

**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. 10698  
Order No. R-9878**

**APPLICATION OF PETROLEUM DEVELOPMENT  
CORPORATION FOR A HORIZONTAL/HIGH ANGLE  
DIRECTIONAL DRILLING PILOT PROJECT,  
SPECIAL OPERATING RULES THEREFOR, AND  
A NON-STANDARD OIL PRORATION UNIT, CHAVES  
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 15th 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) Division Case Nos. 10697 and 10698 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Petroleum Development Corporation, seeks authority to initiate a short radius high angle/horizontal directional drilling pilot project in the Cato-San Andres Pool underlying Lot 4 (NW/4 NW/4 equivalent) of irregular Section 6, Township 8 South, Range 31 East, NMPM, Chaves County, New Mexico, being a non-standard 44.30-acre oil spacing and proration unit for said pool.

(4) The applicant further seeks authority to horizontally drill its existing Wattam Federal Well No. 7 located at a standard surface location 660 feet from the North and West lines (Unit D) of Section 6, in the following unconventional manner:

Squeeze perforations from 3,654 feet to 3,783 feet and 3,578 feet to 3,629 feet, mill casing from approximately 3,564 feet to 3,624 feet, set cement plug and kick off from the vertical at a depth of approximately 3,594 feet and drill in an undetermined direction building angle to approximately 85 degrees so as to penetrate the top of the producing interval within the San Andres formation at a true vertical depth of approximately 3,654 feet. Continue drilling horizontally an undetermined distance at such an angle so as to bottom said wellbore at the base of the producing interval within the San Andres formation at a true vertical depth of approximately 3,700 feet.

(5) 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 100 feet from the outer boundary of Lot 4 (NW/4 NW/4 equivalent) of Section 6.

(6) The proposed well is located within the Cato-San Andres Pool which is currently governed by Statewide Rules and Regulations which require standard 40-acre spacing and proration units with wells to be located no closer than 330 feet from the outer boundary of the spacing unit, a standard oil allowable of 80 barrels of oil per day, and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(7) Through its evidence and testimony, the applicant demonstrated that the proposed high angle wellbore, which is experimental in nature, should encounter a substantially greater number of natural fractures within the San Andres 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.

(8) The proposed non-standard oil proration unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey.

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

(10) In the interest of conservation and prevention of waste, the application of Petroleum Development Corporation for a high angle/horizontal directional drilling project should be approved.

(11) According to applicant's evidence, the proposed 100 foot setback from the outer boundary of the project area will allow the flexibility to determine the direction of the proposed horizontal wellbore, and will also allow the flexibility to extend the wellbore the maximum distance.

(12) 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.

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

(14) The applicant should be required to submit copies of all directional surveys conducted on the subject well to both the Santa Fe and Hobbs offices of the Division.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Petroleum Development Corporation, is hereby authorized to initiate a short radius high angle/horizontal directional drilling pilot project in the Cato-San Andres Pool underlying Lot 4 (NW/4 NW/4 equivalent) of Irregular Section 6, Township 8 South, Range 31 East, NMPM, Chaves County, New Mexico, being a non-standard 44.30-acre oil spacing and proration unit for said pool, also hereby approved.

(2) The applicant is further authorized to horizontally drill its existing Wattam Federal Well No. 7 located at a standard surface location 660 feet from the North and West lines (Unit D) of Section 6, in the following unconventional manner:

Squeeze perforations from 3,654 feet to 3,783 feet and 3,578 feet to 3,629 feet, mill casing from approximately 3,564 feet to 3,624 feet, set cement plug and kick off from the vertical at a depth of approximately 3,594 feet and drill in an undetermined direction building angle to approximately 85 degrees so as to penetrate the top of the producing interval within the San Andres formation at a true vertical depth of approximately 3,654 feet. Continue drilling horizontally an undetermined distance at such an angle so as to bottom said wellbore at the base of the producing interval within the San Andres formation at a true vertical depth of approximately 3,700 feet.

(3) The horizontal or producing portion of the wellbore shall be located no closer than 100 feet from the outer boundary of Lot 4 (NW/4 NW/4 equivalent) of Section 6.

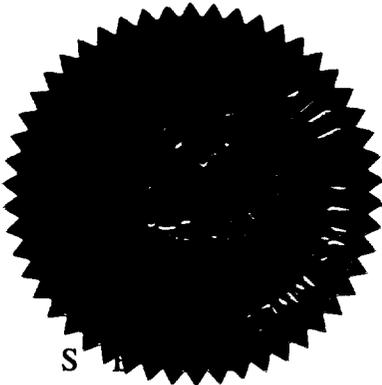
(4) The applicant shall determine the actual location of the kick-off point prior to commencing directional drilling operations. Also, the applicant shall conduct a directional survey on the lateral portion of the wellbore during or after completion of drilling operations.

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

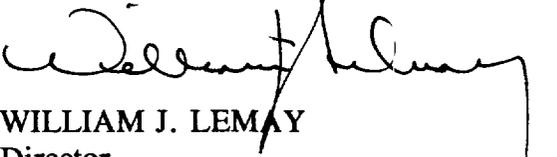
(6) The applicant shall submit copies of all directional surveys conducted on the subject well to both the Santa Fe and Hobbs offices of the Division.

(7) 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

State of New Mexico  
**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**  
Santa Fe, New Mexico 87505



**BRUCE KING**  
GOVERNOR



**ANITA LOCKWOOD**  
CABINET SECRETARY

April 16, 1993

Walter Kegel  
Petroleum Development Corporation  
69 County Road 7  
Española, NM 87532

RE: CASE NO. 10698  
ORDER NO. R-9878

Dear Sir:

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

Sincerely,

*Sally E. Leichtle*  
Sally E. Leichtle  
Administrative Secretary

cc: BLM - Roswell  
Monika Romero - OCD

**VILLAGRA BUILDING - 408 Galisteo**

Forestry and Resources Conservation Division  
P.O. Box 1948 87504-1948  
827-5830

Park and Recreation Division  
P.O. Box 1147 87504-1147  
827-7465

**2040 South Pacheco**

Office of the Secretary  
827-5950

Administrative Services  
827-5925

Energy Conservation & Management  
827-5900

Mining and Minerals  
827-5970

**LAND OFFICE BUILDING - 310 Old Santa Fe Trail**

Oil Conservation Division  
P.O. Box 2088 87504-2088  
827-5800