

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. 10403  
Order No. R-9606*

APPLICATION OF AMERICAN HUNTER EXPLORATION,  
LTD. FOR A HIGH ANGLE/HORIZONTAL DIRECTIONAL  
DRILLING PILOT PROJECT, SPECIAL OPERATING  
RULES THEREFOR, A NON-STANDARD OIL PRORATION  
UNIT, AN UNORTHODOX OIL WELL LOCATION, AND  
TO RESCIND DIVISION ORDER NO. R-9536, RIO  
ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 17, 1991, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 1st day of November, 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) By Order No. R-9536 issued in Case No. 10286 on June 27, 1991, American Hunter Exploration, Ltd. was authorized to drill its Jicarilla 4-A Well No. 1 at an unorthodox surface location 330 feet from the North and East lines (Unit A) of Section 4, Township 27 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Oil Pool, Rio Arriba County, New Mexico, in the following unconventional manner:

Drill vertically to a depth of approximately 7,100 feet to evaluate the pay zone. Plug back to approximately 6,300 feet, deviate from the vertical in a westerly direction with the angle being increased so as to reach an angle of approximately 80 degrees from the vertical at the top of Niobrara formation (about 6,800 feet TVD). Continue drilling in the Niobrara formation at an angle of approximately 80 degrees for a lateral distance of approximately 2,500 feet.

(3) All of said Section 4 was to be dedicated to the subject well forming a standard 651.76-acre oil spacing and proration unit. In addition, both the vertical and horizontal (80 degree) portions of the wellbore would be kept inside a target window described as a rectangle 330 to 1,830 feet from the North line and 330 to 3,230 feet from the East line of said Section 4.

(4) In lieu of drilling the Jicarilla 4-A Well No. 1, the applicant, American Hunter Exploration, Ltd., seeks the formation of a 650.05-acre non-standard oil spacing and proration unit in the West Puerto Chiquito-Mancos Oil Pool comprising Lots 3 and 4, S/2 NW/4, and SW/4 (W/2 equivalent) of Section 3 and Lots 1 and 2, S/2 NE/4, and SE/4 (E/2 equivalent) of Section 4, both in Township 27 North, Range 1 West, NMPM, Rio Arriba County, New Mexico, for the purpose of initiating a high angle/horizontal directional drilling pilot project.

(5) The applicant proposes to drill its Jicarilla 3-F Well No. 1 at an unorthodox surface location 1650 feet from the North line and 2000 feet from the West line (Unit F) of said Section 3 in the following unconventional manner:

Drill vertical to a depth of approximately 6,084 feet, kick off from vertical in a westerly direction building angle to approximately 76 degrees so as to encounter the top of the Niobrara formation at approximately 6,640 feet TVD. Continue drilling a high angle hole in the Mancos formation a lateral distance of approximately 3400 feet.

(6) The applicant further requests ~~that~~ special operating provisions be established for said project including the designation of a prescribed area limiting the horizontal extent of said wellbore to a target window described as a rectangle 330 feet to 2330 feet from the North line of Sections 3 and 4 with the eastern side of the drilling window 2000 feet from the West line of Section 3, and the western side 2000 feet from the East line of Section 4.

(7) According to applicant's testimony, subsequent to the issuance of Division Order No. R-9536, additional seismic data within the subject area was obtained. The results of the seismic data indicate that the newly proposed location should penetrate the Niobrara formation in an area of greater natural fracturing than would a well located at the previously approved location (described in Finding No. (2) above).

(8) Further testimony indicates that as per joint venture agreement with the Jicarilla Tribe, this well location must be approved by the Jicarilla Tribal Council. As of the date of the hearing, the applicant did not know if the newly proposed location would be approved by said body.

(9) Applicant testified that if the newly proposed location is not approved by the Jicarilla Tribal Council, it will seek Division approval to reverse the surface and bottomhole locations of the previously approved Jicarilla 4-A Well No. 1, said reversal being necessary to encounter a greater number of natural fractures within the Niobrara formation as per the geophysical data recently obtained.

