



# 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-810*

## ***APPLICATION OF SAGE ENERGY COMPANY TO EXPAND ITS WATERFLOOD PROJECT IN THE NORTH VACUUM-ABO POOL IN LEA COUNTY, NEW MEXICO***

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

Under the provisions of Division Order No. R-9359, Sage Energy Company has made application to the Division on December 29, 2004 for permission to expand its North Vacuum Abo North Unit Waterflood Project in the North Vacuum-Abo Pool in Lea County, New Mexico.

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

- (1) The application was filed in due form.
- (2) Satisfactory information was provided to demonstrate that all offset operators have been provided notice 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 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, Sage Energy Company is hereby authorized to inject water into the Abo formation through the perforated interval from 8,847 feet to 8,898 feet using 2-3/8-inch tubing set in a packer located at a depth of 8,725 feet in the following-described well for purposes of secondary recovery to wit:

**North Vacuum Abo North Unit 12-A Well No. 1**  
API No. 30-025-25146  
460' FSL & 660' FEL, Unit P,  
Section 36, Township 16 South, Range 34 East  
Perforated Injection Interval: 8,847'-8,898'  
Maximum Surface Injection Pressure: 1769 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 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 to 0.2 psi/ft. to the uppermost injection perforations, as shown above.

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 Abo 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 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-9359, 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

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*Sage Energy Company*

*January 20, 2005*

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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 well, 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 20th day of January, 2005.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MARK E. FESMIRE  
Director

cc: Oil Conservation Division – Hobbs