

(HOSPAH, SOUTH-LOWER SAND (TENNECO LOWER  
HOSPAH PRESSURE MAINTENANCE) POOL - Cont'd.)

**RULE 10.** The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection wells, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection wells which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas or water will be confined to the Lower-Hospah formation.

(3) A letter stating that all offset operators to the proposed injection wells have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection wells if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

**LANGLIE-MATTIX POOL**  
(Langlie Lynn (Queen) Unit Waterflood)  
Lea County, New Mexico

Order No. R-4417, Authorizing Continental Oil Company to Institute a Waterflood Project in the Seven Rivers and Queen Formations in the Langlie-Mattix Pool, Lea County, New Mexico, September 10, 1972.

Application of Continental Oil Company for a Waterflood Project, Lea County, New Mexico.

CASE NO. 4840  
Order No. R-4417

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 a.m. on October 4, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of October, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS:**

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

(2) That the applicant, Continental Oil Company, seeks authority to institute a waterflood project in the Langlie Lynn (Queen) Unit Area, Langlie-Mattix Pool, by the injection of water into the Seven Rivers and Queen formations through nine injection wells in Sections 22, 23, 26 and 27, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico.

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

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

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

**IT IS THEREFORE ORDERED:**

(1) That the applicant, Continental Oil Company, is hereby authorized to institute a waterflood project in the Langlie Lynn (Queen) Unit Area, Langlie-Mattix Pool, by the injection of water into the Seven Rivers and Queen formations through the following-described wells in Township 23 South, Range 36 East, NMPM, Lea County, New Mexico:

| Well Name   | Unit | Section |
|---|------|---------|
| Shell Oil Company State "JK"<br>Well No. 4          | 0    | 22      |
| Gackle Oil Company Sinclair<br>"A" State Well No. 7 | 0    | 23      |
| Gackle Oil Company Sinclair<br>"A" State Well No. 3 | L    | 23      |
| Continental Oil Company Lynn<br>B-1 Well No. 15     | L    | 26      |
| Continental Oil Company Lynn<br>B-1 Well No. 12     | G    | 26      |
| Continental Oil Company Lynn<br>B-1 Well No. 11     | K    | 26      |
| Continental Oil Company Lynn<br>B-1 Well No. 10     | E    | 26      |
| Continental Oil Company Lynn<br>B-1 Well No. 9      | B    | 26      |
| Continental Oil Company Lynn<br>B-1 Well No. 8      | A    | 27      |

(2) That the subject waterflood project is hereby designated the Continental Langlie Lynn Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



GARREY CARRUTHERS  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

ORDER NO. WFX-581

**APPLICATION OF CONOCO, INC. TO EXPAND ITS WATERFLOOD PROJECT IN  
THE LANGLE MATTIX SEVEN RIVERS QUEEN GRAYBURG POOL IN LEA COUNTY,  
NEW MEXICO**

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-4417, Conoco, Inc. has made application to the Division on May 1, 1989 for permission to expand its Langlie-Lynn Queen Unit Waterflood Project in the Langlie Mattix Seven Rivers Queen Grayburg Pool in Lea County, New Mexico.

NOW, on this 16th day of May, 1989, the Division Director finds that:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
- (5) The proposed expansion of the above-referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Conoco, Inc., be and the same is hereby authorized to inject water into the Seven Rivers and Queen formations at approximately 3450 feet to approximately 3600 feet through 2 3/8-inch plastic lined tubing set in a packer at approximately 3450 feet in the following described well for purposes of secondary recovery to wit:

Langlie Lynn Queen Unit Well No. 5  
1980 FSL & 1980 FEL (Unit J)  
Section 23, T-23 South, R-36 East, NMPM,  
Lea County, New Mexico.



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NOW, on this 16th day of May, 1989, the Division Director finds that:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
- (5) The proposed expansion of the above-referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Conoco, Inc., be and the same is hereby authorized to inject water into the Seven Rivers and Queen formations at approximately 3450 feet to approximately 3600 feet through 2 3/8-inch plastic lined tubing set in a packer at approximately 3450 feet in the following described well for purposes of secondary recovery to wit:

Langlie Lynn Queen Unit Well No. 5  
1980 FSL & 1980 FEL (Unit J)  
Section 23, T-23 South, R-36 East, NMPM,  
Lea County, New Mexico.