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

(11) The evidence presented in this case indicates that the newly proposed location is justified by geologic conditions and that a well at the proposed location should adequately drain and develop the proposed non-standard proration unit, should recover additional oil reserves, and will not violate correlative rights.

(12) The proposed bottomhole target window (described in Finding No. (6) above) is reasonable and should be approved.

(13) The applicant should be required to conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore during or subsequent to completion of directional drilling operations in order that direction, extent and terminus of said wellbore may be determined to be in compliance with the terms of this order.

(14) The applicant should further be required to submit copies of said directional surveys to the Santa Fe and Aztec offices of the Division.

(15) The applicant should notify the supervisor of the Aztec district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

(16) Applicant's request to rescind Division Order No. R-9536 should be dismissed.

(17) Should the newly proposed location not be approved by the Jicarilla Tribal Council, this order should terminate and therefore be of no further effect.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of American Hunter Exploration, Ltd. for a high angle/horizontal directional drilling pilot project within a 650.05-acre non-standard oil spacing and proration unit comprising Lots 3 and 4, S/2 NW/4, and SW/4 (W/2 equivalent) of Section 3 and Lots 1 and 2, S/2 NE/4, and SE/4 (E/2 equivalent) of Section 4, both in Township 27 North, Range 1 West, NMPM, West Puerto Chiquito-Mancos Oil Pool, Rio Arriba County, New Mexico, is hereby approved.

(2) The applicant is further authorized to drill its Jicarilla 3-F Well No. 1 at an unorthodox surface location 1650 feet from the North line and 2000 feet from the West line (Unit F) of said Section 3 in the following unconventional manner:

Drill vertical to a depth of approximately 6,084 feet, kick off from vertical in a westerly direction building angle to approximately 76 degrees so as to encounter the top of the Niobrara formation at approximately 6,640 feet TVD. Continue drilling a high angle hole in the Mancos formation a lateral distance of approximately 3400 feet.

(3) From the surface location to total depth, the Jicarilla 3-F Well No. 1 shall be kept inside a target window described as a rectangle 330 feet to 2330 feet from the North line of Sections 3 and 4 with the eastern side of the drilling window 2000 feet from the West line of Section 3, and the western side 2000 feet from the East line of Section 4.

(4) The applicant shall conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore during or subsequent to completion of directional drilling operations in order that direction, extent and terminus of said wellbore may be determined to be in compliance with the terms of this order.

(5) The applicant shall submit copies of said directional surveys to the Santa Fe and Aztec offices of the Division.

(6) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

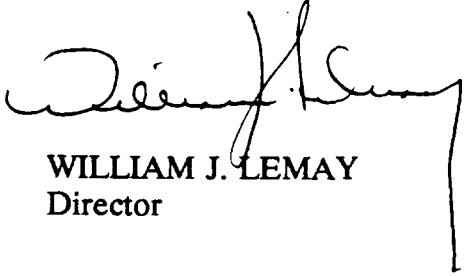
(7) Applicant's request to rescind Division Order No. R-9536 is hereby dismissed.

(8) Should the proposed horizontal directional drilling pilot project and well location not be approved by the Jicarilla Tribal Council, this order shall terminate and therefore be of no further effect.

(9) 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

  
WILLIAM J. LEMAY  
Director

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. 10506  
ORDER NO. R-9766*

**APPLICATION OF AMERICAN HUNTER EXPLORATION, LTD. FOR AN  
EXCEPTION TO NO-FLARE RULE 306; CANCELLATION OF OVERPRODUCTION  
OR, IN THE ALTERNATIVE, SPECIAL PROVISIONS GOVERNING  
OVERPRODUCTION; AND THE ADOPTION OF SPECIAL OPERATING  
PROCEDURES, RIO ARriba COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on July 9, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

Now, on this 12<sup>th</sup> day of November, 1992, the Division Director, having considered the testimony, the record and the recommendation 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) American Hunter Exploration, Ltd. ("American Hunter") seeks an exception to the No-Flare Provisions of Division General Rule 306 for its Jicarilla "3F" Well No. 1 ("the Jicarilla 3F Well") located 1845 feet from the North line and 1900 feet from the West line (Unit F) of Section 3, Township 27 North, Range 1 West, NMPM, Rio Arriba County, New Mexico to permit this well to continue to produce at a rate no higher than authorized by the pool rules applicable thereto. American Hunter also seeks cancellation of the current overproduction assigned to this well or, in the alternative, adoption of special procedures governing the make up of this overproduction and the adoption of special operating procedures for this well.

