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117 NORTH GUADALUPE

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TELEPHONE (505) 982-4285  
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December 7, 1990

RECEIVED

DEC 07 1990

OIL CONSERVATION DIV.  
SANTA FE

Mr. William J. LeMay  
Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87504

Re: Application of Richmond Petroleum Inc.  
for a Horizontal Directional Drilling  
Pilot Project, Special Operating Rules  
therefore, an Unorthodox Well Location,  
and Non-standard Spacing Unit, Rio  
Arriba County, New Mexico

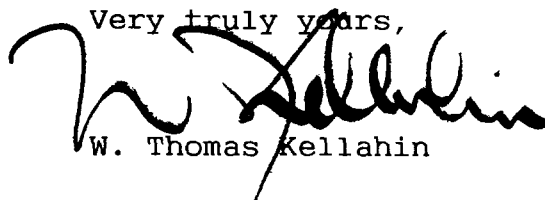
10198

Dear Mr. LeMay:

On behalf of Richmond Petroleum Inc., please find enclosed our Application for a Horizontal Directional Drilling Pilot Project, Special Operating Rules therefore, an Unorthodox Well Location, and Non-standard Spacing Unit which we request be set for hearing on the next available Examiner's docket now scheduled for January 10, 1990.

By copy of this letter and application to all parties, we are notifying them by certified mail, return-receipt requested, that they have the right to appear at the hearing, to make a statement to the Division, to present evidence and cross-examine witnesses either in support of or in opposition to the application.

Very truly yours,

  
W. Thomas Kellahin

WTK/tic  
Enclosure

Mr. William J. LeMay  
December 7, 1990  
Page 2

cc: Mr. Steve Roche  
Roche Oil and Gas Corp  
6400 Uptown Blvd., N.E.  
Suite 480W  
Albuquerque, New Mexico 87110

Certified copy return receipt:

All parties listed on Exhibit "C"  
of application

KELLAHIN, KELLAHIN AND AUBREY

ATTORNEYS AT LAW

EL PATIO BUILDING

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January 15, 1991

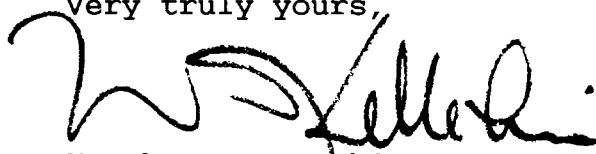
Mr. David R. Catanach  
Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87504

Re: Application of Richmond Petroleum Inc.  
for a Horizontal Directional Drilling  
Pilot Project, Rio Arriba County,  
New Mexico  
NMOCD Case No. 10198

Dear Mr. Catanach:

In accordance with your request at the conclusion  
of the hearing on the referenced case held on January  
10, 1991, please find enclosed a proposed order for  
entry in this case.

Very truly yours,



W. Thomas Kellahin

WTK/tic  
Enclosure

cc: William F. Carr, Esq.  
Bob McCamey  
Steve Roche

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. 10198  
ORDER NO. R-

APPLICATION OF RICHMOND PETROLEUM INC.  
FOR A HORIZONTAL DIRECTIONAL DRILLING  
PILOT PROJECT, SPECIAL OPERATING RULES  
THEREFOR, A NON-STANDARD OIL PRORATION  
UNIT, AND UNORTHODOX SURFACE LOCATION,  
GAVILAN-MANCOS 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  
January 10, 1991, at Santa Fe, New Mexico, before Examiner  
David R. Catanach.

NOW, on this \_\_\_\_\_ day of January, 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.

CASE NO. 10198  
ORDER NO. R-  
PAGE NO. 2

(2) The applicant, Richmond Petroleum Inc., seeks the formation of a non-standard 430.56-acre oil spacing and proration unit for the Gavilan-Mancos Oil Pool comprising all of Section 28, Township 27 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, for the purpose of initiating a horizontal directional drilling pilot project therein and to further promulgate special rules and provisions within said pilot project area including the designation of a prescribed area limiting the horizontal displacement of the wellbore and special allowable considerations.

(3) The proposed pilot project area is within one mile of the North boundary of the Gavilan-Mancos Oil Pool and, as such, is subject to the Special Rules and Regulations for said pool as promulgated by Division Order No. R-7407, as amended, which provides for 640-acre spacing and proration units with an allowable of 800 barrels of oil per day and for all wells to be no closer than 790 feet to the outer boundary of a proration unit nor closer than 330 feet to an inner quarter-quarter section line or subdivision inner boundary.

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ORDER NO. R-  
PAGE NO. 3

(4) The Niobrara interval of the Mancos shale is the productive zone of the Gavilan-Mancos Oil Pool, which is characterized by tight, low permeability blocks interconnected by a high capacity fracture system.

(5) Past experience in said pool has shown that unless a conventionally drilled (vertical) well intersects such a fracture, the chance of obtaining commercial production is severely curtailed.

(6) By drilling a horizontal wellbore, the applicant is attempting to increase the probability of encountering several of these fractures, which may ultimately result in the recovery of a greater amount of oil, thereby preventing waste.

