

**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. 10702
ORDER NO. R-9889**

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

ORDER OF THE DIVISION

BY THE DIVISION:

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

NOW, on this 29th day of April, 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 Barker Creek-Paradox (Pennsylvanian) Pool underlying all of Sections 15 and 16, Township 32 North, Range 14 West, NMPM, San Juan County, New Mexico, thereby forming a non-standard 1280-acre gas spacing and proration unit for said pool.

(3) The applicant further seeks authority to re-enter and drill its Ute Well No. 8, located at an unorthodox surface location 1750 feet from the South line and 950 feet from the West line (Unit L) of Section 15, in the following unconventional manner:

Squeeze existing Paradox perforations from 8,032 feet to 8,216 feet. Mill casing from approximately 7,650 feet to 7,710 feet and set a kickoff plug from 7,650 feet to 7,900 feet. Kick off from the vertical at a depth of 7,680 feet and drill in an estimated northwesterly direction building angle to approximately 80- 89 degrees so as to penetrate the top of the Upper Ismay member of the Paradox formation at an estimated true vertical depth of approximately 8,030 feet. Continue drilling horizontally a distance of approximately 2,460 feet bottoming said wellbore at a true vertical depth of approximately 8,082 feet and no closer than 990 feet from the northern 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 1650 feet from the south, east and west boundaries of the proposed project area and no closer than 990 feet from the northern boundary of the project area;
- b) authority to produce both the Ute Well No. 8 and the existing Ute Well No. 12 located 2708 feet from the South line and 1608 feet from the West line (Unit F) of Section 16; and,
- (c) approval of a 1280-acre non-standard gas spacing and proration unit comprising all of Sections 15 and 16.

(5) The proposed high angle/horizontal directional drilling pilot project is within the boundaries of the Barker Creek-Paradox (Pennsylvanian) Pool which is currently governed by Special Rules and Regulations as promulgated by Division Order No. R-46 which require standard 640-acre spacing and proration units with wells to be located no closer than 1650 feet from the outer boundary of the section nor closer than 330 feet from the center of the section.

(6) Evidence presented by the applicant indicates that with the exception of the W/2 of Section 19, which is unleased and owned by the Ute Mountain Ute Tribe, Meridian Oil Inc. controls 100% of the operating rights in the Barker Creek-Paradox (Pennsylvanian) Pool with 100% of the royalty being owned by the Ute Mountain Ute Tribe.

(7) The Ismay member of the Paradox formation is the potential productive zone in the proposed project area. It is characterized as a tight, low permeability carbonate reservoir.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed horizontal wellbore should increase the ultimate recovery from this low permeability reservoir while reducing the costs involved, thereby preventing waste.

(9) In support of its application, the applicant presented drilling cost estimates of \$750,000 dollars for this proposed re-entry as compared to conventional vertical well costs in the range of \$1,414,000 dollars.

(10) Although it has been the Division's practice not to allow the simultaneous production of multiple gas wells in the same spacing unit in non-prorated gas pools, the requested authorization to produce both the Ute Well Nos. 8 and 12 is justified in this case for the following reasons:

- (a) the Ute Well No. 12 is producing from the Barker Creek member of the Paradox formation which is lower than the Ismay member and therefore the Ute Well No. 12 and the Ute Well No. 8 each will be producing from substantially different portions of the pool;
- (b) neither well will be affecting the drainage area of the other and both wells are necessary in order to adequately recover the gas underlying the project area;
- (c) estimates of the effective drainage area for the Ute Well No. 8 is substantially less than 640 acres.

(11) The applicant's proposed setback limits from the outer boundary of the project area will allow for operational and drilling flexibility, serve to minimize risk and maximize the success of such a completion.

(12) The applicant is the operator of the affected offset acreage to the north in Irregular Section 9.

(13) The applicant has provided proper notice of its application to all affected parties, namely the Ute Mountain Ute Tribe and the Bureau of Indian Affairs.

(14) No party appeared at the hearing in opposition to the application.

(15) Approval of the subject application will provide an opportunity for the applicant to obtain reservoir data from which to determine the appropriate method for further development of the pool, should result in the recovery of additional oil and gas from the proposed project area, thereby preventing waste, and will not adversely affect any other operators and/or interest owners.

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

(17) Subsequent to the hearing, it was determined that the aforesaid Ute Well No. 12 is currently dedicated to a 480-acre non-standard gas proration unit comprising the S/2 and NW/4 of Section 16.

(18) In addition, Division records show that the Ute Well No. 8 was recompleted in 1990 from the Barker Creek-Paradox (Pennsylvanian) Pool to the "Undesignated Desert Creek/Ismay Paradox". In conjunction with such recompletion, the applicant filed a new C-102 (Acreage Dedication Plat) which shows 160 acres dedicated to this well comprising the SW/4 of Section 15.

(19) According to the interest ownership evidence and testimony presented by the applicant, the change in dedicated acreage for the Ute Well Nos. 8 and 12 as proposed by the applicant should be inconsequential inasmuch as Meridian Oil Inc. is the only working interest owner and the Ute Mountain Ute Tribe the only royalty interest owner in Sections 15 and 16.

(20) Any Division Order which approved non-standard spacing unit(s) for the above-described well(s) should be superseded by this order.

(21) Prior to commencing re-entry and drilling operations on the Ute Well No. 8 the applicant should be required to submit to the Aztec District Office new C-102 Forms showing the proposed acreage rededication and project area.

(22) 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.

(23) 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.

(24) 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 Ismay member of the Paradox formation underlying all of Sections 15 and 16, Township 32 North, Range 14 West, NMPM, Barker Creek-Paradox (Pennsylvanian) Pool, San Juan County, New Mexico, by re-entering and drilling its Ute Well No. 8, located at an unorthodox surface location 1750 feet from the South line and 940 feet from the West line (Unit L) of Section 15, in the following unconventional manner:

Squeeze existing Paradox perforations from 8,032 feet to 8,216 feet. Mill casing from approximately 7,650 feet to 7,710 feet and set a kickoff plug from 7,650 feet to 7,900 feet. Kick off from the vertical at a depth of 7,680 feet and drill in an estimated northwesterly direction building angle to approximately 80-89 degrees so as to penetrate the top of the Upper Ismay member of the Paradox formation at an estimated true vertical depth of approximately 8,030 feet. Continue drilling horizontally a distance of approximately 2,460 feet bottoming said wellbore at a true vertical depth of approximately 8,082 feet and no closer than 990 feet from the northern boundary of the project area.

PROVIDED HOWEVER THAT, no portion of the horizontal portion of the wellbore shall be located closer than 990 feet from the northern boundary of the project area, nor closer than 1650 feet from the south, east and west boundaries of the project area.

(2) All of Sections 15 and 16 shall be dedicated to the above-described Ute Well No. 8 and to the existing Ute Well No. 12 located 2708 feet from the South line and 1608 feet from the West line (Unit F) of Section 16 forming a non-standard 1280-acre gas spacing and proration unit, also hereby approved.

(3) The applicant is further authorized to produce its Ute Well No. 8 concurrently with the existing Ute Well No. 12.

(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) Any Division Order which approved non-standard spacing unit(s) for the above-described well(s) are hereby superseded by this order.

(8) Prior to commencing re-entry and drilling operations on the Ute Well No. 8 the applicant shall submit to the Aztec District Office new Forms C-102 showing the acreage rededication and project area.

(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

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