

**Oil Conservation Division**

*AMENDED ADMINISTRATIVE ORDER NO. PMX-176*

***APPLICATION OF PHILLIPS PETROLEUM COMPANY TO EXPAND ITS PRESSURE MAINTENANCE PROJECT IN THE VACUUM GRAYBURG-SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order Nos. R-5897 and R-6856, Phillips Petroleum Company has made application to the Division on August 9, 1994 for permission to expand its East Vacuum Grayburg-San Andres Pressure Maintenance Project in the Vacuum Grayburg-San Andres 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 is eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced East Vacuum Grayburg-San Andres Pressure Maintenance Project will not cause waste nor impair correlative rights.
- (6) Certain wells originally authorized by this Division Order have since had an increase in injection pressure approved and are therefore not limited in that respect by this amendment.
- (7) The application should be approved.

**BEFORE THE OIL CONSERVATION  
DIVISION  
Santa Fe, New Mexico  
Exhibit No. 16**

Submitted by: **ConocoPhillips Company Inc.**  
Hearing Date: May 25, 2016

**IT IS THEREFORE ORDERED THAT:**

The applicant, Phillips Petroleum Company, be and the same is hereby authorized to alternately inject water and CO<sub>2</sub> into the San Andres formation at approximately 4350 feet to approximately 4650 feet through 2 7/8-inch plastic lined tubing set in a packer at located within 100

feet of the uppermost depth of the injection interval in the following described wells shown on Exhibit "A" attached hereto, for purposes of pressure maintenance.

**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 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 1350 psig while on water injection and no more than 1850 psig while on CO<sub>2</sub> injection. Those wells which may already have an approved increase in injection pressure in place are exempt from these limits.

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 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 Nos. R-5897 and R-6856, 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

*Amended Administrative Order PMX-176*  
*Phillips Petroleum Company*  
*July 25, 1995*  
*Page 3*

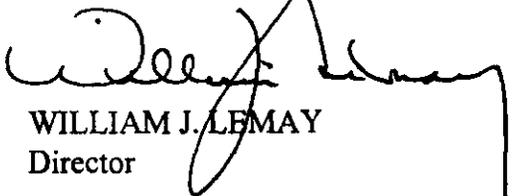
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operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

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 24th day of July, 1995.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

