

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. 9851
Order No. R-9105

APPLICATION OF MCKAY OIL
CORPORATION FOR HORIZONTAL
DRILLING, CHAVES COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 10, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of January, 1990, 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, McKay Oil Corporation, seeks authority to reenter the two following described wells for the purpose of drilling two horizontal drainholes from each well (as further described below) in the Abo formation, South Pecos Slope-Abo and West Pecos Slope-Abo Gas Pools, Chaves County, New Mexico:

- (a) Reenter the McKay-Harvey Federal Well No. 1 located at a standard surface location 660 feet from the South and East lines (Unit P) of Section 17, Township 9 South, Range 25 East, NMPM, plug back to a depth of approximately 3735 feet, and commence a short radius curve in a northerly

CASE NO. 9851
Order No. R-9105
Page -2-

direction to encounter the Abo formation at a depth of approximately 3754 feet at which point a drainhole will be drilled horizontally within the Abo formation a distance of 281 feet. The well will then be plugged back to a depth of approximately 3729 feet and a short radius curve will be commenced in a westerly direction to encounter the Abo formation at a depth of approximately 3754 feet at which point a second drainhole will be drilled horizontally within the Abo formation a distance of approximately 275 feet.

- (b) Reenter the L.L. & E. Federal Well No. 3 located at a previously approved unorthodox surface location (as per Division Order No. NSL-2587) 660 feet from the North line and 1485 feet from the West line (Unit C) of Section 12, Township 6 South, Range 22 East, NMPM, plug back to a depth of approximately 2825 feet, and commence a short radius curve in an easterly direction to encounter the Abo formation at a depth of approximately 2848 feet at which point a drainhole will be drilled horizontally within the Abo formation a distance of 277 feet. The well will then be plugged back to a depth of approximately 2819 feet and a short radius curve will be commenced in a westerly direction to encounter the Abo formation at a depth of approximately 2848 feet at which point a second drainhole will be drilled horizontally within the Abo formation a distance of approximately 271 feet.

(3) The terminus of each horizontal drainhole originating from the McKay-Harvey Federal Well No. 1 is proposed to be located 660 feet from the South line and 960 feet from the East line (Unit P), and 960 feet from the South line and 660 feet from the East line (Unit P), both in said Section 17.

(4) The terminus of each horizontal drainhole originating from the L.L. & E. Federal Well No. 3 is proposed to be located 729 feet from the North line and 1776 feet from the West line (Unit C), and 660 feet from the North line and 1184 feet from the West line (Unit D), both in said Section 12.

CASE NO. 9851
Order No. R-9105
Page -3-

(5) The applicant further proposes to dedicate two standard 160-acre gas spacing and proration units consisting of the SE/4 of said Section 17 and the NW/4 of said Section 12, respectively, to the above-described McKay-Harvey Federal Well No. 1 and the L.L. & E. Federal Well No. 3.

(6) Division records indicate that the McKay-Harvey Well No. 1 was originally drilled and completed in the South Pecos Slope-Abo Gas Pool in 1984, and that the L.L. & E. Federal Well No. 3 was originally drilled and completed in the West Pecos Slope-Abo Gas Pool in 1988.

(7) The evidence and testimony presented indicates that each of the proposed horizontal drainholes, which are experimental in nature, should encounter a greater amount of natural fractures within the Abo formation than would a conventional wellbore, which should ultimately result in the recovery of a greater amount of gas from each respective proration unit, thereby preventing waste.

(8) None of the proposed horizontal drainholes will encroach upon the 660-foot setback requirement as prescribed for the South Pecos Slope-Abo Gas Pool and the West Pecos Slope-Abo Gas Pool by Division General Rule No. 104 (C)(II).

(9) The two proposed horizontal drainholes originating from the L.L. & E. Federal Well No. 3 are not in compliance, however, with said Division General Rule No. 104 (C)(II) with respect to the 330-foot minimum setback requirement for the interior quarter-quarter section lines.

(10) Although the advertisement for this case did not contain a specific request for approval of said unorthodox bottomhole locations, the information provided in said advertisement, namely the surface well location and the termination points of the two proposed drainholes, was sufficient to allow the determination that said drainholes were in fact unorthodox bottomhole locations.

(11) In addition, the applicant has provided sufficient notice of the proposed horizontal drainhole project to all offset operators, and no such operator appeared at the hearing in opposition to the application.

CASE NO. 9851
Order No. R-9105
Page -4-

(12) Approval of the proposed horizontal drilling project should result in the recovery of an additional amount of gas from the subject proration units, which may not otherwise be recovered, thereby preventing waste, and will not violate correlative rights provided that the proposed horizontal drainholes are located and in fact terminate at the above described locations.

(13) The applicant should be required to conduct a directional survey on the vertical portion of each well-bore prior to commencing directional drilling operations, and on each respective horizontal drainhole during or subsequent to directional drilling operations in order that the direction, extent, and terminus of said horizontal drainholes may be determined to be in compliance with the proposed bottomhole locations.

