

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. 10347
ORDER NO. R-9556*

**APPLICATION OF WARRIOR, INC. FOR A
WATERFLOOD PROJECT, LEA COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 25, 1991 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 7th day of August, 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.
- (2) The applicant, Warrior, Inc., seeks authority to institute a one well waterflood pilot project on a portion of its Federal "D" Lease underlying the W/2 of Section 26 and the NE/4 of Section 27, Township 20 South, Range 36 East, NMPM, Lea County, New Mexico, by the injection of produced water into the Upper Queen interval of the Eumont Oil Pool through the perforated interval from approximately 3804 feet to 3964 feet in its Federal "D" Well No. 2 located 1980 feet from the North line and 660 feet from the West line (Unit E) of said Section 26.
- (3) The wells in the proposed project area are in an advanced state of depletion and should therefore be properly classified as "stripper wells."

(4) At the hearing, the applicant demonstrated that an incremental secondary recovery of oil of 418 MSTBU could be obtained by institution of the proposed pilot waterflood project, resulting in the recovery of additional oil which would not otherwise be recovered, and the waste of oil would thereby be prevented.

(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 into other formations or onto the surface from injection, production or plugged and abandoned wells.

(6) Injection should be accomplished through 2 7/8-inch internally cement-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforated interval; the casing-tubing annulus should be filled with an inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leaks in the casing, tubing or packer.

(7) Prior to commencing injection operations, the casing of the subject well should be pressure-tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(8) The injection well or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 750 psi.

(9) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Queen formation.

(10) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(11) The subject application should be approved and the project should be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Warrior, Inc., is hereby authorized to institute a one well waterflood pilot project on a portion of its Federal "D" Lease, underlying the following described lands, by the injection of produced water into the Upper Queen interval of the Eumont Oil Pool through its existing Federal "D" Well No. 2 located 1980 feet from the North line and 660 feet from the West line (Unit E) of Section 26, Township 20 South, Range 36 East, NMPM, Lea County, New Mexico:

FEDERAL "D" LEASE PILOT WATERFLOOD PROJECT AREA
LEA COUNTY, NEW MEXICO

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM.

Section 26: W/2
Section 27: NE/4

(2) Injection into said well shall be accomplished through 2 7/8-inch internally cement-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforated interval, with injection into the perforated interval from approximately 3804 feet to 3964 feet;

PROVIDED HOWEVER THAT, the casing-tubing annulus shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

PROVIDED FURTHER THAT, prior to commencing injection operations, the casing in the subject well shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(3) The injection well or system shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 750 psi.

(4) 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 Queen formation.

(5) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(6) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

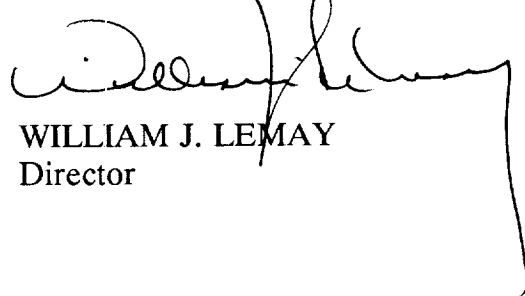
(7) The subject waterflood project is hereby designated the Eumont Federal "D" Lease Pilot Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

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

(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

S E A L