SEAL

WJL/BES

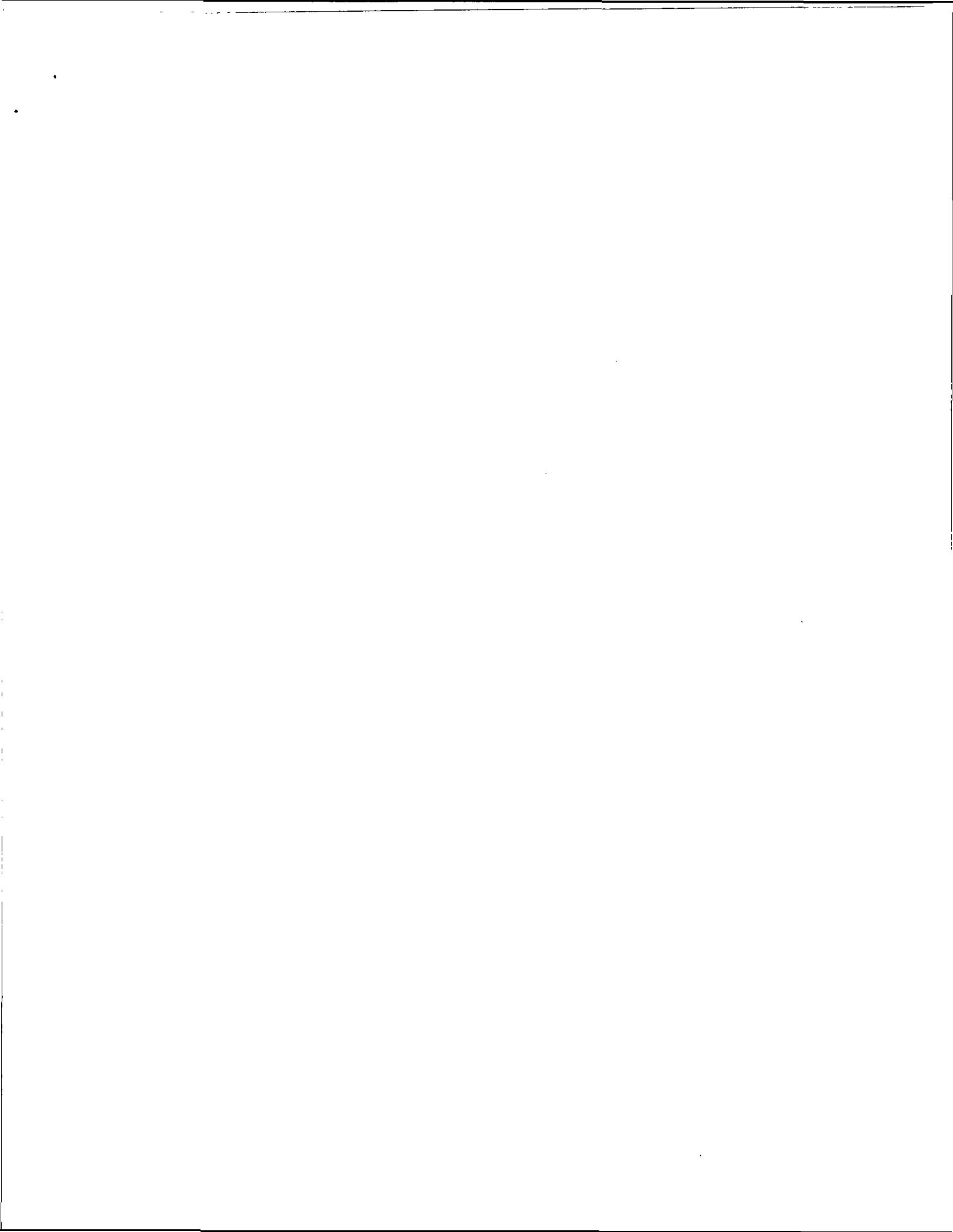
cc: Oil Conservation Division - Hobbs

EXHIBIT "A"  
 AMENDED DIVISION ORDER NO. PMX-176  
**East Vacuum Grayburg-San Andres Pressure Maintenance Project**  
 APPROVED INJECTION WELLS

<i>Well Name</i>	<i>Well No.</i>	<i>Location</i>	<i>S-T-R</i>	<i>Packer Depth</i>	<i>Injection Pressure Water / CO<sub>2</sub>*</i>
EVGSAU	383	1219' FSL & 1769' FWL	M-33-17S-35E	4178'	1350 psig/1850 psig
EVGSAU	384	825' FSL & 2524' FEL	O-33-17S-35E	4173'	1350 psig/1850 psig
EVGSAU	385	875' FSL & 1160' FEL	P-32-17S-35E	4053'	1350 psig/1850 psig
EVGSAU	386	1310' FSL & 531' FWL	M-32-17S-35E	4103'	1350 psig/1850 psig
EVGSAU	387	1440' FSL & 508' FWL	L-33-17S-35E	4078'	1350 psig/1850 psig

All wells in Lea County, New Mexico

*\* Does not apply to injection pressure increases approved subsequent to the original issuance of this Division Order.*





# 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. PMX-228*

## ***APPLICATION OF CONOCOPHILLIPS TO EXPAND ITS PRESSURE MAINTENANCE PROJECT IN THE VACUUM GRAYBURG-SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO***

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

Under the provisions of Division Orders No. R-5897 and R-6856, as amended, ConocoPhillips has made application to the Division on January 24, 2005 for authorization to expand its East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project in the Vacuum Grayburg-San Andres 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 above-referenced East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

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

The applicant, ConocoPhillips, is hereby authorized to alternately inject water and CO<sub>2</sub> into the San Andres formation at approximately 4,148 feet to approximately 4,660 feet through 2 7/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost open-hole injection

interval in the following described wells for purposes of pressure maintenance to wit:

**East Vacuum Grayburg San Andres Unit Well No. 2819-002**  
API No.30-025-02921  
1980' FNL & 660' FEL, Unit H,  
Injection Interval: 4,249' - 4,640'  
Maximum Injection Pressure: 1350 psi - water / 1850 psi - CO<sub>2</sub>

**East Vacuum Grayburg San Andres Unit Well No. 2801-009**  
API No.30-025-02910  
660' FSL & 1992' FWL, Unit N,  
Injection Interval: 4,148' - 4,660'  
Maximum Injection Pressure: 1350 psi - water / 1850 psi - CO<sub>2</sub>

