

KELLAHIN and KELLAHIN

Attorneys at Law

El Patio - 117 North Guadalupe
Post Office Box 2265
Santa Fe, New Mexico 87504-2265

Telephone 982-4285
Area Code 505

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey
James B. Grant

September 20, 1983

SEP 21 1983

RECEIVED

Mr. Joe D. Ramey
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

"Hand Delivered"

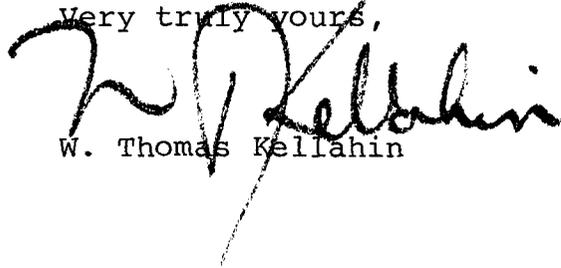
Re: Phillips Petroleum Company

Case 7974

Dear Mr. Ramey:

Please set the enclosed application for hearing
on October 12, 1983.

Very truly yours,



W. Thomas Kellahin

WTK:ca

Enc.

cc: George W. Terry, Jr. Esq.
William Mueller

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF PHILLIPS PETROLEUM COMPANY FOR
AMENDMENT TO ORDER R-3181 AND R-3181-A
TO INCLUDE INJECTION OF WATER, FOR
THE CONVERSION OF CERTAIN PRODUCING
WELLS TO INJECTION AND FOR EXPANSION
OF THE PROJECT AREA FOR THE VACUUM
ABO UNIT, LEA COUNTY, NEW MEXICO.

SEP 21 1983

CASE 7974

A P P L I C A T I O N

Comes now PHILLIPS PETROLEUM COMPANY, by and through its attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Division for an Amendment to Order R-3181 and Order R-3181-A to include the injection of water, for the conversion of certain producing wells to injection wells, and for expansion of the project area for its Vacuum Abo Unit Pressure Maintenance Project, Lea County, New Mexico, and in support thereof would show:

1. Applicant is the operator of the Vacuum Abo Unit approved by the Oil Conservation Division on January 13, 1967 by Order R-3180, copy attached as Exhibit A.

2. Applicant is the operator of the pressure maintenance project in its vacuum Abo Unit Area in the Vacuum-Abo Reef Pool, Lea County, New Mexico as approved by

the Oil Conservation Division in Order R-3181 entered January 18, 1967 and by Order R-3181-A entered September 10, 1969, copies attached as Exhibit B and C.

3. Applicant seeks:

(a) The expansion of the pressure maintenance project to include all of the area contained in the Vacuum Abo Unit as described in Order R-3180 (Exhibit A to this application);

(b) The addition of water as an injection fluid to the pressure maintenance project; and

(c) The conversion of the following producing wells to water injection wells:

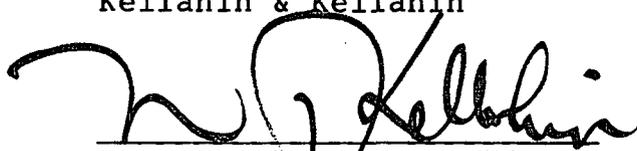
1. Tract 5 Well A
2. Tract 4 Well 6
3. Tract 1 Well 9
4. Tract 13 Well 9
5. Tract 6 Well 68
6. Tract 9 Well 5
7. Tract 15 Well 3
8. Tract 13 Well 18
9. Tract 12 Well 2
10. Tract 13 Well 7

(d) For an administrative procedure for the approval of additional injection and producing wells at standard and unorthodox well locations.

4. In accordance with Rule 701 etc., Form C-108 and attachment is being prepared and will be filed separately.

WHEREFORE, applicant requests that this application be set for hearing and that after notice and hearing the application be granted as requested.

Kellahin & Kellahin

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', written over a horizontal line.

By: W. Thomas Kellahin
P. O. Box 2265
Santa Fe, NM 87501

(505) 982-4285

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3508
Order No. R-3180

APPLICATION OF PHILLIPS PETROLEUM COMPANY
FOR APPROVAL OF THE VACUUM ABO UNIT AGREE-
MENT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1967,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of January, 1967, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Phillips Petroleum Company, seeks
approval of the Vacuum Abo Unit Agreement covering 3640 acres,
more or less, of State and Fee lands described as follows:

LEA COUNTY, NEW MEXICO

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 25: NW/4, NW/4 NE/4, and N/2 SW/4
Section 26: E/2 NW/4, SW/4 NW/4, NE/4, and S/2
Section 27: S/2 SW/4 and SE/4
Section 33: SE/4 NE/4, SW/4 SW/4, E/2 SW/4,
and SE/4
Section 34: N/2, SW/4, N/2 SE/4, and SW/4 SE/4
Section 35: NW/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 3: N/2 NW/4 and SW/4 NW/4
Section 4: N/2, N/2 S/2, and S/2 SW/4
Section 5: NE/4 NE/4, S/2 N/2, and S/2
Section 8: NW/4 and N/2 NE/4

(3) That approval of the proposed unit agreement should promote the prevention of waste and the protection of correlative rights within the unit area.

