



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**  
Governor

**Joanna Prukop**  
Cabinet Secretary  
Acting Director  
Oil Conservation Division

*ADMINISTRATIVE ORDER NO. PMX-225*

***APPLICATION OF CBS OPERATING CORPORATION TO EXPAND ITS PRESSURE  
MAINTENANCE PROJECT IN THE SQUARE LAKE-GRAYBURG SAN ANDRES POOL  
IN EDDY COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No R-11435-A issued in Case No 12112, CBS Operating Corporation has made application to the Division on August 21, 2003 and October 8, 2003, for permission to expand its North Square Lake Unit Pressure Maintenance Project in the Square Lake-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 pressure maintenance project will not cause waste nor impair correlative rights.

**IT IS THEREFORE ORDERED THAT:**

The applicant, CBS Operating Corporation, is hereby authorized to utilize the following wells to inject water for purposes of pressure maintenance into the Grayburg and San Andres formations through 2 3/8-inch plastic lined tubing set in packers located within 100 feet of the uppermost perforation or open hole injection interval.

North Square Lake Unit Well No. 12, API No. 30-015-04856  
660 FSL & 660 FEL, (Unit P) Section 19, Township 16 South, Range 31 East, NMPM  
Open Hole Interval: 3065 - 3338, Packer at 3000, Maximum Injection Pressure 613 psi.

North Square Lake Unit Well No. 15, API No. 30-015-04859  
660 FSL & 1980 FEL, (Unit O) Section 20, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3356 - 3506, Packer at 3256, Maximum Injection Pressure 671 psi.

North Square Lake Unit Well No. 16, API No. 30-015-04860  
660 FSL & 660 FEL, (Unit P) Section 20, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3354 - 3562, Packer at 3254, Maximum Injection Pressure 670 psi.

North Square Lake Unit Well No. 124, API No. 30-015-24580  
1250 FNL & 1031 FWL, (Unit C) Section 31, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3040 - 3270, Packer at 2950, Maximum Injection Pressure 608 psi.

North Square Lake Unit Well No. 126, API No. 30-015-04947  
1980 FNL & 1980 FEL, (Unit G) Section 31, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3129 - 3311, Packer at 3030, Maximum Injection Pressure 625 psi.

North Square Lake Unit Well No. 144, API No. 30-015-04941  
1980 FSL & 1680 FWL, (Unit K) Section 31, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3032 - 3232, Packer at 3265, Maximum Injection Pressure 606 psi.

North Square Lake Unit Well No. 162, API No. 30-015-24457  
660 FSL & 1980 FEL, (Unit O) Section 31, Township 16 South, Range 31 East, NMPM  
Perforated Interval: 3084 - 3320, Packer at 2984, Maximum Injection Pressure 616 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 injection into each of these wells, the following remedial work shall be completed to the satisfaction of the Division representative from the Artesia district office of the Division as well as other remedial work as identified and required by the Artesia district office.** Cement bond logs are required on each well prior to conversion and another bond log is required if remedial cementing is done. Supply all new logs, including cement bond logs to the Artesia District office.

**Casing shoe on all wells:** If the injection will be through perforations, ensure cement is adequate below and across the injection interval and for at least 300 feet above this interval. If injection is to be open hole, ensure cement above the injection-casing shoe is adequate in height and competency – at least 300 feet of good cement. If necessary, squeeze additional cement.

**Surface Cement Sheath on all wells:** Ensure competent cement is in place in the annulus behind the injection casing from the surface to just below the casing shoe of the next larger casing, unless this next larger casing cement was already circulated. If necessary, squeeze additional cement.

**In addition, the following specific Area of Review work shall be performed to the specifications and satisfaction of the Artesia district office of the Division prior to injection into these respective wells.**

NSLU Well No. 12, API No. 30-015-04856

- A) Reenter and replug the George Etz Well No. 2, API No. 30-015-04924 located 310 FNL, 1666 FWL, Section 30, Township 16 South, Range 31 East.

NSLU Well No. 15, API No. 30-015-04859

- A) Run a Cement Bond Log on the NSLU Well No. 8, API No. 30-015-04864 located 1980 FSL, 660 FEL, Section 20, Township 16 South, Range 31 East. Ensure cement top is at least 3150 feet from the surface, else perforate above the existing cement top and squeeze cement to raise cement to at least 2,900 feet. Re-run CBL to verify.

NSLU Well No. 16, API No. 30-015-04860

- A) Run a Cement Bond Log on the NSLU Well No. 8, API No. 30-015-04864 located 1980 FSL, 660 FEL, Section 20, Township 16 South, Range 31 East. Ensure cement top is at least 3150 feet from the surface, else perforate above the existing cement top and squeeze cement to raise cement to at least 2,900 feet. Re-run CBL to verify.
- B) Reenter and replug the NSLU Well No. 26, API No. 30-015-04897 located 660 FNL, 660 FWL, Section 28, Township 16 South, Range 31 East.

NSLU Well No. 124, API No. 30-015-24580

- A) Reenter and replug the Welch State Well No. 1, API No. 30-015-04029 located 660 FNL, 660 FEL, Section 36, Township 16 South, Range 30 East.

NSLU Well No. 126, API No. 30-015-04947

- A) Reenter and replug the NSLU Well No. 103, API No. 30-015-04940 located 660 FNL, 660 FEL, Section 31, Township 16 South, Range 31 East.
- B) Reenter and replug the Grier Well No. 5, API No. 30-015-04952 located 1980 FSL, 660 FEL, Section 31, Township 16 South, Range 31 East.
- C) Obtain casing and cement data on the Grier Well No. 7, API No. 30-015-05975 located in Unit H, Section 31, Township 16 South, Range 31 East, supply to the Artesia district office and re-enter and re-plug the well if directed to by the Artesia district office.

NSLU Well No. 144, API No. 30-015-04941

- A) Reenter and replug the Grier Well No. 3, API No. 30-015-04950 located 660 FSL, 512 FWL, Section 31, Township 16 South, Range 31 East.

NSLU Well No. 162, API No. 30-015-24457

A) Reenter and replug the Grier Well No. 5, API No. 30-015-04952 located 1980 FSL, 660 FEL, Section 31, Township 16 South, Range 31 East.

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 wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than 0.2 psi per foot to the uppermost injection perforation or open-hole interval.

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 injection 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.

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

The operator of these new injection wells shall obey Division Rules 702 through 706, and all provisions of Division Order No R-11435-A as amended, and 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 for each well shall terminate one year after the effective date of this order if the operator has not commenced injection operations into that 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 12th day of April 2004.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



JOANNA PRUKOP  
Acting Division Director

JP/wvj

cc: Oil Conservation Division - Artesia  
Bureau of Land Management – Roswell  
Case File No. 12112