

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. 9139  
Order No. R-8479

APPLICATION OF ELF AQUITAINE  
PETROLEUM FOR A HORIZONTAL  
DIRECTIONAL DRILLING PILOT  
PROJECT AND SPECIAL OPERATING  
RULES THEREFOR, WEST LINDRITH  
GALLUP-DAKOTA OIL POOL, RIO  
ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 3, 1987, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 21st day of July, 1987, 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, Elf Aquitaine Petroleum, seeks authority to initiate a horizontal directional drilling pilot project located in the W/2 of Section 14, Township 23 North, Range 3 West, NMPM, West Lindrith Gallup-Dakota Oil Pool, Rio Arriba County, New Mexico, and to further promulgate special provisions within said project area including limiting the horizontal extent of the wellbore and special allowable considerations.

(3) The applicant proposes to drill its Jicarilla Thomas Apache "H" Well No. 1 at an unorthodox surface location 500 feet from the North line and 1500 feet from the West line of Section 14, Township 23 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(4) The proposed well would be located within the boundaries of the West Lindrith Gallup-Dakota Oil Pool and, as such, would be subject to the special rules and regulations for said pool which require 160-acre spacing and proration units with wells to be located no closer than 660 feet from the outer boundary of the proration unit or to another well capable of producing from the pool, nor closer than 330 feet from any quarter-quarter section line.

(5) The applicant further proposes to drill and complete said well in the following unconventional manner:

Directionally drill said well by kicking off from the vertical at a depth of approximately 5600 feet, drill a long-radius curve in such a manner as to penetrate the Dakota "A" sandstone horizontally at a depth of approximately 7230 feet, utilize existing and proven technology to drill horizontally within the Dakota formation in a South-Southeasterly direction a distance of approximately 2000 feet to a point located 1269 feet from the South line and 1807 feet from the West line of said Section 14, set casing strings at depths of approximately 5400 feet and 7230 feet, set a slotted liner from the top of the Dakota formation to total depth, and produce the Dakota formation throughout the entire horizontal interval.

(6) As a result of this type of completion, the producing interval in the well would include an area underlying both the NW/4 and the SW/4 of said Section 14.

(7) The applicant presented evidence that indicates the producing interval in the well would be located a minimum distance of 833 feet from the outer boundary of the proration unit and, as such, would not encroach upon offsetting proration units, thereby protecting correlative rights.

(8) Testimony by the applicant further indicated that this type of well completion has been utilized successfully in several different parts of the world and should result in the recovery of a substantially greater amount of oil than would normally be recovered by a conventional well completion, thereby preventing waste.

(9) No offset operator objected to the proposed horizontal directional drilling project.

(10) In the interest of conservation, prevention of waste, and protection of correlative rights, the application

of Elf Aquitaine for a horizontal directional drilling project should be approved subject to certain bottomhole location provisions and special allowable considerations described below and in Finding No. (14).

- (a) The bottomhole location of the proposed well should not be located closer than 833 feet to the outer boundary of the project area.
- (b) The applicant should be required to conduct a directional survey on the proposed well during the drilling of or after the completion of drilling operations on the well, and submit to the Santa Fe office of the Division a copy of said directional survey.

(11) There are currently two existing Gallup-Dakota wells within the proposed project area operated by Dave Thomas, Jr., these being the Chacon Jicarilla Apache "D" Well Nos. 2 and 6 located, respectively, 790 feet from the North line and 990 feet from the West line (Unit D) and 790 feet from the South and West lines (Unit M), both in said Section 14.

(12) Since the project area consists of two standard 160-acre proration units, the applicant proposed that the project be assigned an allowable of 764 barrels of oil per day, which is equal to the normal allowable assigned to a standard 160-acre proration unit in the pool times two.

(13) The applicant further proposed to either simultaneously dedicate a non-standard 320-acre proration unit consisting of the NW/4 and the SW/4 of said Section 14 to the proposed well and to the two existing wells as described above or, in the alternative, to simultaneously dedicate the NW/4 to the proposed well and to the Chacon Jicarilla Apache "D" Well No. 2, and to simultaneously dedicate the SW/4 to the proposed well and to the Chacon Jicarilla Apache "D" Well No. 6.

