPECIAL OPERATING RULES THEREFOR,
AN EXCEPTION TO RULE 2(b) OF THE SPECIAL RULES
GOVERNING THE BLANCO-MESAVERDE POOL AND A SPECIAL
PROJECT GAS ALLOWABLE, SAN JUAN COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 13, 1991, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 9th day of August, 1991 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 Blanco-Mesaverde Pool on an existing 314.96-acre gas spacing and proration unit comprising Lots 1, 3, 7, 8, 9, 10, 13 and 14 (E/2 equivalent) of Section 21, Township 31 North, Range 9 West, NMPM, San Juan County, New Mexico, by drilling its proposed Sunray "G" Well No. 2-R in the following unconventional manner:

Drill vertically from a standard gas well location in the SW/4 SE/4 equivalent (Lot 13) of said Section 21 to a depth of approximately 4760 feet (plus or minus 100 feet), kick-off in a northeasterly direction, build angle up to 80 to 90 degrees and commence drilling horizontally a distance not in excess of 3620 feet.

(3) The applicant further requests that special operating provisions and rules be established for said project area including the designation of a prescribed area limiting the horizontal displacement of the well's producing interval such that it can be no closer than 790 feet to the outer boundary of said proration unit and for a special project gas allowable. Also, an exception to Rule 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Pool as promulgated by Division Order No. R-8170, as amended, is being sought to allow a third well to be drilled and produced on an existing proration unit in which are dedicated the Sunray "G" Well Nos. 2 and 2A located in Units G and P, respectively, of said Section 21.

(4) The proposed high angle/horizontal pilot project is within the boundaries of the Blanco-Mesaverde Pool and is therefore governed by the Special Rules and Regulations for said pool and the General Rules for the Prorated Gas Pools of New Mexico, both promulgated by said Division Order No. R-8170, as amended.

(5) The potential productive zone of the Blanco-Mesaverde Pool in this area is characterized by tight, low permeability blocks interconnected by a high capacity fracture system. Past experience in said pool has shown that conventionally drilled (vertical) wells may not adequately develop and produce all of the reserves in a spacing unit. By drilling a horizontal wellbore, the applicant is attempting to increase the probability of encountering and producing hydrocarbon reserves which may not ultimately be produced by the original vertical wells in the spacing unit, thereby preventing waste.

(6) At no point in its traverse of the Mesaverde formation does the proposed highly-deviated wellbore encroach upon the 790-foot setback required by the Special Rules and Regulations for the Blanco-Mesaverde Pool, as promulgated by said Order No. R-8170, as amended.

(7) No offset operator appeared and objected to the proposed pilot project and the proposal to produce all three of the wells on the proration unit; however, Gas Company of New Mexico, a transporter of gas in the state, appeared and expressed concern over the applicant's proposed method of determining the deliverability for the subject proration unit.

(8) Based on precedent established by the New Mexico Oil Conservation Commission in Case No. 9765 and in order to assure that the correlative rights of offset operators and/or operators in the Blanco-Mesaverde Pool are being adequately protected, the deliverability of the subject gas proration unit, for the purpose of calculating gas allowable, should be determined by whichever of the following three methods results in a higher calculated deliverability.

- (a) If the highly-deviated wellbore is completed in and produces from both quarter-sections in the proration unit, the sum of the deliverability of the deviated well plus the deliverability of either of the vertical wells should be utilized; or
- (b) If the highly-deviated wellbore is not completed in and producing from both quarter-sections in the proration unit, the sum of the deliverability of the deviated well should be added to the deliverability of a vertical well in the other quarter section of the proration unit; or
- (c) Utilize the sum of the deliverabilities of the two existing vertical wellbores.

(9) The applicant should be allowed to produce the gas allowable assigned to the subject proration unit from the three subject wells in any proportion.

(10) The aforementioned prescribed area limiting the horizontal displacement of the wellbore would allow for flexibility, serve to minimize risk and maximize the success of such a completion.

