

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. 10288  
Order No. R-9500

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

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 18, 1991, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 6th day of May, 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, Phillips Petroleum Company (Phillips), seeks authority to institute a pressure maintenance project on its James "A" State Lease underlying Lots 1 through 4, S/2 N/2, N/2 SW/4, SE/4 SW/4 and SE/4 of Section 2, Township 22 South, Range 30 East, NMPM, Eddy County, New Mexico, by the injection of water into the Cabin Lake-Delaware Pool, through a perforated interval from approximately 5600 feet to 7400 feet in a well to be drilled 1250 feet from the South line and 1150 feet from the East line (Unit P) of said Section 2. Applicant further seeks a special oil producing allowable whereby any well in the project area could produce its ability and would not be subject to the depth bracket allowable for said pool.

(3) Phillips is the current operator of the James "A" State Lease. It contains approximately 600 acres and is developed with 10 Delaware oil producing wells. Development began in 1986. Reservoir pressure has not reached the advanced or "stripper" stage of depletion.

Case No. 10288  
Order No. R-9500  
Page 2

(4) Phillips is requesting pressure maintenance status for the entire lease. Initially they plan a pilot project in the SE/4 of Section 2 using an inverted 40-acre five-spot pattern with a single injection well at the location set out in Finding No. (2) above. They are requesting approval to expand the project administratively.

(5) The proposed injection well would be used to inject up to 2000 barrels of water per day into the oil productive portions of the Cherry Canyon and Brushy Canyon intervals of the Delaware formation from approximately 5600 feet to 7400 feet. An average injection pressure of 500 psi is expected. Maximum injection pressure of 0.2 psi per foot (1120 psi) is being requested. Form C-108 submitted by Phillips indicates that all OCD requirements would be met.

(6) Produced water from Phillips' producing leases in the area would be the initial source of injection water.

(7) To maintain reservoir pressure, approximately 1.2 barrels of water would be injected for each barrel of fluid withdrawn from the reservoirs.

(8) Phillips' witness testified that the pilot project is expected to recover 124,000 barrels more oil than would be recovered by primary depletion.

(9) At the hearing, a project allowable for the pilot area equal to top allowable for the four wells to be affected (Wells Nos. 2, 5, 6 and 7) was requested.

(10) The project should be approved and should be designated the James "A" State Pressure Maintenance Project.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Phillips Petroleum Company, is hereby authorized to institute a pressure maintenance project on its James "A" State Lease, underlying Lots 1 through 4, S/2 N/2, N/2 SW/4, SE/4 SW/4 and the SE/4 of Section 2, Township 22 South, Range 30 East, NMPM, Eddy County, New Mexico, by the injection of water into the Delaware formation, Cabin Lake-Delaware Pool, through a perforated interval from approximately 5600 feet to 7400 feet in a well to be drilled 1250 feet from the South line and 1150 feet from the East line (Unit P) of said Section 2.

(2) The project is hereby designated the James "A" State Pressure Maintenance Project.

(3) The project allowable for the pilot project in the SE/4 of Section 2 shall be 4 x 10<sup>7</sup> or 428 barrels per day which is equal to top allowable for the four producing wells (Nos. 2, 5, 6 and 7) and may be produced by any well or combination of wells within the pilot project area.

(4) As the project is expanded, administrative approval for additional allowable may be granted by the Division Director upon receipt of an application explaining the reasons additional allowable should be assigned. Notice of an application to increase allowable shall be provided to each leasehold operator within one-half mile of the project.

(5) 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.

(6) Injection into the proposed injection well shall be accomplished through 2 7/8-inch internally plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(7) The injection well or system shall be equipped to limit the surface injection pressure to no more than 1120 psi.

(8) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in migration of waters from the Cabin-Lake Delaware Pool.

(9) Prior to commencing injection operations into the injection well, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of the casing.

(10) The operator shall give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure test, and of any injection well remedial work so that these operations may be witnessed.

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

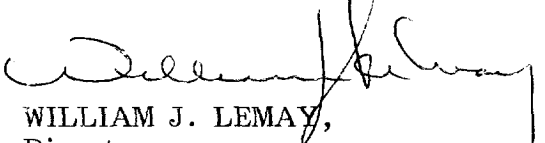
Case No. 10288  
Order No. R-9500  
Page 4

(12) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 and 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(13) 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

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