Administrative Order WFX-581  
Conoco, Inc.  
May 16, 1989  
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IT IS FURTHER ORDERED THAT:

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.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 690 psi.

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 Seven Rivers & Queen formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

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 test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order No. R-4417 and rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

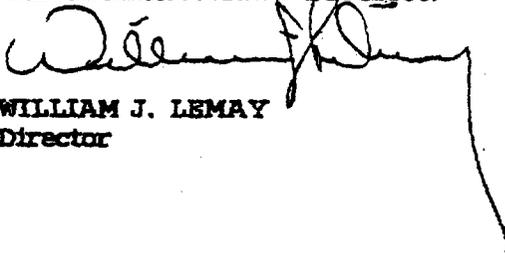
PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule 706 and 1120 of the Division Rules and Regulations.

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Conoco, Inc.  
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Approved at Santa Fe, New Mexico, on this 16th day of May, 1989.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

SEAL



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
Oil Conservation Division

ADMINISTRATIVE ORDER NO. WFX-780

## ***APPLICATION OF ENERGEN RESOURCES CORPORATION TO EXPAND ITS WATERFLOOD PROJECT IN THE LANGLIE-MATTIX (SEVEN RIVERS-QUEEN- GRAYBURG) POOL IN LEA COUNTY, NEW MEXICO***

### **ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-4417, as amended, Energen Resources Corporation has made application to the Division on April 14, 2000, for permission to expand its Continental Langlie Lynn Waterflood Project in the Langlie-Mattix (Seven Rivers-Queen-Grayburg) Pool in Lea County, New Mexico.

#### **THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the Continental Langlie Lynn Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

#### **IT IS THEREFORE ORDERED THAT:**

The applicant, Energen Resources Corporation, is hereby authorized to inject water into the Seven Rivers-Queen-Grayburg formation through the gross perforated interval from approximately 3,408 feet to approximately 3,682 feet through 2 3/8-inch plastic-lined tubing\* set in a packer located within 100 feet of the uppermost injection perforations in the following described wells for purposes of secondary recovery to wit:

Langlie Lynn Queen Unit No. 5  
API No. 30-025-09389  
1980' FSL & 1980' FEL, Unit J,  
Section 23, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,494'-3,631'  
Maximum Surface Injection Pressure: 699 psi

Langlie Lynn Queen Unit No. 7  
API No. 30-025-09391  
660' FSL & 1980' FWL, Unit N,  
Section 23, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,510'-3,682'  
Maximum Surface Injection Pressure: 702 psi

Langlie Lynn Queen Unit No. 12  
API No. 30-025-20052  
660' FNL & 660' FWL, Unit D,  
Section 26, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,446'-3,682'  
Maximum Surface Injection Pressure: 689 psi

Langlie Lynn Queen Unit No. 14  
API No. 30-025-20191  
660' FNL & 1980' FEL, Unit B,  
Section 26, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,408'-3,586'  
Maximum Surface Injection Pressure: 682 psi

Langlie Lynn Queen Unit No. 16  
API No. 30-025-21229  
1980' FNL & 1980' FWL, Unit F,  
Section 26, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,468'-3,653'  
Maximum Surface Injection Pressure: 694 psi

Langlie Lynn Queen Unit No. 18  
API No. 30-025-21458  
1980' FSL & 660' FWL, Unit L,  
Section 26, T-23 South, R-36 East, NMPM  
Perforated Interval: 3,540'-3,681'  
Maximum Surface Injection Pressure: 708 psi

IT IS FURTHER ORDERED THAT:

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.

Prior to commencing injection operations, the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Seven Rivers-Queen-Grayburg formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify 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 tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-4417, as amended, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein 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.

Remarks: This order shall supersede Division Orders No. WFX-521, which order authorized injection into the Langlife Lynn Queen Unit No. 7, and WFX-581, which order authorized injection

*Administrative Order WFX-780  
Energen Resources Corporation  
December 19, 2001  
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into the Langlie Lynn Queen Unit No. 5.

\* Injection into the Langlie Lynn Queen Unit No. 12 shall be accomplished through the 2 7/8 inch tubing that was set at a depth of 3,748 feet and cemented back to surface.

DONE at Santa Fe, New Mexico, on this 19th day of December, 2001.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

SEAL

LW/DRC

cc: Oil Conservation Division - Artesia  
File-WFX-521, WFX-531