(11) In the interest of conservation, the application of Meridian Oil, Inc. for this horizontal drainhole project should be approved.

(12) The applicant should be required to determine the actual location of the kick-off point prior to directional drilling operations. Also, the applicant should notify the supervisor of the Aztec District Office of the Division of the proposed direction of the deviated hole and of the date and time of the commencement of directional drilling in order that the same may be witnessed.

(13) The applicant should be required to conduct a directional survey on the lateral portion of the wellbore during or after completion of the drilling operations on the well and submit a copy of said survey to both the Santa Fe and Aztec Offices of the Division.

IT IS THEREFORE ORDERED THAT:

(1) The application of Meridian Oil, Inc. for a high angle/horizontal directional drilling pilot project in Lots 1, 3, 7, 8, 9, 10, 13 and 14 (E/2 equivalent) of Section 21, Township 31 North, Range 9 West, NMPM, Blanco-Mesaverde Pool, San Juan County, New Mexico, is hereby approved.

(2) The applicant is further authorized to drill its Sunray "G" Well No. 2-R at a standard surface gas well location in the SW/4 SE/4 equivalent (Lot 13) of said Section 21 in the unconventional manner as described in Finding Paragraph No. (2) of this order.

(3) The lateral extent of the horizontal wellbore shall be such that the producing interval be limited to an area which extends no closer than 790 feet to the outer boundary of the project area.

(4) Lots 1, 3, 7, 8, 9, 10, 13 and 14 (E/2 equivalent) of said Section 21, forming a 314.96-acre gas spacing and proration unit, shall be simultaneously dedicated to the above-described well and to the existing Sunray "G" Well Nos. 2 and 2A located in Units G and P, respectively, of said Section 21.

(5) The deliverability of the subject gas proration unit, for the purpose of calculating gas allowable, shall be as follows:

- (a) If the highly-deviated wellbore is completed in and produces from both quarter-sections in the proration unit, the sum of the deliverability of the deviated well plus the deliverability of either of the vertical wells should be utilized; or
- (b) If the highly-deviated wellbore is not completed in and producing from both quarter-sections in the proration unit, the sum of the deliverability of the deviated well must be added to the deliverability of a vertical well in the other quarter section of the proration unit; or

- (c) Utilize the sum of the deliverabilities of the two existing vertical wellbores;

whichever method results in the higher calculated deliverability for the proration unit.

(6) The applicant shall be allowed to produce the gas allowable assigned to the subject proration unit from any of the three subject wells in any proportion.

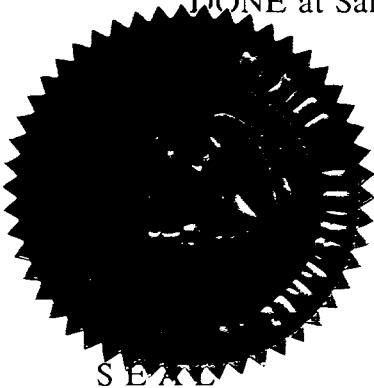
(7) The geographic location of the kick-off point for the proposed horizontal well shall be determined prior to directional drilling. Also, the operator shall notify the supervisor of the Aztec District Office of the Division of the proposed direction of the deviated hole and of the date and time of the directional drilling in order that the same may be witnessed.

(8) The applicant shall conduct a directional drilling survey on the well during or after completion of horizontal drilling operations.

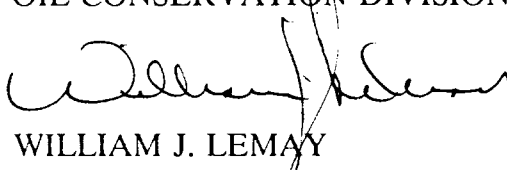
(9) Upon completion of the horizontal drilling operations on the well, the applicant shall file a copy of said directional drilling survey along with a final report specifying the depth and location of the terminus of said horizontal wellbore to both the Santa Fe and Aztec Offices of the Division.

(10) Jurisdiction of this cause is 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