(3) The Jicarilla 3F Well was drilled in late 1991 as a horizontal well in the West Puerto Chiquito-Mancos Oil Pool pursuant to the provisions of Division Order R-9606 and completed in early 1992 in the Mancos Formation.

(4) The West Puerto Chiquito-Mancos Oil Pool is governed by Special Pool Rules which establish an allowed producing rate of 800 barrels of oil per day and an associated GOR of 2,000 to 1.

(5) Although the Jicarilla 3F Well initially did not produce, American Hunter has worked on the well and its ability to produce has dramatically improved, and at the time of the hearing the well was capable of producing in excess of 600 barrels of oil per day with a gas-oil ratio between 600 and 900 to 1.

(6) The 60-day testing exception to the No-Flare Provisions of Division General Rule 306 for the Jicarilla 3F Well ended on April 24, 1992.

(7) The only options available to American Hunter for handling the gas from the Jicarilla 3F Well other than seeking authority to flare the gas from appropriate governmental authorities are:

- (a) shut in the well,
- (b) extend a gas pipeline to the well, or
- (c) re-inject produced gas.

(8) Shutting in the well will prevent the acquisition of data necessary to efficiently develop the reservoir in the future, will impair the ability of the well to continue to clean up and is unnecessary because continued flaring of gas from this well during a temporary production period will not harm the reservoir.

(9) At this time, there are no gas pipelines within seven miles of the Jicarilla 3F Well into which American Hunter can deliver the gas produced from the well. The applicant testified that an extension of a pipeline to this well is not feasible at the time of this hearing for there may not be available sufficient volumes of gas to pay the costs of a pipeline, and it would be imprudent to commit large volumes of gas to a pipeline at this time since efficient development of this reservoir may require re-injection of this gas.

(10) American Hunter committed to a plan to inject the gas produced by the 3F well into the Jicarilla 2A Well No. 1 which is a marginal well located up structure from the Jicarilla 3F Well in the NE/4 NE/4 of Section 2, Township 27 North, Range 1 West, NMPM, Rio Arriba County, New Mexico. Both the Jicarilla 3F and 2A Wells are located on adjacent tracts of lands within the Jicarilla Apache Reservation.

(11) American Hunter should re-inject the gas produced from the Jicarilla 3F Well at the earliest practicable time and upon obtaining the proper permits and authority.

(12) On May 1, 1992, American Hunter sought the approval of the U.S. Bureau of Land Management and the Oil Conservation Division to continue to flare gas produced from this well. The Division accepted American Hunter's letter as an application for exception to General Rule 306 on May 1, 1992.

(13) On June 3, 1992, as confirmed by letter dated June 11, 1992, the BLM granted American Hunter a six-month testing period beginning April, 1992 and ending September, 1992 during which the gas from the Jicarilla 3F Well may be vented or flared.

(14) On June 4, 1992, the Division's Aztec District Office directed American Hunter to curtail production from the Jicarilla 3F Well to approximately 30 MCF per day until alternative arrangements are made for use of the gas produced from the well, thereby effectively shutting it in.

(15) Following meetings between Division Staff and American Hunter, the Division:

- (a) approved the testing program for Jicarilla 3F Well thereby permitting it to produce certain specified volumes during a specific test period,
- (b) advised American Hunter that the well would continue to accumulate overproduction during this test period, and
- (c) advised American Hunter that any additional production authorization or allowable relief would require a hearing before the Division.



