



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

ADMINISTRATIVE ORDER NO. WFX-708

**APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD  
PROJECT IN THE RED LAKE QUEEN-GRAYBURG-SAN ANDRES POOL IN EDDY  
COUNTY, NEW MEXICO**

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-3469 as amended, Devon Energy Corporation has made application to the Division on February 3, 1997 for permission to expand its West Red Lake Waterflood Project in the Red Lake Queen-Grayburg-San Andres Pool in Eddy 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the San Andres formation at approximately 1268 feet to approximately 2104 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the wells described on Exhibit "A" attached hereto, for purposes of secondary recovery.

**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 West Red Lake Unit Well Nos. 36, 71, and 74, Grayburg and/or Premier interval perforations shall be cement squeezed and pressure tested in a manner satisfactory to the supervisor of the Artesia District Office of the Division. Specific intervals are indicated on Exhibit "A".

Prior to commencing injection operations into the wells, 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 wells to range from .6 to .9 psi per foot of depth to the uppermost injection perforations of each well as indicated on Exhibit "A".

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 San Andres 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 Artesia 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 Artesia 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.

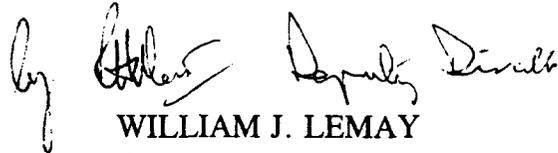
The subject wells shall be governed by all provisions of Division Order No. R-3469, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 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.

DONE at Santa Fe, New Mexico, on this 12th day of March, 1997.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

cc: Oil Conservation Division - Artesia  
Case File No.3824

**EXHIBIT "A"**  
**DIVISION ORDER NO. WFX-708**  
**WEST RED LAKE UNIT WATERFLOOD PROJECT**  
**APPROVED INJECTION WELLS**

Well Name	Well No.	Location	Unit	S.T.R.	Interval to Squeeze	Injection Interval	Packer Depth	Tubing Size	Pressure Gradient	Injection Pressure
West Red Lake Unit	26	2340' FSL & 400' FEL	I	8-18S-27E	N/A	1972'-2081'	1875'	2 3/8"	.75 psi/ft	1479 PSIG
West Red Lake Unit	36	1630' FNL & 330' FEL	H	36-18S-27E	1290'-1298'	1657'-2104'	1575'	2 3/8"	.71 psi/ft	1176 PSIG
West Red Lake Unit	47	2310' FNL & 1510' FEL	G	8-18S-27E	N/A	1656'-2068'	1575'	2 3/8"	.60 psi/ft	994 PSIG
West Red Lake Unit	63	1500' FNL & 850' FEL	H	8-18S-27E	N/A	1656'-2065'	1575'	2 3/8"	.75 psi/ft	1242 PSIG
West Red Lake Unit	71	710' FNL & 1650' FEL	B	8-18S-27E	1194'-1196'	1268'-1996'	1200'	2 3/8"	.72 psi/ft	913 PSIG
West Red Lake Unit	74	1930' FNL & 2600' FEL	G	8-18S-27E	1196'-1225'	1517'-1996'	1450'	2 3/8"	.90 psi/ft	1365 PSIG

All wells in Eddy County, New Mexico