

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. 9260
Order No. R-8572

APPLICATION OF SOHIO PETROLEUM
COMPANY (STANDARD OIL PRODUCTION
COMPANY) 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 November 18, 1987, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 18th day of December, 1987, 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, Sohio Petroleum Company (Standard Oil Production Company), seeks authority to institute a waterflood project by the injection of water into the San Andres formation through five certain wells as shown on Exhibit "A" attached to this order, on its Phillips Lea State Lease underlying a portion of Section 31, Township 17 South, Range 34 East, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico.

(3) The applicant proposed that the project area be comprised of the following described acreage, that being its Phillips Lea State Lease in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 31: SW/4, W/2 SE/4, E/2 NW/4,
and SW/4 NE/4

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

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

(6) The operator should otherwise 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.

(7) At the time of the hearing, the applicant requested that it be allowed to inject into the proposed injection wells at a pressure greater than 0.2 psi per foot of depth from the surface to the uppermost perforation.

(8) Prior to approval of the proposed injection pressure, the applicant should be required to conduct step rate tests on the proposed injection wells to assure said pressure will not result in the fracturing of the injection formation or confining strata.

(9) The injection wells or injection pressurization system should initially be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation in any injection well, but the Division Director should have authority to increase said pressure limitation upon a proper showing that said pressure increase would not result in the fracturing of the injection formation or confining strata.

(10) Prior to initiating injection into any proposed injection well which is located within one-half mile of the Malco Phillips State Well No. 1 located 330 feet from the North line and 1980 feet from the East line of Section 6, Township 18 South, Range 34 East, NMPM, the applicant should be required to re-enter and plug said well in a manner satisfactory to the supervisor of the Division's Hobbs district office which will ensure that said wellbore will not serve as a conduit for migration of injected fluid.

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

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Sohio Petroleum Company (Standard Oil Production Company), is hereby authorized to institute a waterflood project on its Phillips Lea State Lease, Vacuum Grayburg-San Andres Pool, by the injection of water into the San Andres formation through five initial injection wells described on Exhibit "A" attached to this order.

(2) The project area shall be comprised of the following described acreage in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 31: SW/4, W/2 SE/4, E/2 NW/4,
and SW/4 NE/4

(3) 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 from the surface to the top injection perforation, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such higher pressure will not result in fracturing of the injection formation or confining strata.

(4) Injection into each injection well shall be through plastic- or cement-lined tubing, set in a packer which shall be located as near as practicable to the uppermost perforations; the casing-tubing annulus shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak-detection device.

(5) Prior to commencing injection operations into any of the wells shown on Exhibit "A", the applicant shall pressure-test the casing in the subject wells from the surface to the packer-setting depth to assure the integrity of said casing.

(6) Prior to commencing injection operations into any of the wells shown on Exhibit "A" which are located within one-half mile of the Malco Phillips State Well No. 1 located 330 feet from the North line and 1980 feet from the East line of Section 6, Township 18 South, Range 34 East, NMPM, the applicant shall be required to re-enter and plug said well in a manner which will ensure that said wellbore will not serve as a conduit for migration of injected fluid or in a manner satisfactory to the supervisor of the Division's Hobbs district office.

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(7) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, mechanical integrity tests, and of any workover operations on the Malco Phillips State Well No. 1, in order that said operations may be witnessed.

(8) The applicant shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing or packer in any of the 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.

(9) The authorized subject waterflood is hereby designated the Phillips Lea State Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(10) Monthly progress reports of the waterflood project herein authorized shall be submitted to the Division in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(11) 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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(7) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, mechanical integrity tests, and of any workover operations on the Malco Phillips State Well No. 1, in order that said operations may be witnessed.

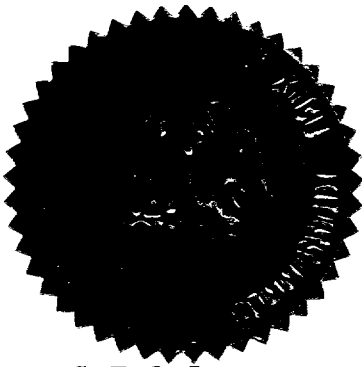
(8) The applicant shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well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

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



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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

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EXHIBIT "A"
CASE NO. 9260
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INJECTION WELLS

<u>WELL NAME & NUMBER</u>	<u>WELL LOCATION</u> (All in Section 31, Township 17 South, Range 34 East, NMPM)
Phillips Lea State No. 5	2310 FSL & 990 FWL (Unit L)
Phillips Lea State No. 7	990 FNL & 1980 FWL (Unit C)
Phillips Lea State No. 8	990 FSL & 1650 FWL (Unit N)
Phillips Lea State No. 9	1565 FNL & 1350 FEL (Unit G)
Phillips Lea State No. 10	1150 FSL & 1350 FEL (Unit O)