(7) The applicant proposes to drill its Apache 27-2W-28 No. 1 well commencing at an unorthodox surface location 500 feet FEL and 500 feet FSL of said Section 28 and drilling directionally to approximately 7100 feet which is the estimated top of the Mancos formation at which point the well will be no closer than 790 feet FSL and FEL of Section 28 and then the applicant will kick-off the well in a Northwesterly direction building an assumed 360 foot

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ORDER NO. R-  
PAGE NO. 4

radius turn and penetrating the Gavilan-Mancos Pool at an estimated depth of 7412 feet in "C" zone of Niobrara and thence drilling horizontally in a Northwesterly direction a distance not in excess of 2,000 feet.

(8) To allow for flexibility, to minimize risk and maximize the success of such a completion, the applicant is requesting the designation of a prescribed area limiting the horizontal displacement of the wellbore such that the producing interval of the well be within the following described rectangular area:

Not closer than 790 feet to any side  
boundary of Section 28.

(9) Because Sections 28, 29, 27, 20, 21 and 22 are all under Jicarilla Apache Tribe ownership with the applicant, correlative rights are protected.

(10) Of the operators and interest owners notified of this application only Amoco appeared and withdrew its objection by stipulation of the applicant and Amoco.

(11) Since the project area consists of a non-standard 430.56-acre oil spacing and proration unit for the

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Gavilan-Mancos Oil Pool, the applicant proposes that the project be assigned an allowable of 538 barrels of oil per day, which is its proportionate share of the normal allowable assigned a single 640-acre unit for said pool.

(12) The subject 430.56-acre non-standard proration unit should not become effective until such time as the horizontal wellbore is completed and placed on production and will cease at such time as the horizontal wellbore is properly plugged and abandoned.

(13) The applicant should be required to determine the actual location of the kick-off point prior to directional drilling operations. Also, the applicant should notify the supervisor of the Aztec District Office of the Division of the proposed direction of the deviated hole and of the date and time of the commencement of directional drilling operations in order that the same may be witnessed.

(14) The applicant should be required to conduct a directional survey on the lateral portion of the wellbore during or after completion of the drilling operations on the horizontal wellbore and submit a copy of said survey to both the Santa Fe and Aztec Offices of the Division.



CASE NO. 10198  
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IT IS THEREFORE ORDERED THAT:

(1) The application of Richmond Petroleum Inc. for a horizontal directional drilling pilot project comprising all of Section 28, Township 27 South, Range 2 West, N.M.P.M., Gavilan-Mancos Oil Pool, Rio Arriba County, New Mexico, thereby forming a non-standard 430.56-acre oil spacing and proration unit for said pool, is hereby approved.

(2) The applicant is further authorized to drill its Apache 27-2W-28 No. 1 well commencing at an unorthodox surface location 500 feet FEL and 500 feet FSL of said Section 28 and drilled directionally to approximately 7100 feet which is the estimated top of the Mancos formation at which point the well will be no closer than 790 feet FSL and FEL of Section 28 and then the applicant will kick-off the well in a Northwesterly direction building an assumed 360 foot radius turn and penetrating the Gavilan-Mancos Pool at an estimated depth of 7412 feet in "C" zone of Niobrara and thence drilling horizontally in a Northwesterly direction a distance not in excess of 2,000 feet.

(3) The producing interval of the well shall be

CASE NO. 10198  
ORDER NO. R-  
PAGE NO. 7

within the following rectangular area:

Not closer than 790 feet to any side  
boundary of Section 28.

(4) The aforementioned 430.56-acre non-standard oil proration unit shall be assigned an acreage dedication factor of .67275 to be assessed toward the depth bracket allowable for said pool (800 barrels of oil per day on a monthly average).

(5) This non-standard proration unit shall not become effective until such time as the horizontal wellbore is completed and placed on production and shall cease at such time as the horizontal well is properly plugged and abandoned.

(6) The geographic location of the kick-off point for the proposed horizontal well shall be determined prior to directional drilling. Also, the operator shall notify the supervisor of the Aztec District Office of the Division of the proposed direction of the deviated hole and of the date and time of the directional drilling in order that the same may be witnessed.

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ORDER NO. R-  
PAGE NO. 8

(7) The applicant shall conduct a directional drilling survey on the well during or after completion of horizontal drilling operations.

(8) Upon completion of the horizontal drilling operations on the well, the applicant shall file a copy of said directional drilling survey along with a final report specifying the depth and location of the terminus of said horizontal wellbore with both the Santa Fe and Aztec Offices of the Division.

(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 DIVISION

WILLIAM J. LEMAY  
Director

SEAL



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

January 28, 1991

POST OFFICE BOX 2088  
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SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Mr. Thomas Kellahin  
Kellahin, Kellahin & Aubrey  
Attorneys at Law  
Post Office Box 2265  
Santa Fe, New Mexico

Re: CASE NO. 10198  
ORDER NO. R-9419

Applicant:

Richmond Petroleum Inc.

Dear Sir:

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

Sincerely,

Florence Davidson

FLORENE DAVIDSON  
OC Staff Specialist

Copy of order also sent to:

Hobbs OCD \_\_\_\_\_ X  
Artesia OCD \_\_\_\_\_ X  
Aztec OCD \_\_\_\_\_ Y

Other \_\_\_\_\_