**East Vacuum Grayburg San Andres Unit Well No. 2801-011**  
API No.30-025-02912  
1980' FSL & 1980' FEL, Unit J,  
Injection Interval: 4,152' - 4,636'  
Maximum Injection Pressure: 1350 psi - water / 1850 psi - CO<sub>2</sub>

All in Section 28, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected fluid 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 shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

Prior to commencing injection operations into the EVGSAU Well No. 2801-009, the applicant shall perform remedial cement operations on the Vacuum Glorieta East Unit Well No. 7 (API No. 30-025-30805) located 430 feet from the South line and 330 feet from the West line (Unit M) of Section 28, Township 17 South, Range 35 East, NMPM, such that cement shall be placed within the production casing annulus above and across the proposed injection interval. The current cement top on the 5 ½-inch production casing is shown to be at a depth of 4,300 feet.

Prior to commencing remedial cement operations on the Vacuum Glorieta East Unit Well No. 7, the applicant shall consult with the supervisor of the Hobbs district office of the Division in order to obtain an approved procedure.

**Subsequent to the completion of remedial cement operations on the Vacuum Glorieta East Unit Well No. 7, the applicant shall submit to the Santa Fe office of the Division, attention Engineering Bureau, documentation to show that the required work has been completed. Failure to notify the Santa Fe office of the Division of the completion on this work may result in the termination of the injection authority for the EVGSAU Well No. 2801-009.**

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 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 1350 psi while on water injection and no more than 1850 psi while on CO<sub>2</sub> injection.

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 Hobbs district office of the Division of the date and time of: i) the installation of injection equipment; ii) the mechanical integrity pressure tests; and iii) the remedial cement operations on the Vacuum Glorieta East Unit Well No. 7 in order that these operations may be 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 Nos. R-5897 and R-6856, 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

*Administrative Order PMX-228*  
*ConocoPhillips*  
*February 8, 2005*  
*Page 4*

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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 8th day of February, 2005.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MARK E. FESMIRE, P.E.  
Division Director

SEAL

MEF/drc

cc: Oil Conservation Division - Hobbs





# 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. PMX-246*

***APPLICATION OF CONOCOPHILLIPS COMPANY TO EXPAND ITS PRESSURE  
MAINTENANCE PROJECT IN THE VACUUM GRAYBURG-SAN ANDRES POOL IN LEA  
COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-6856, as amended, ConocoPhillips Company has made application to the Division on May 3, 2006 for permission to expand its East Vacuum Grayburg San Andres Unit Pressure Maintenance Project in the Vacuum Grayburg-San Andres 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 above-referenced pressure maintenance project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, ConocoPhillips Company, be and the same, is hereby authorized to inject water, carbon dioxide and produced gas into the Grayburg and San Andres formations within the interval from

approximately 4,305 feet to approximately 4,682 feet through 2 7/8-inch plastic-lined tubing set in a packer located approximately 100 feet above the uppermost injection perforations in the following described wells for purposes of pressure maintenance to wit:

**East Vacuum Grayburg San Andres Unit Well No. 3456-004**  
**(API No. 30-025-03019)**

Well Location: 1980' FNL & 1980' FWL, Unit F, Section 34,  
**Township 17 South, Range 35 East, NMPM**  
Perforated Interval: 4,470'-4612'

**East Vacuum Grayburg San Andres Unit Well No. 3229-012**  
**(API No. 30-025-30280)**

Well Location: 2630' FSL & 567' FWL, Unit L, Section 32,  
**Township 17 South, Range 35 East, NMPM**  
Perforated Interval: 4,305'-4608'

**East Vacuum Grayburg San Andres Unit Well No. 3127-009**  
**(API No. 30-025-30279)**

Well Location: 1175' FSL & 740' FEL, Unit P, Section 31,  
**Township 17 South, Range 35 East, NMPM**  
Perforated Interval: 4,328'-4682'

all located in Lea County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected fluid 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 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 wells or pressurization system shall be equipped so as to limit the surface injection pressure for the subject wells to the following:

Water:	1350 PSIG
Carbon Dioxide:	1850 PSIG

The Director of the Division may authorize an increase in the maximum injection pressure shown above upon a proper showing by the operator that such higher pressure will not result in

migration of the injected fluid from the Grayburg or San Andres formations.

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-6856, 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 for the wells granted herein, shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the 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 18th day of May, 2006.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MARK E. FESMIRE, P.E.,  
Director

SEAL

MEF/drc

cc: Oil Conservation Division - Hobbs