

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. 9897
Order No. R-9161

APPLICATION OF SIETE OIL & GAS
CORPORATION FOR A WATERFLOOD
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 4, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 24th day of April, 1990, 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, Siete Oil & Gas Corporation, seeks authority to institute a waterflood project on its Sackett Federal Lease underlying the S/2 SW/4 and SW/4 SE/4 of Section 29, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico, by the injection of water into the Grayburg-Jackson Pool through the perforated interval from approximately 2300 feet to 3220 feet in its Sackett Federal Well No. 2 located 660 feet from the South line and 1650 feet from the West line (Unit N) of said Section 29.

(3) According to the evidence presented, initial injection will be confined to the Grayburg formation at a depth of approximately 2527 feet to 2568 feet; however, the applicant seeks authority to expand said injection interval at a later time to include the Seven Rivers, Queen and San Andres formations which are within the vertical limits of the Grayburg-Jackson Pool, and the Yates formation, which, according to evidence presented, has not been previously produced in this area.

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(4) The wells within the project area are in an advanced state of depletion within the Grayburg-Jackson Pool and should properly be classified as "stripper" wells.

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

(6) The applicant did not present sufficient evidence to demonstrate that the Yates formation is potentially productive in this area or that injection into said formation will increase ultimate oil recovery.

(7) Injection authority should be initially limited to the Seven Rivers, Queen, Grayburg and San Andres formations within the Grayburg-Jackson Pool, provided however, that the Division Director should have the authority to administratively expand the injection interval within the subject well to include the Yates formation should it be determined that said formation is productive and will benefit from waterflood operations.

(8) Arco Oil & Gas Company, the operator of the Empire Abo Unit, being the offset acreage to the north of the proposed waterflood project, appeared at the hearing and requested that the applicant be required, prior to conducting injection operations, to perform remedial cement operations on its Empire Abo Unit Well Nos. C-48, C-49 and B-49 located, respectively, 1980 feet from the South line and 990 feet from the East line (Unit I) of Section 30, Township 17 South, Range 29 East, NMPM, 2310 feet from the South line and 330 feet from the West line (Unit L) of said Section 29, and 1980 feet from the North line and 330 feet from the West line (Unit E) of said Section 29.

(9) The evidence presented indicates that the above-described Empire Abo Unit Well Nos. C-48 and C-49 are not cemented adequately to confine the injected fluid to the proposed injection zone.

(10) In addition, the evidence indicates that the Marbob Energy Corporation Old Loco Unit Well Nos. 2, 3, and 4, all producing wells located, respectively, 990 feet from the North line and 1980 feet from the East line (Unit B), 990 feet from the North line and 2310 feet from the West line (Unit C), and 990 feet from the North and West lines (Unit D) of Section 32, Township 17 South, Range 29 East, NMPM, and the General American Oil Company

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Green "B" Well No. 8, a plugged and abandoned well located 330 feet from the South line and 2310 feet from the West line (Unit N) of said Section 29, are not cemented or plugged in a manner adequate to confine the injected fluid to the proposed injection zone.

(11) Prior to commencing injection operations, the applicant should be required to perform remedial cement operations on the Arco Oil & Gas Company Empire Abo Unit Well Nos. C-48 and C-49, and on the Marbob Energy Corporation Old Loco Unit Well Nos. 2, 3 and 4, and should further be required to re-enter and re-plug the General American Oil Company Green "B" Well No. 8, all as described in Finding Nos. (8) and (10) above.

(12) 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 to other formations or onto the surface.

(13) The injection of water into the Sackett Federal Well No. 2 should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set at approximately 2300 feet; 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 Sackett Federal Well No. 2, the casing 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 well or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 505 psi.

(16) 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 Grayburg-Jackson Pool.

(17) The operator should give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the conductance of any required remedial work, installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

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(18) 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, Siete Oil & Gas Corporation, is hereby authorized to institute a waterflood project on its Sackett Federal Lease underlying the S/2 SW/4 and SW/4 SE/4 of Section 29, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico, by the injection of water into the Grayburg-Jackson Pool through the perforated interval from approximately 2300 feet to 3220 feet in its Sackett Federal Well No. 2 located 660 feet from the South line and 1650 feet from the West line (Unit N) of said Section 29.

(2) Injection into the above-described well shall be initially limited to that interval within the Grayburg-Jackson Pool, provided however, that the Director of the Division may administratively authorize expansion of said injection zone to include the Yates formation should it be determined that said Yates formation is productive and will benefit from waterflood operations.

(3) Prior to commencing injection operations, the applicant shall be required to perform remedial cement operations on the Arco Oil & Gas Company Empire Abo Unit Well Nos. C-48 and C-49, and on the Marbob Energy Corporation Old Loco Unit Well Nos. 2, 3 and 4, and shall further be required to re-enter and re-plug the General American Oil Company Green "B" Well No. 8, all as further described on Exhibit "A" attached hereto and made a part hereof.

(4) 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.

(5) The injection of water into the Sackett Federal Well No. 2 shall be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set at approximately 2300 feet; 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.

(6) Prior to commencing injection operations into the Sackett Federal Well No. 2, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

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(7) The injection well or injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 505 psi.

(8) The Director of the Division shall 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 Grayburg-Jackson Pool.

(9) The operator shall give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the conductance of any remedial cement operations, installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(10) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing, casing, or packer in said Sackett Federal Well No. 2, 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.

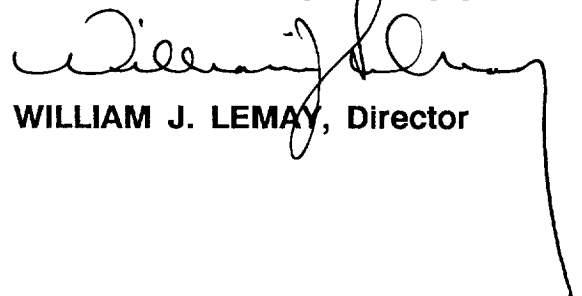
(11) The subject waterflood project is hereby designated the Sackett Federal Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(12) 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.

(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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EXHIBIT "A"
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<u>OPERATOR, WELL NAME, AND NUMBER</u>	<u>LOCATION</u>
Arco Oil & Gas Company Empire Abo Unit Well No. C-48	1980' FSL & 990' FEL Section 30, T-17S, R-29E
Empire Abo Unit Well No. C-49	2310' FSL & 330' FWL Section 29, T-17S, R-29E
Marbob Energy Corporation Old Loco Unit Well No. 2	990' FNL & 1980' FEL Section 32, T-17S, R-29E
Old Loco Unit Well No. 3	990' FNL & 2310' FWL Section 32, T-17S, R-29E
Old Loco Unit Well No. 4	990' FNL & 990' FWL Section 32, T-17S, R-29E
General American Oil Company Green "B" Well No. 8	330' FSL & 2310' FWL Section 29, T-17S, R-29E