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LAW OFFICES OF
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P. O. BOX 2168
ALBUQUERQUE, NEW MEXICO 87103

JOHN F. SIMMS (1885-1954)
AUGUSTUS T. SEYMOUR
(1907-1965)

TELEPHONE 243-4511
AREA CODE 505

September 14, 1972

Mr. George Hatch
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

JRF
Cons 4830 +
4831

Dear George:

Pursuant to telephone conversation this morning, you have agreed to make the following amendments to Mobil Oil Corporation's applications as follows:

1. Application for Authority to Institute a Pressure Maintenance Project in the North Vacuum Abo Pool, Lea County, New Mexico - The unit acreage should read 5,840 acres mentioned in paragraph 1 of the application, line 3, instead of 5,680 as previously amended.

2. Application for Approval of the North Vacuum Abo Unit Agreement in the North Vacuum Abo Pool, Lea County, New Mexico - In paragraph numbered 1, line 2, it should read 5,840 acres, rather than 5,680. Also, please add to the description under Township 17 South, Range 34 East, N.M.P.M., the following:

Section 2: S/2 SW/4
Section 11: N/2 NE/4

We appreciate your cooperation in this matter.

Best regards,

James E. Sperling
James E. Sperling

JES:jv

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AREA CODE 505

September 20, 1972



Mr. George Hatch
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Mobil Oil Corporation's Application for
Authority to Institute a Pressure Maintenance
Project in the North Vacuum Abo Pool, Lea
County, New Mexico

Dear George:

Enclosed, please find a revised plat marked Exhibit "A"
which I would appreciate your substituting for the
previous Exhibit "A" which was submitted with the above-
captioned application.

Thank you.

Best regards,



James E. Sperling

JES:jv

Enclosure

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF MOBIL OIL CORPORATION FOR
AUTHORITY TO INSTITUTE A PRESSURE
MAINTENANCE PROJECT IN THE NORTH
VACUUM ABO POOL, LEA COUNTY, NEW
MEXICO

Case No. 4831

A P P L I C A T I O N

1. Mobil Oil Corporation hereby makes application for authority to inject fluids into the North Vacuum Abo Formation underlying the North Vacuum Abo Unit area containing 4,680 acres in Lea County, New Mexico. Attached to this Application as Exhibit "A" is a plat showing the location of the proposed injection wells and the location of all other wells within a radius of two miles from said proposed injection wells and the formation from which said wells are producing. The plat also indicates the lessees within said two mile radius.

2. Attached hereto as Exhibit "B" is the log of Applicant's Bridges State Well No. 171, which is a typical log of the wells in the area.

3. A diagrammatical sketch of the proposed injection wells showing pertinent information required by Rule 701 will be furnished to the Commission at the time of hearing.

4. Attached hereto as Exhibit "C" is pertinent information indicating the name and depth of the zone into which it is proposed to make injection and the kind of fluid and/or gas proposed to be injected into the Abo Formation and the anticipated volumes and source of proposed injection substances.

5. As indicated on Exhibit "A", it is proposed to inject the substances indicated on Exhibit "C" into the North Vacuum Abo Formation through 34 injection wells located in

Sections 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26 and 27, in Township 17 South, Range 34 East, N.M.P.M., Lea County, New Mexico.

6. Applicant seeks establishment of an administrative procedure whereby the Commission may authorize the completion of a second producing well on 80-acre proration units at unorthodox locations within the unit providing such wells are located no closer than 1780 feet to the outer boundary of the unit, nor closer than 10 feet to any quarter-quarter section subdivision inner boundary.

7. Applicant requests that an allowable formula be fixed by the Commission to provide for the maximum daily allowable for the unit not to exceed the total number of 80-acre proration units within the project area times the daily top unit allowable set for the North Vacuum Abo Pool with such unit allowable to be produced from any well or wells in the unit area in any proportion.

8. The Applicant requests that the project area be established as the total area within the North Vacuum Abo unit with provision that the project area may be expanded administratively upon request and the furnishing of satisfactory showing or justification in compliance with such conditions as the Commission may require.

9. That the granting of this Application will protect correlative rights and will result in the prevention of waste and will permit the recovery of otherwise unrecoverable hydrocarbon substances.


WHEREFORE, Applicant prays that this matter be set for hearing at the Examiner Hearing to be held September 27,

1972, and that following hearing the Commission issue its Order authorizing the injection of the substances at the locations as hereinabove set forth and further granting the requests as hereinabove set forth.

