



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**  
Governor  
**Joanna Prukop**  
Cabinet Secretary

**Mark E. Fesmire, P.E.**  
Director  
Oil Conservation Division

*ADMINISTRATIVE ORDER NO. WFX-806*

## ***APPLICATION OF MACK 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 Orders No. R-568 and R-938, Mack Energy Corporation has made application to the Division on August 2, 2004 for permission to expand its Red Lake Sand Unit Waterflood Project in the Red Lake Queen-Grayburg-San Andres Pool in Eddy County, New Mexico.

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

- (1) The application was filed in due form.
- (2) Satisfactory information was 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, Mack Energy Corporation, is hereby authorized to inject water into the Grayburg formation through the gross interval from 1,895 feet to 1,943 feet using 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:

**Red Lake Sand Unit Well No. 51**

API No. 30-015-33330

2310' FNL & 2310' FEL, Unit G,

Section 20, Township 17 South, Range 28 East

Perforated Injection Interval: 1909'-1943'

Maximum Surface Injection Pressure: 382 PSIG

**Red Lake Sand Unit Well No. 72**

API No. 30-015-33298

1650' FSL & 1650' FWL, Unit K,

Section 20, Township 17 South, Range 28 East

Perforated Injection Interval: 1895'-1933'

Maximum Surface Injection Pressure: 379 PSIG

**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 wells, 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 in each well 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 to 0.2 psi/ft. to the uppermost injection perforations in each well, as shown above.

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 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 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.

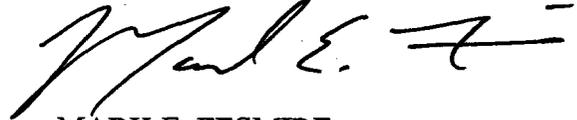
The subject well shall be governed by all provisions of Division Order No. R-568 and R-938, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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.

DONE at Santa Fe, New Mexico, on this 17th day of August, 2004.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MARK E. FESMIRE  
Director

cc: Oil Conservation Division – Artesia  
Bureau of Land Management - Carlsbad