IT IS THEREFORE ORDERED:

(1) That the Vacuum Abo Unit Agreement is hereby approved.

(2) That the plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that in the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3509
Order No. R-3181

APPLICATION OF PHILLIPS PETROLEUM
COMPANY FOR A PRESSURE MAINTENANCE
PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1967, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of January, 1967, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Phillips Petroleum Company, seeks authority to institute a pressure maintenance project in its Vacuum Abo Unit Area, Vacuum-Abo Reef Pool, Lea County, New Mexico, by the injection of gas into the Abo Reef formation through the following wells in Lea County, New Mexico:

Shell Oil Company State "T" Well No. 6,
located 330 feet from the South line and
660 feet from the East line of Section 33,
Township 17 South, Range 35 East, NMPM, and

Standard of Texas Vac Edge Unit Well No. 11,
located 1650 feet from the North line and
1980 feet from the West line of Section 4,
Township 18 South; Range 35 East, NMPM.

(3) That initially the project area should comprise only the following-described area:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 33: SW/4 SW/4, E/2 SW/4, and SE/4
Section 34: SW/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 3: N/2 NW/4 and SW/4 NW/4
Section 4: N/2, N/2 S/2, and S/2 SW/4
Section 5: NE/4 NE/4, S/2 NE/4, and SE/4

(4) That a pressure maintenance project comprising the above-described area is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(5) That the applicant further seeks the promulgation of special rules and regulations governing said pressure maintenance project, and the establishment of an administrative procedure whereby said project may be expanded for good cause shown and whereby additional wells in the project area may be converted to gas injection.

(6) That special rules and regulations for the operation of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project in any proportion, provided that no well in the project area which directly or diagonally offsets a well outside the Vacuum Abo Unit Area producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the Vacuum-Abo Reef Pool until such time as the well has experienced a substantial response to gas injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the Vacuum-Abo Reef Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Petroleum Company, is hereby authorized to institute a pressure maintenance project in its Vacuum Abo Unit Area, Vacuum-Abo Reef Pool, Lea County, New Mexico,

to be designated as the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, by the injection of gas into the Abo Reef formation through the following-described wells in Lea County, New Mexico:

Shell Oil Company State "T" Well No. 6,
located 330 feet from the South line and
660 feet from the East line of Section 33,
Township 17 South, Range 35 East, NMPM, and

Standard of Texas Vac Edge Unit Well No. 11,
located 1650 feet from the North line and
1980 feet from the West line of Section 4,
Township 18 South, Range 35 East, NMPM.

(2) That Special Rules and Regulations governing the operation of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
PHILLIPS PETROLEUM COMPANY
VACUUM ABO PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area described as follows:

LEA COUNTY, NEW MEXICO

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 33: SW/4 SW/4, E/2 SW/4, and SE/4

Section 34: SW/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 3: N/2 NW/4 and SW/4 NW/4

Section 4: N/2, N/2 S/2, and S/2 SW/4

Section 5: NE/4 NE/4, S/2 NE/4, and SE/4

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables

for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3, which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on a 40-acre proration unit shall be top unit allowable for the Vacuum-Abo Reef Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the Vacuum-Abo Reef Pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the Vacuum-Abo Reef Pool, whichever is less, provided that any producing well in the project area which directly or diagonally offsets a well outside the Vacuum Abo Unit Area producing from the same common source of supply shall not produce in excess of top unit allowable for the pool until such time as the well receives a substantial response to gas injection. When such a response has occurred, the well shall be permitted to produce up to two times top unit allowable for the pool. Production of such well at a higher rate shall be authorized only after notice and hearing. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the Vacuum-Abo Reef Pool, except that any well or wells within

the project area producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected, if any, into the Vacuum-Abo Reef Pool within the project area to such high gas-oil ratio well. The daily adjusted oil allowable for any well receiving gas injection credit shall be determined in accordance with the following formula:

$$A_{adj} = \frac{TUA \times F_a \times 2,000}{\frac{P_g - I_g}{P_o}}$$

where:

- A_{adj} = the well's daily adjusted allowable
- TUA = top unit allowable for the pool
- F_a = the well's acreage factor
- P_g = average daily volume of gas produced by the well during the preceding month, cubic feet
- I_g = the well's allocated share of the daily average gas injected during the preceding month, cubic feet
- P_o = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio, $\frac{P_g - I_g}{P_o}$, to be less than 2,000 cubic feet of gas per barrel of oil produced.

