

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 9337  
Order No. R-8645

THE APPLICATION OF MOBIL PRODUCING  
TEXAS AND NEW MEXICO, INC. FOR SALT  
WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on April 21, 1988, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 5th day of May, 1988, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) Applicant, Mobil Producing Texas & New Mexico, Inc., seeks authority to inject produced water from the Vacuum Abo Unit area into the Siluro-Devonian formation between the depths of 11,950 feet to 13,708 feet through its State "Section 27" Well No. 2 located 1980 feet from the North line and 660 feet from the East line of Section 27, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) Water is proposed to be injected below the producing interval of the South Vacuum Devonian Oil Pool into the open hole interval through 4 1/2-inch plastic-lined tubing below a packer set at 11,950 feet in 7-inch casing set at 11,950 feet and cemented to a point 50 feet above setting depth of 9 5/8-inch intermediate casing which in turn is cemented 42 feet above the setting depth of 13 3/8-inch surface casing at 422 feet, cemented to surface. The annular space between

casing and tubing above the packer will be filled with an inert fluid.

(4) Injection volumes are anticipated to be 10,000 barrels of water per day which will be treated so as to prevent precipitation of solids by the mixing of waters produced from Grayburg, San Andres, Glorieta, Abo and Upper- and Middle- Pennsylvanian formations, at a pressure not to exceed 2,375 psig. at the surface.

(5) Snyder Ranches Inc. (Snyder) appeared in opposition to the application on the grounds that such injection will encroach on land owned by Snyder located in the NW/4 NW/4 of Section 26, which is less than one-quarter mile from the proposed injection well; and on the further grounds that fresh water resources in the Ogalalla formation and the surface on lands owned or leased by Snyder will be endangered by the disposal operation.

(6) The injection zone in the proposed injection well is separated from the lands owned by Snyder by a sealing fault so that water will not encroach on protestant's lands and further the injection interval is separated vertically from the fresh water interval by approximately 11,500 feet which in the well is protected by cemented casing which in turn is protected by tubing and packer, preventing upward movement of the water in the well.

(7) Mobil presented two structure maps showing a major Northwest-Southeast trending fault with an upthrown Southwest block which block may include 0 to 1 acre of the NW/4 NW/4, Section 26, Township 18 South, Range 35 East.

(8) There was no evidence to support a conclusion that Snyder Ranch surface would be damaged by granting approval of Mobil's application to inject produced waters and there was no evidence to support a conclusion that underground encroachment will occur.

(9) The use of the disposal well compared to the alternative surface disposal is more economical and thus prevents waste.

(10) An expert witness testified that pressure would increase across the fault as a result of injection in the proposed disposal well, but did not present evidence that such increase would occur on protestant's property.

(11) Injection of produced water underground through mechanically sound injection wells in such a manner that fresh

water resources and oil and gas accumulations are not adversely affected has proven to be safe and acceptable.

(12) Prudent disposal of the produced water will prolong the producing life of oil and gas wells, prevent waste be caused by premature abandonment of oil and gas wells, and prevent harm to either underground sources of fresh water or surface.

(13) The application for authority to inject produced water as proposed should be approved.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Mobil Producing Texas and New Mexico, Inc. is hereby authorized to inject water produced in the North Vacuum Abo Unit Area from the Grayburg, San Andres, Glorieta, Abo, Upper Pennsylvanian and Middle Pennsylvanian formations into the Siluro-Devonian formation in the South Vacuum Devonian pool area through applicant's State Section 27 Well No. 2 located 1980 feet from the North line and 660 feet from the East line, (Unit H), Section 27, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico.

(2) Water shall be injected into the open-hole interval 11,950 to 13,708 feet through 4 1/2-inch plastic-lined tubing set on a packer placed within 25 feet above the 7-inch casing shoe at 11,950 feet; the casing-tubing annulus above the packer shall be filled with an inert fluid and equipped with a pressure-gauge or other approved leak-detection device in order to determine leakage in the casing, tubing and/or packer.

PROVIDED HOWEVER 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 district office at Hobbs.

(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 2375 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 Siluro-Devonian formation.

-4-

Case No. 9337  
Order No. R-8645

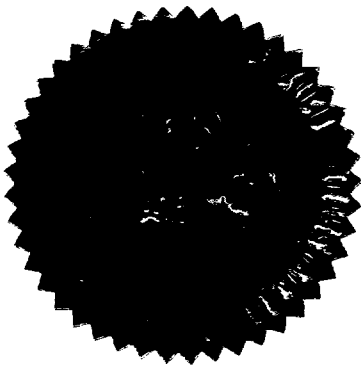
(5) The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(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 immediate steps as may be necessary to correct such failure or leakage.

(7) The applicant shall conduct disposal operations and submit monthly reports in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division Rules and Regulations.

(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.



S E A L

dr/

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

WILLIAM R. HUMPHRIES, Member

ERLING A. BROSTUEN, Member

WILLIAM J. LEMAY, Chairman and  
Secretary