

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. 10794  
Order No. R-9961

APPLICATION OF YATES PETROLEUM  
CORPORATION FOR APPROVAL OF 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 August 12, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 10th day of September, 1993, 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) Division Case Nos. 10794 and 10763 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Yates Petroleum Corporation, seeks authority to institute a waterflood project in its Sanmal Queen Unit, Sanmal-Queen Pool, by the injection of water into the Queen formation through the gross perforated interval from approximately 3,762 feet to 3,782 feet in the following described wells located in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico:

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WELL NAME & NUMBER

WELL LOCATION

Billy "AES" St. No. 2	530' FNL & 1750' FWL (Unit C) Section 12
Hoover "ADR" St. No. 2	990' FSL & 2310' FEL (Unit O) Section 1

(4) The applicant further seeks authority to reclassify its Hoover "ADR" State Well No. 1, located 1650 feet from the South line and 990 feet from the East line (Unit I) of Section 1, Township 17 South, Range 33 East, NMPM, from a salt water disposal well to an injection well within the proposed Sanmal Queen Unit Waterflood Project.

(5) The Hoover "ADR" State Well No. 1 was approved as a salt water disposal well by Division Order No. SWD-402 dated October 3, 1990. The well is currently authorized to inject water into the Queen formation through the perforated interval from 3,767 feet to 3,774 feet.

(6) The applicant further seeks to establish an administrative procedure whereby additional wells may be approved for injection and/or production within the Sanmal Queen Unit without the necessity for further hearings.

(7) Such provisions and procedures are currently contained within the Oil Conservation Division Rules and Regulations and it is unnecessary to duplicate such provisions within this order.

(8) The applicant's Sanmal Queen Unit currently comprises the following described area in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM  
Section 1: SW/4, W/2 SE/4, NE/4 SE/4,  
and S/2 NE/4  
Section 12: N/2 NW/4

(9) The proposed waterflood project encompasses only a portion of the Sanmal-Queen Pool. According to applicant's testimony in this case, it has attempted to secure an agreement with Mack Energy, the only other operator in the pool, to cooperatively conduct waterflood operations within the entire Sanmal Queen Pool, but has been unable to do so.

(10) The wells within the Sanmal Queen Unit Area are in an advanced state of depletion and should therefore be properly classified as "stripper wells".

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

(12) Prior to commencing injection operations into the Billy "AES" State Well No. 2, the applicant should be required to squeeze cement the existing Grayburg and San Andres perforations from 4,585 feet to 4,595 feet and plug back to the Queen formation in a manner acceptable to the supervisor of the Division's Hobbs district office.

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

(14) Prior to commencing injection operations into the proposed injection wells, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(15) The injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 753 psi.

(16) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(17) 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 tests in order that the same may be witnessed.

(18) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(19) The Hoover "ADR" State Well No. 1 should be reclassified as an injection well within the Sanmal Queen Unit Waterflood Project.

(20) The applicant further requests that the subject waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(21) The evidence presented indicates that the subject waterflood project meets all the criteria for approval.

(22) The approved "project area" should initially comprise the area contained within the applicant's Sanmal Queen Unit as described in Finding No. (8) above.

(23) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(24) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(25) The injection authority granted herein for the proposed injection wells should 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.

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**IT IS THEREFORE ORDERED THAT:**

(1) The application of Yates Petroleum Corporation for authority to institute a waterflood project in its Sanmal Queen Unit, Sanmal-Queen Pool, by the injection of water into the Queen formation through the gross perforated interval from approximately 3,762 feet to 3,782 feet in the following described wells located in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, is hereby approved:

<u>WELL NAME &amp; NUMBER</u>	<u>WELL LOCATION</u>
Billy "AES" St. No. 2	530' FNL & 1750' FWL (Unit C) Section 12
Hoover "ADR" St. No. 2	990' FSL & 2310' FEL (Unit O) Section 1

(2) Prior to commencing injection operations into the Billy "AES" State Well No. 2, the applicant shall squeeze cement the existing Grayburg and San Andres perforations from 4,585 feet to 4,595 feet and plug back to the Queen formation in a manner acceptable to the supervisor of the Division's Hobbs district office.

(3) The applicant 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 from injection, production, or plugged and abandoned wells.

(4) Injection shall be accomplished through 2 7/8-inch plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(5) The injection wells or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 753 psi.

(6) 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 the fracturing of the injection formation or confining strata.

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

(8) The operator shall 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 tests in order that the same may be witnessed.

(9) The applicant shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing, casing 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 steps as may be timely and necessary to correct such failure or leakage.

(10) The subject waterflood project is hereby designated the Sanmal Queen Unit Waterflood Project, and the applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(11) The Hoover "ADR" State Well No. 1, located 1650 feet from the South line and 990 feet from the East line (Unit I) of Section 1, Township 17 South, Range 33 East, NMPM, previously classified as a salt water disposal well, is hereby reclassified as an injection well within the Sanmal Queen Unit Waterflood Project.

(12) The subject waterflood project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(13) The approved "project area" should initially comprise the area contained within the applicant's Sanmal Queen Unit as described in Finding No. (8) above.

(14) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

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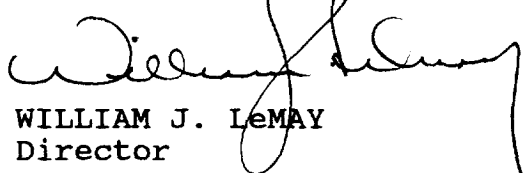
(15) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(16) The injection authority granted herein for the proposed injection wells 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.

(17) 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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