RULE 8. Each month the project operator shall, within three days after the normal unit allowable for Southeast New Mexico has been established, submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total Project allowable. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well outside the Project producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 10. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection or gas will be confined to the Abo Reef formation.

(3) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

RULE 11. That the subject pressure maintenance project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with the rules prescribed by this order.

CASE No. 3509
Order No. R-3181

(3) That allowables to all wells in the Vacuum Abo Unit Area but outside the limits of the Vacuum Abo Pressure Maintenance Project Area as defined herein shall be assigned and produced in accordance with the applicable Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4194
Order No. R-3181-A

APPLICATION OF PHILLIPS PETROLEUM COMPANY
FOR AN AMENDMENT OF ORDER NO. R-3181 AND
DUAL COMPLETIONS, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of September, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That Order No. R-3181, dated January 18, 1967, authorized
the applicant, Phillips Petroleum Company, to institute a pressure
maintenance project in its Vacuum Abo Unit Area, Vacuum-Abo Reef
Pool, Lea County, New Mexico, through the following-described wells
in Lea County, New Mexico:

(a) Shell Oil Company State "T" Well No. 6 (now
Vacuum Abo Unit Tract 11 Well No. 6), located
in Unit P of Section 33, Township 17 South,
Range 35 East, NMPM.

(b) Standard of Texas Vac Edge Unit Well No. 11
(now Vacuum Abo Unit Tract 13 Well No. 11),
located in Unit F of Section 4, Township 18
South, Range 35 East, NMPM.

(3) That the applicant seeks amendment of said Order No. R-3181 to permit the injection of gas through two additional wells located in Unit L of Section 34, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, and Unit B of Section 4, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, and the expansion of said project area to include the SE/4 NE/4 of Section 33 and the NW/4, N/2 SE/4, and SW/4 SE/4 of Section 34, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

(4) That the applicant further seeks authority to dually complete the four above-described wells in such a manner as to permit the production of oil from the lower section of the Abo Reef through tubing and the injection of gas for pressure maintenance purposes into the upper section of the Abo Reef through the casing-tubing annulus, with separation of sections by packers.

(5) That the mechanics of the proposed dual completions are feasible and in accord with good conservation practices.

(6) That the injection of gas through two additional wells and the expansion of the project area as requested are in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(7) That amendment of Order No. R-3181 to permit approval of the two additional wells for gas injection, the dual completion of all gas injection wells, and expansion of the subject project area will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That Order (1) of Order No. R-3181 is hereby amended to read in its entirety as follows:

"(1) That the applicant, Phillips Petroleum Company, is hereby authorized to operate a pressure maintenance project in its Vacuum Abo Unit Area, Vacuum-Abo Reef Pool, Lea County, New Mexico, to be designated as the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, by the injection of gas into the Abo Reef formation through four wells to be completed in such a manner as to permit the production of oil from the lower section of the Abo Reef through tubing and the injection of gas into the

upper section of the Abo Reef through the casing-tubing annulus as follows:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Vacuum Abo Unit Tract 11 Well No. 6, located in Unit P of Section 33 - injection of gas in the perforated interval from 8310 feet to 8455 feet, production of oil from the perforated interval from 8746 feet to 8786 feet, with separation of sections by a packer set at 8500 feet;

Vacuum Abo Unit Tract 10 Well No. 6, located in Unit L of Section 34 - injection of gas in the perforated interval from 8430 feet to 8460 feet, production of oil from the perforated interval from 8751 feet to 8833 feet, with separation of sections by a packer set at 8500 feet;

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Vacuum Abo Unit Tract 13 Well No. 4, located in Unit B of Section 4 - injection of gas in the perforated interval from 8364 feet to 8400 feet, production of oil from the perforated interval from 8704 feet to 8762 feet, with separation of sections by a packer set at 8450 feet;

Vacuum Abo Unit Tract 13 Well No. 11, located in Unit F of Section 4 - injection of gas in the perforated interval from 8335 feet to 8490 feet, production of oil from the perforated interval from 8799 feet to 8857 feet, with separation of sections by a packer set at 8550 feet."

(2) That Rule 1 of the Special Rules and Regulations for the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project is hereby amended to read in its entirety as follows:

"RULE 1. The project area of the Phillips Petroleum Company Abo Pressure Maintenance Project, hereinafter referred to as the

CASE No. 4194
Order No. R-3181-A

Project, shall comprise the area described as follows:

LEA COUNTY, NEW MEXICO

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 33: SW/4 SW/4, E/2 SW/4, SE/4,
and SE/4 NE/4

Section 34: W/2, N/2 SE/4, and SW/4 SE/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 3: N/2 NW/4 and SW/4 NW/4

Section 4: N/2, N/2 S/2, and S/2 SW/4

Section 5: NE/4 NE/4, S/2 NE/4, and SE/4"

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/