



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

ADMINISTRATIVE ORDER NO. WFX-743

**APPLICATION OF MARBOB ENERGY CORPORATION TO EXPAND ITS  
WATERFLOOD PROJECT IN THE GRAYBURG JACKSON POOL IN EDDY  
COUNTY, NEW MEXICO.**

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-7900 as amended, Marbob Energy Corporation has made application to the Division on October 14, 1998 for permission to expand its Burch Keely Unit Waterflood Project in the Grayburg Jackson Pool in Eddy County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Marbob Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 4128 feet to approximately 4652 feet through 2 3/8-inch plastic or fiberglass lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described wells for purposes of secondary recovery to wit:

**Burch Keely Unit Well No.104**

API No.30-015-04210  
330' FSL & 1650' FWL – Unit 'N', Section 19  
Injection Interval: 2940 feet to 3440 feet  
Packer Setting: 2930 feet  
Maximum Injection Pressure: 588 psig

**Burch Keely Unit Well No.142**

API No.30-015-04388  
660' FNL & 660' FWL – Unit 'D', Section 30  
Injection Interval: 3110 feet to 3500 feet  
Packer Setting: 3100 feet  
Maximum Injection Pressure: 622 psig

**Burch Keely Unit Well No.146**

API No.30-015-04394  
660' FNL & 1980' FEL – Unit 'B', Section 30  
Injection Interval: 2975 feet to 3445 feet  
Packer Setting: 2925 feet  
Maximum Injection Pressure: 595 psig

All in Township 17 South, Range 30 East, Eddy County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

Prior to commencing injection operations into wells number 104 and 146, the operator shall run 5 ½ inch casing cemented with 250 sacks in both. The approximate injection intervals indicated above shall then be selectively perforated.

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no greater than .2 psi per foot of depth to the uppermost injection perforations or casing shoe.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg or San Andres formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

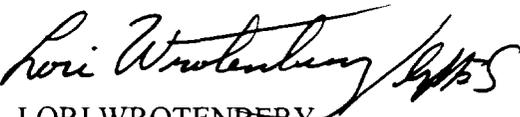
The subject wells shall be governed by all provisions of Division Order No. R-7900 as amended, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 29th day of October, 1998.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director

S E A L

LW/BES/kv

cc: Oil Conservation Division - Artesia  
Case File No.8418

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 8418  
Order No. R-7900

APPLICATION OF PHILLIPS OIL COMPANY  
FOR A WATERFLOOD PROJECT, EDDY  
COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on November 28, 1984, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 25th day of April, 1985, 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, Phillips Oil Company, seeks authority to institute a cooperative waterflood project in the Grayburg-Jackson Pool by the injection of water into the Grayburg and San Andres formations through selected perforated intervals from approximately 2300 feet to 3500 feet in 23 existing wells, as described in Exhibit "A" attached hereto and made a part hereof, all located on the applicant's Keely "A" Federal, Keely "B" Federal, Keely "C" Federal, Burch "BB" Federal, Burch "C" Federal, and Dexter Federal Leases in Sections 23, 24, 25, and 26, Township 17 South, Range 29 East, NMPM, and Sections 19 and 30, Township 17 South, Range 30 East, NMPM, in Eddy County, New Mexico.

(3) The wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) The proposed cooperative waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(6) There are two temporarily abandoned wells within the area of the proposed waterflood project that may require remedial work prior to the commencement of injection operations in a portion of the project area, those wells being the Phillips Petroleum Company Grayburg Deep Unit Wells Nos. 4 and 6 located 1946 feet from the South line and 662 feet from the West line (Unit L) and 330 feet from the North line and 1980 feet from the West line (Unit C), respectively, both in Section 30, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(7) The injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi, per foot of depth to the top of the uppermost perforation, but the Division Director should have authority to increase said pressure limitation, should circumstances warrant.

(8) The subject application should be approved and the cooperative project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Phillips Oil Company, is hereby authorized to institute a cooperative waterflood project on its Keely "A" Federal, Keely "B" Federal, Keely "C" Federal, Burch "B" Federal, Burch "BB" Federal, Burch "C" Federal and Dexter Federal Leases, Grayburg-Jackson Pool, by the injection of water into the Grayburg and San Andres formations through 23 existing wells, as described in Exhibit "A" attached hereto and made a part hereof, in Eddy County, New Mexico.

(2) Injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the uppermost perforation; the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

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Order No. R-7900

(3) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(4) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforation of each well, provided however, the Division Director may authorize a higher surface injection pressure upon application and satisfactory showing that such pressure will not result in fracturing of the confining strata.