Respectfully submitted,

MOBIL OIL CORPORATION

By: MODRALL SPERLING ROEHL HARRIS & SISK

By: 
James E. Sperling, its attorneys
Post Office Box 2168
Albuquerque, New Mexico 87103

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF MOBIL OIL
CORPORATION FOR A PRESSURE
MAINTENANCE PROJECT, LEA
COUNTY, NEW MEXICO.

CASE NO. 4831
Order No. R-4430-A

NUNC PRO TUNC

BY THE COMMISSION:

It appearing to the Commission that due to clerical error Order No. R-4430, dated October 27, 197~~2~~¹, does not correctly state the intended order of the Commission,

IT IS THEREFORE ORDERED:

(1) That Rule 10 on Page 6 of Order No. R-4430 should read in its entirety as follows:

" RULE 10. The Secretary-Director of the Commission is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the North Vacuum-Abo Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than **460** feet to the outer boundary of said unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. 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 production or injection wells shall include the following:"

(2) That this order shall be effective nunc pro tunc as of October 27, 197~~2~~¹.

DONE at Santa Fe, New Mexico, this _____ day of November, 1973.

GMH/dr

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. 4831

Order No. R- 4430

APPLICATION OF MOBIL OIL
CORPORATION 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 September 27, 1972,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this day of October, 1972, 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, Mobil Oil Corporation, seeks
authority to institute a pressure maintenance project in the North
Vacuum-Abo Pool ~~on~~ its North Vacuum - Abo Unit Area Lease,
gas and water
Lea County, New Mexico, by the injection of water into the
Abo
formation through 34 wells located in
Sections 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, and 27,
Township 17 South, Ranges 34 and 35 East, NMPM, Lea County, New
Mexico.

~~(3) That the applicant further seeks the following:~~

(3) That the applicant further seeks the designation of the project area and the promulgation of special rules and regula-

tions governing said project. *including a provision for administrative approval for well locations for injection wells and producing wells.*

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

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 East, NMPM

Sec. 2: SW/4 Sec. 26: All
Sec. 3: SE/4 Sec. 27: E/2
Sec. 10: E/2
Sec. 11: S/2
Sec. 12: NE/4 and S/2
Sec. 13: N/2 and SW/4
Sec. 14: All
Sec. 15: E/2
Sec. 22: E/2
Secs. 23 and 24: All

Sec. 25: NW/4 and N/2 NE/4
TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Sec. 19: W/2 NW/4

(5) That a pressure maintenance project, designated the Mobil North Vacuum Abo 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.

(6) That an administrative procedure should be established whereby said project area may be expanded for good cause shown and whereby additional ~~wells~~ *injection wells and producing wells at other* in the project area may be converted ~~to water injection.~~ *approved without the necessity of*

notice and hearing.

at well locations

-3-

Case No. 4831

Order No. R-4430

North Vacuum-Abo Pool in its North Vacuum-Abo Unit Area, Lea County, New Mexico, to be designated the Mobil North Vacuum Abo Pressure Maintenance Project, by the injection of gas and water into the Abo formation, through the following-described wells:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM

<u>OPERATOR</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>SECTION</u>	<u>LOCATION</u>
Mobil	Bridges State	172	3	P
Mobil	" "	166	10	H
Shell	State "VH"	1	10	P
Mobil	Bridges State	130 (a dual completion)	15	H
Mobil	" "	144	15	P
Mobil	State "J"	9	22	H
Shell	Location	to be drilled	22	P
Mobil	Bridges State	157	27	H
Mobil	" "	145	27	P
Mobil	" "	148	11	N
Mobil	" "	173	14	F
Mobil	" "	171	14	N
Mobil	" "	151 (a dual completion)	23	F
Mobil	State "KK"	1	23	N
Mobil	Bridges State	118	26	F
Mobil	" "	153	26	N
Mobil	" "	140	11	P
Mobil	" "	125 (a dual completion)	14	H
Mobil	" "	124 (a dual completion)	14	P
Mobil	" "	128	23	H
Mobil	" "	117 (a dual completion)	23	P
Mobil	" "	96	26	H
Mobil	" "	95 (a dual completion)	26	P
Mobil	" "	150	12	N
Mobil	" "	147 (a dual completion)	13	F
Mobil	" "	120 (a dual completion)	13	N
Mobil	" "	119 (a triple completion)	24	F
Mobil	" "	109 (a triple completion)	24	N
Mobil	" "	108 (a triple completion)	25	F
Mobil	" "	161	12	H
Mobil	" "	159	12	P
Mobil	" "	169	13	H
Pennzoil	Mobil State	1	24	H
Shell	State "C"	2	24	P