- (16) *At the hearing in this matter, Benson-Montin-Greer Drilling Corporation, another operator in the West Puerto Chiquito-Mancos Oil Pool, appeared and recommended certain changes to the Commission-approved testing program for the Jicarilla 3F Well.*

**FINDING:** Changes in the approved testing procedures for this well should be made only by the District Office of the Division and after consultation with and concurrence in the proposed changes by the operator of the wells involved. If any amendment to the Division-approved testing program for the Jicarilla 3F Well is made by the District Office at the request of another operator in the pool, the costs associated with such amendment should be borne by the operator requesting the change in testing procedures.

(17) The application of American Hunter for an exception to the No-Flare Provisions of Division General Rule 306 for the Jicarilla 3F Well No. 1 should be granted.

(18) This exception should be effective for 120 days from July 9, 1992 during which time American Hunter should test its Jicarilla 3F Well and convert its Jicarilla 2A Well No. 1 to injection.

(19) During the period of this exception to the provisions of Division General Rule 306, no more than 600 Mcf of gas per day should be flared from the Jicarilla 3F Well unless authorized by a Division approved well test.

(20) The Jicarilla 3F Well should not be subject to shut in during the 120 day exception to Division General Rule 306 and should not be shut in after this exception period as long as the well's overproduction is retired at a rate of at least 200 barrels per day and the produced gas is being re-injected into the reservoir.

(21) If an operator accrues additional overproduction during a Commission-approved testing period for a well, there is less incentive for operators to proceed with Division-approved testing programs.

(22) American Hunter's Jicarilla 3F Well should not accrue additional overproduction during the period of time covered by this exception to Division General Rule 306 and any underproduction accrued during this time should be credited against the well's overproduced status.

(23) Nothing in this order shall prevent American Hunter from seeking cancellation of overproduction or other relief at the conclusion of the period covered by the exemption to Division General Rule 306 authorized by this Order.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of American Hunter Exploration, Ltd. for an exception to Division General Rule 306 which prohibits the flaring of natural gas is granted for 120 days commencing on July 9, 1992 for its Jicarilla 3F Well No. 1 located 1845 feet from the North line and 1900 feet from the West line of Section 3, Township 27 North, Range 1 West, NMPM, Rio Arriba County, New Mexico.

**PROVIDED**, this exception shall be limited to 600 Mcf of gas per day unless otherwise authorized by a Division approved well test.

**PROVIDED FURTHER**, that during the time of this exception, American Hunter shall conduct the tests on this well which were approved by the Division on June 28, 1992, and such modifications or additions to this test or other data-gathering procedures which are agreed to by American Hunter and approved by the Division. No amendment to the Division-approved testing procedure made at the request of another operator in the West Puerto-Chiquito-Mancos Oil Pool shall be required unless such operator agrees to bear the costs of such tests.

**PROVIDED FURTHER**, the Jicarilla 3F Well will not be subject to shut in during the 120 day exception to Division General Rule 306 and this well should not be shut in to make up overproduction after this exception period as long as its production is low enough to retire the well's overproduction at a rate of at least 200 barrels per day and the produced gas is re-injected into the reservoir.

**PROVIDED FURTHER**, at the conclusion of any testing or other data-gathering procedure conducted on the Jicarilla 3F Well, the Division may in its sole discretion re-open this case and require American Hunter to review the results of these tests and procedures.

(2) The Jicarilla 3F Well No. 1 shall not accrue additional overproduction during the period of time covered by this exception to Division General Rule 306 for volumes of gas produced and vented in accordance with this order and any production under the limits set by this order shall be credited against the well's overproduced status.

Case No. 10506  
Order No. R-9766  
Page 6

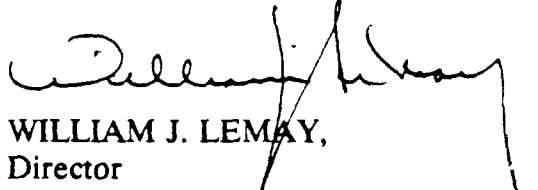
---

(3) Nothing in this Order shall prevent American Hunter from seeking cancellation of overproduction or other relief at the conclusion of the period covered by the exemption to Division General Rule 306 authorized by this Order.

(4) 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

S E A L