(14) Inasmuch as the interest is common in the NW/4 and the SW/4 of said Section 14 and to assist the Division in assigning allowables and the accounting of production within the project area, the applicant's request to simultaneously dedicate the NW/4 of said Section 14 to the proposed well and to the existing Chacon Jicarilla Apache "D" Well No. 2, and to simultaneously dedicate the SW/4 of said Section 14

to the proposed well and to the existing Chacon Jicarilla Apache "D" Well No. 6, should be approved subject to the following conditions:

- (a) The production from the proposed well should be allocated equally between the two 160-acre proration units and should be reported to the Division as such.
- (b) The two existing wells in the proration units should be allowed to produce at full capacity, with the proposed well making up the difference in the assigned allowable for the respective proration units.

(15) Further, to assist the Division in the allowable assignment and for production-reporting purposes, the applicant should be required to designate either themselves or Dave Thomas, Jr. to be the operator of the proposed proration units prior to the date of first production from the proposed well.

IT IS THEREFORE ORDERED THAT:

(1) The application of Elf Aquitaine Petroleum for a horizontal directional drilling project consisting of the W/2 of Section 14, Township 23 North, Range 3 West, NMPM, West Lindrith Gallup-Dakota Oil Pool, Rio Arriba County, New Mexico, is hereby approved.

(2) The applicant is further authorized to drill and complete its Jicarilla Thomas Apache "H" Well No. 1 at an unorthodox surface location 500 feet from the North line and 1500 feet from the West line of said Section 14 in the following unconventional manner:

Directionally drill said well by kicking off from the vertical at a depth of approximately 5600 feet, drill a long-radius curve in such a manner as to penetrate the Dakota "A" sandstone horizontally at a depth of approximately 7230 feet, utilize existing and proven technology to drill horizontally within the Dakota formation in a South-Southeasterly direction a distance of approximately 2000 feet to a point located 1269 feet from the South line and 1807 feet from the West line of said Section 14, set casing strings at depths of approximately 5400 feet and 7230 feet, set a slotted liner from the top

of the Dakota formation to total depth, and produce the Dakota formation throughout the entire horizontal interval.

(3) The bottomhole location of the proposed well shall not be located closer than 833 feet to the outer boundary of the project area.

(4) The applicant shall conduct a directional survey on the proposed well during the drilling or after the completion of drilling operations on the well and shall submit to the Santa Fe office of the Division a copy of said directional survey.

(5) For purposes of assignment of allowable and reporting of production, the NW/4 of said Section 14 shall be simultaneously dedicated to the proposed well and to the existing Chacon Jicarilla Apache "D" Well No. 2 located 790 feet from the North line and 990 feet from the West line (Unit D) of said Section 14, and the SW/4 of said Section 14 shall be simultaneously dedicated to the proposed well and to the existing Chacon Jicarilla Apache "D" Well No. 6 located 790 feet from the South and West lines (Unit M) of said Section 14.

(6) Each of the standard 160-acre proration units shall be assigned a standard allowable of 382 barrels of oil per day.

(7) The two existing wells in the proration units consisting of the NW/4 and the SW/4 of said Section 14 shall be allowed to produce at full capacity, with the proposed well making up the difference in the assigned allowable for the respective proration units.

(8) The production from the proposed well shall be allocated equally between the two 160-acre proration units and should be reported to the Division as such.

(9) The Division may, at its own discretion, authorize or implement a change in the method of assigning or reporting production in the project area if deemed necessary.

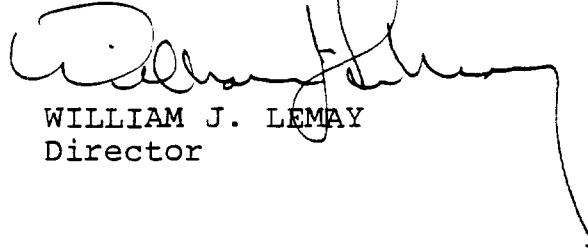
(10) For allowable assignment and production reporting procedures, the applicant shall be required to designate a single operator for the two standard proration units prior to the date of first production from the proposed well.

-6-  
Case No. 9139  
Order No. R-8479

(11) 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

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the typed name. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

WILLIAM J. LEMAY  
Director

S E A L

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