

**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. 11050  
Order No. R-10196**

**APPLICATION OF ENRE CORPORATION FOR  
A HIGH ANGLE/HORIZONTAL DIRECTIONAL  
DRILLING PILOT PROJECT AND FOR THE  
PROMULGATION OF 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 August 18, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26<sup>th</sup> day of September, 1994, 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, EnRe Corporation, seeks authority to initiate a high angle/horizontal directional drilling pilot project in the Boulder-Mancos Pool underlying a proposed project area comprising all of Section 22, Township 28 North, Range 1 West, NMPM, Rio Arriba County, New Mexico, thereby creating a non-standard 640-acre oil spacing and proration unit for said pool.

(3) The applicant further seeks authority to horizontally drill its Cedar Canyon 22G Well No. 1 from an unorthodox surface location 1950 feet from the North line and 1800 feet from the East line (Unit G) of Section 22 in the following unconventional manner:

Drill vertically to a depth of approximately 250 feet. Set 10 3/4-inch casing and cement to surface. Drill to a depth of approximately 5,977 feet. Kick off from the vertical at this depth and drill in a southwesterly direction building angle at a rate of 8 degrees/100 feet to a depth of approximately 6,526 feet at the top of the Mancos "A" interval. Set 7-inch casing at this depth. Continue drilling and building angle at a rate of 8 degrees/100 feet to a depth of approximately 6,689 feet at the top of the Mancos "B" interval. Continue drilling horizontally within the Mancos "B" interval a distance of approximately 2,600 feet so as to bottom said wellbore at an unorthodox bottomhole location 2299 feet from the South line and 544 feet from the West line (Unit L) of Section 22.

(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 or producing portion of the wellbore such that it can be no closer than 330 feet from the outer boundary of the project area.

(5) The applicant further seeks:

- a) the assignment of a special oil allowable for the subject well equal to 1,280 barrels of oil per day, being eight times the normal allowable for a standard 80-acre proration unit (160 BOPD);
- b) the establishment of an administrative procedure whereby the applicant may obtain Division approval administratively to drill an additional high angle/horizontal wellbore within the project area should problems arise during the drilling of the proposed Cedar Canyon 22G Well No. 1 which would preclude its completion.

(6) The proposed well is located within the Boulder-Mancos Pool which is currently governed by Special Rules and Regulations as promulgated by Division Order No. R-2543 which require standard 80-acre spacing and proration units with wells to be located within 150 feet of the center of a governmental quarter-quarter section or lot, a standard oil allowable of 160 barrels of oil per day, and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(7) The applicant presented geologic evidence which indicates that the target zone within the proposed wellbore is the Mancos "B" interval. The Mancos "B" interval is characterized by a major fracture system which predominantly runs north-south and a minor fracture system which runs both north-south and east-west in this area.

(8) Through its evidence and testimony, the applicant demonstrated that the proposed high angle/horizontal wellbore should encounter a greater number of natural fractures within the Mancos "B" interval than would a conventional wellbore, which should significantly increase the recovery of oil and gas from the project area, thereby preventing waste.

(9) Due to extensive fracturing in the Mancos formation, the proposed Cedar Canyon 22G Well No. 1 should be capable of draining the entire project area.

(10) The normal minimum setback requirement for the Boulder-Mancos Pool is 510 feet from the outer boundary of the proration unit. The applicant has requested a minimum setback of 330 feet from the outer boundary of the project area. The applicant did not present evidence or testimony which would indicate the necessity of the proposed setback, nor does it coincide with the proposed bottomhole location of the Cedar Canyon 22G Well No. 1 as described in Finding No. (3) above.

(11) Any high angle/horizontal wellbore drilled within the project area should be located no closer than 510 feet from the outer boundary of the project area.

(12) The applicant's proposed allowable of 1,280 barrels of oil per day, while not in conformance with current Division policy regarding allowables for horizontal wellbores, is justified in this case due to the nature of the producing formation and should therefore be approved.

(13) The project area is composed of a single Jicarilla Apache Tribal Lease which is currently under lease to the applicant.

(14) No offset operator and/or interest owner appeared at the hearing in opposition to the proposed high angle/horizontal wellbore.

(15) In the interest of conservation and prevention of waste, the application of EnRe Corporation for a high angle/horizontal drilling pilot project should be approved.

(16) 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.

(17) 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.

(18) 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.

(19) The Division Director should be authorized to administratively approve the drilling of an additional high angle/horizontal wellbore within the project area should mechanical difficulties preclude the completion of horizontal drilling operations on the Cedar Canyon 22G Well No. 1. Such application should include the proposed surface location, direction and extent of the lateral, and the proposed bottomhole location. In addition, a copy of the application should be furnished to each operator offsetting the project area by certified or registered mail, and the application should state that such notice has been given. The Division Director may approve the application upon receipt of waivers from all offset operators or if no offset operator has entered an objection to the proposed horizontal wellbore within 20 days after the Director has received the application.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, EnRe Corporation, is hereby authorized to initiate a high angle/horizontal directional drilling pilot project in the Boulder-Mancos Pool underlying all of Section 22, Township 28 North, Range 1 West, NMPM, Rio Arriba County, New Mexico, thereby forming a non-standard 640-acre oil spacing and proration unit for said pool, also hereby approved.

(2) The applicant is further authorized to drill its Cedar Canyon 22G Well No. 1 from an unorthodox surface location 1950 feet from the North line and 1800 feet from the East line (Unit G) of Section 22 in the following unconventional manner:

Drill vertically to a depth of approximately 250 feet. Set 10 3/4-inch casing and cement to surface. Drill to a depth of approximately 5,977 feet. Kick off from the vertical at this depth and drill in a southwesterly direction building angle at a rate of 8 degrees/100 feet to a depth of approximately 6,526 feet at the top of the Mancos "A" interval. Set 7-inch casing at this depth. Continue drilling and building angle at a rate of 8 degrees/100 feet to a depth of approximately 6,689 feet at the top of the Mancos "B" interval. Continue drilling horizontally within the Mancos "B" interval a distance of approximately 2,600 feet so as to bottom said wellbore at an unorthodox bottomhole location 2299 feet from the South line and 544 feet from the West line (Unit L) of Section 22.

(3) The horizontal or producing portion of the wellbore shall be located no closer than 510 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.

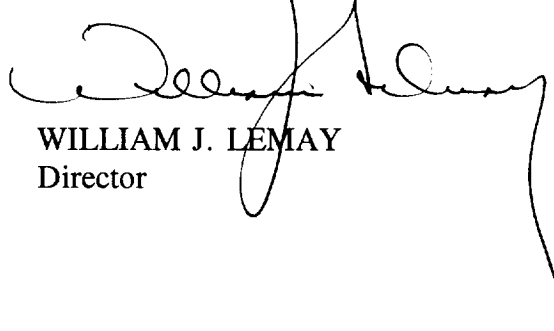
(7) The allowable assigned to the project area in the Boulder-Mancos Pool shall be equal to 1,280 barrels of oil per day.

(8) The Division Director shall be authorized to administratively approve the drilling of an additional high angle/horizontal wellbore within the project area should mechanical difficulties preclude the completion of horizontal drilling operations on the Cedar Canyon 22G Well No. 1. Such application shall include the proposed surface location, direction and extent of the lateral, and the proposed bottomhole location. In addition, a copy of the application shall be furnished to each operator offsetting the project area by certified or registered mail, and the application shall state that such notice has been given. The Division Director may approve the application upon receipt of waivers from all offset operators or if no offset operator has entered an objection to the proposed horizontal wellbore within 20 days after the Director has received the application.

(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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