-4-

Case No. 4831
Order No. R-4430

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

SPECIAL RULES AND REGULATIONS
FOR THE
MOBIL NORTH VACUUM-ABO PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Mobil North 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 34 EAST, NMPM
Section 2: SW/4
Section 3: SE/4
Section 10: E/2
Section 11: S/2
Section 12: NE/4 and S/2
Section 13: N/2 and SW/4
Section 14: All
Section 15: E/2
Section 22: E/2
Sections 23 and 24: All
Section 25: NW/4 and N/2 NE/4
Section 26: All
Section 27: E/2

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 19: W/2 NW/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,

-4-

Case No. 4831

Order No. R-

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

~~(2) That the aforesaid water injection well shall be equipped with 2 3/8-inch tubing set in a packer, said packer being set at approximately _____ feet. Further, that the casing tubing annulus shall be filled with an inert fluid and the annulus equipped with a pressure gauge to facilitate detection of leakage in the tubing or packer.~~

✓
(3) That Special Rules and Regulations governing the operation of the Mobil North Vacuum-Abo Pressure Maintenance Project, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
MOBIL NORTH VACUUM-ABO PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Mobil North 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 34 EAST, NMPM

Sec. 2: SW¹/₄
Sec. 3: SE¹/₄
Sec. 10: E¹/₂
Sec. 11: S¹/₂
Sec. 12: NE¹/₄ and S¹/₂
Sec. 13: N¹/₂ and SW¹/₄
Sec. 14: All
Sec. 15: E¹/₂
Sec. 22: E¹/₂
Secs. 23 and 24: All
~~Sec. 24~~
Sec. 25: NW¹/₄ and N¹/₂ NE¹/₄
Sec. 26: All
Sec. 27: E¹/₂

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Sec. 19: W/2 NW/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 ⁸⁰~~40~~-acre proration unit shall be top unit allowable for the North Vacuum-Abo 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 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 basic 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 pool, whichever is less. Wells capable of producing more than top unit allowable may also receive transfer allowable, provided however, that no producing well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply shall receive an allowable or produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the pool. *Each month*

RULE 8. ~~Each month~~ *Every hour* 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 *based upon the pool's depth bracket allowable and the market demand* project allowable. The aforesaid Pressure Maintenance Project

percentage factor in effect.

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 ~~the~~ succeeding month¹ 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 on another lease 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~~ ^{production or} 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 of gas or water will be confined to the~~ 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 of the Commission is hereby authorized to approve such additional producing wells as injection wells at existing and unexisting locations within the boundaries of the project with vacuum - also unit area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 175 feet to the outer boundary of the said unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

-8-

Case No. 4831

Order No. R-

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.

(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.

-5- *Regist. & file*

feasible to conduct a salvage fluid injection operation in the Upper Penn and Middle Penn reservoirs.

In summary, Mobil Oil Corporation respectfully asks the Commission for the following:

1. Approval of the North Vacuum Unit Agreement.
2. Approval of the plan of operation to inject fluids into the Abo formation through the 34 wells described in Exhibit No. 11.
3. An allowable formula to be fixed by the Commission to provide for a maximum daily unit allowable not to exceed the number of 80-acre proration units times the daily top unit allowable set for wells in the North Vacuum Abo Pool. Such unit allowable may be produced from any well or wells on the project area in any proportion.
4. Establishment of an administrative procedure whereby the Commission may authorize the completion of a second producing well on the 80-acre proration units at unorthodox locations within said Unit, providing such wells are located no closer than 1,780 feet from the outer unit boundary nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. In explanation of this, the 80-acre spacing and the large pattern areas (160 acres) coupled with the low permeability of the reservoir and its effect on project response may make it necessary to infill drill the producers in certain areas of the project.
5. That the project area be fixed as the total area within the boundaries of the said North Vacuum Abo Unit as described in this application,

Requist Data

with further provisions that the project area may be expanded
administratively by the Commission upon satisfactory meeting conditions
set forth by the Commission.

A. J. Hankinson
Project Coordinator

AJH/eg
9/14/72