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

(15) The applicant should notify the supervisor of the Artesia 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 wells in order that these operations may be witnessed.

IT IS THEREFORE ORDERED THAT:

(1) The application of McKay Oil Corporation for a horizontal drilling project in the SE/4 of Section 17, Township 9 South, Range 25 East, NMPM, South Pecos Slope-Abo Gas Pool, and the NW/4 of Section 12, Township 6 South, Range 22 East, NMPM, West Pecos Slope-Abo Gas Pool, both in Chaves County, New Mexico, is hereby approved.

(2) The applicant is further authorized to reenter the following described wells and drill two horizontal drainholes from each well in the following described manner:

CASE NO. 9851
Order No. R-9105
Page -5-

- (a) Reenter the McKay-Harvey Federal Well No. 1 located at a standard surface location 660 feet from the South and East lines (Unit P) of Section 17, Township 9 South, Range 25 East, NMPM, plug back to a depth of approximately 3735 feet, and commence a short radius curve in a northerly direction to encounter the Abo formation at a depth of approximately 3754 feet at which point a drainhole will be drilled horizontally within the Abo formation a distance of 281 feet. The well will then be plugged back to a depth of approximately 3729 feet and a short radius curve will be commenced in a westerly direction to encounter the Abo formation at a depth of approximately 3754 feet at which point a second drainhole will be drilled horizontally within the Abo formation a distance of approximately 275 feet.
- (b) Reenter the L.L. & E. Federal Well No. 3 located at a previously approved unorthodox surface location 660 feet from the North line and 1485 feet from the West line (Unit C) of Section 12, Township 6 South, Range 22 East, NMPM, plug back to a depth of approximately 2825 feet, and commence a short radius curve in an easterly direction to encounter the Abo formation at a depth of approximately 2848 feet at which point a drainhole will be drilled horizontally at an unorthodox bottomhole location within the Abo formation a distance of 277 feet. The well will then be plugged back to a depth of approximately 2819 feet and a short radius curve will be commenced in a westerly direction to encounter the Abo formation at a depth of approximately 2848 feet at which point a second drainhole will be drilled horizontally at an unorthodox bottomhole location within the Abo formation a distance of approximately 271 feet.
- (3) The SE/4 of said Section 17 and the NW/4 of said Section 12 shall be respectively dedicated to the above-described McKay-Harvey Federal Well No. 1 and the L.L. & E. Federal Well No. 3.

CASE NO. 9851
Order No. R-9105
Page -6-

(4) The terminus of each horizontal drainhole originating from the McKay-Harvey Federal Well No. 1 shall be located 660 feet from the South line and 960 feet from the East line (Unit P), and 960 feet from the South line and 660 feet from the East line (Unit P), both in said Section 17, and at no point in their traverse of the Abo formation shall the subject drainholes encroach upon the 660-foot setback requirement within the subject proration unit.

(5) The terminus of each horizontal drainhole originating from the L.L. & E. Federal Well No. 3 shall be located 729 feet from the North line and 1776 feet from the West line (Unit C), and 660 feet from the North line and 1184 feet from the West line (Unit D), both in said Section 12, and at no point in their traverse of the Abo formation shall the subject drainholes encroach upon the 660-foot setback requirement within the subject proration unit.

(6) The applicant shall conduct a directional survey on the vertical portion of each wellbore prior to commencing directional drilling operations, and on each respective horizontal drainhole during or subsequent to directional drilling operations in order that the direction, extent, and terminus of said horizontal drainholes may be determined to be in compliance with the proposed bottomhole locations.

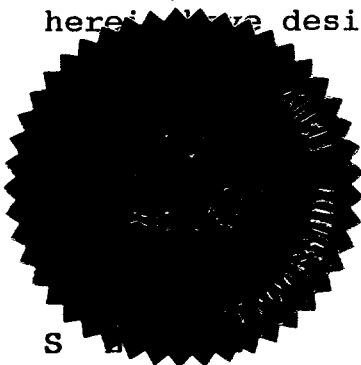
(7) The applicant shall submit copies of said directional surveys to the Santa Fe and Artesia district offices of the Division.

(8) The applicant shall notify the supervisor of the Artesia 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 wells in order that these operations may be witnessed.

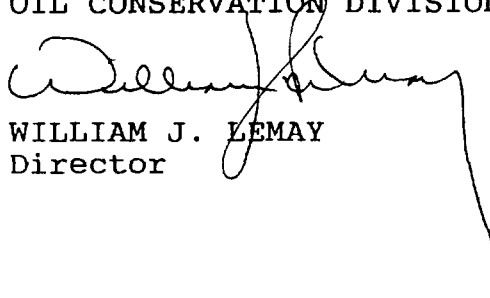
(9) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

CASE NO. 9851
Order No. R-9105
Page -7-

DONE at Santa Fe, New Mexico, on the day and year
herein designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director