(5) The subject cooperative waterflood project is hereby designated the Phillips Burch-Keely Cooperative Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(6) Monthly progress reports of the cooperative waterflood project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(7) Injection into the following described three injection wells shall not commence until the Phillips Oil Company Grayburg Deep Unit Wells Nos. 4 and 6 located 1946 feet from the South line and 662 feet from the West line (Unit L) and 330 feet from the North line and 1980 feet from the the West line (Unit C), respectively, both in Section 30, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico, have been completed in such a manner as to ensure that they do not provide an avenue of escape for the injected fluids from the proposed zone of interest and that is satisfactory to the supervisor of the Division's district office at Artesia:

| <u>WELL NAME<br/>AND NO.</u>   | <u>FOOTAGE<br/>LOCATION (UNIT)</u> | <u>SECTION-TOWNSHIP<br/>RANGE</u> |
|--------------------------------|------------------------------------|-----------------------------------|
| Burch "BB" Fed.<br>Well No. 6  | 660' FS & WL (M)                   | 19-17S-30E                        |
| Keely "C" Fed.<br>Well No. 20  | 1980' FSL -660'FEL<br>(T)          | 25-17S-30E                        |
| Burch "BE" Fed.<br>Well No. 10 | 660' FNL-1980'FWL<br>(C)           | 19-17S-30E                        |

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(8) 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

*R. L. Stamets*  
R. L. STAMETS,  
Director

EXHIBIT "A"  
ORDER NO. R-7900

| <u>WELL NAME AND NO.</u>          | <u>FOOTAGE LOCATION (UNIT)</u> | <u>SECTION<br/>TOWNSHIP, RANGE</u> |
|-----------------------------------|--------------------------------|------------------------------------|
| Burch "BB" Fed.<br>Well No. 6     | 660' FS & WL (M)               | 19-17S-30E                         |
| Burch "BB" Fed.<br>Well No. 10    | 660' FNL-1980' FWL (C)         | 30-17S-30E                         |
| Burch "BB" Federal<br>Well No. 19 | 660'FN & FEL (A)               | 23-17S-29E                         |
| Burch "C" Federal<br>Well No. 17  | 660' FNL-1980'FWL (C)          | 23-17S-29E                         |
| Keely "A" Federal<br>Well No. 5   | 2310'FSL-330'FEL (I)           | 24-17S-29E                         |
| Keely "A" Federal<br>Well No. 7   | 1980'FS & WL (K)               | 24-17S-29E                         |
| Keely "A" Federal<br>Well No. 9   | 1980'FNL -660'FWL (E)          | 24-17S-29E                         |
| Keely "A" Federal<br>Well No. 15  | 1650'FNL -2310' FEL (G)        | 24-17S-29E                         |
| Keely "B" Federal<br>Well No. 6   | 660'FNL - 1980' FWL (C)        | 25-17S-29E                         |
| Keely "B" Federal<br>Well No. 7   | 1980' FN & FEL (G)             | 26-17S-29E                         |
| Keely "B" Federal<br>Well No. 10  | 1980' FSL - 660'FEL (I)        | 26-17S-29E                         |
| Keely "B" Federal<br>Well No. 11  | 660' FSL-1980' FEL (O)         | 26-17S-29E                         |
| Keely "B" Federal<br>Well No. 24  | 660' FSL - 560' FWL (M)        | 24-17S-29E                         |
| Keely "C" Federal<br>Well No. 5   | 660' FSL - 1980' FEL (O)       | 24-17S-29E                         |

EXHIBIT "A"  
Case No. 3428  
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|                                  |                      |     |            |
|----------------------------------|----------------------|-----|------------|
| Keely "C" Federal<br>Well No. 8  | 660' FN & FEL        | (A) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 10 | 1980' FNL - 660'FWL  | (E) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 12 | 1980'FN & FEL        | (G) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 16 | 1980'FS & FWL        | (K) | 26-17S-29E |
| Keely "C" Federal<br>Well No. 18 | 1980'FS & FWL        | (K) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 20 | 1980' FSL - 660' FEL | (I) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 21 | 660' FS & FWL        | (M) | 26-17S-29E |
| Keely "C" Federal<br>Well No. 23 | 660' FS & FWL        | (M) | 25-17S-29E |
| Keely "C" Federal<br>Well No. 25 | 660' FSL - 1980' FEL | (O) | 25-17S-29E |