



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

September 2, 1998

Cross Timbers Operating Company
3000 North Garfield, Suite 175
Midland, Texas 79705

Attn: Mr. Ray F. Martin

**RE: Injection Pressure Increase,
Southeast Maljamar Grayburg-San Andres Unit
Lea County, New Mexico**

Dear Mr. Martin:

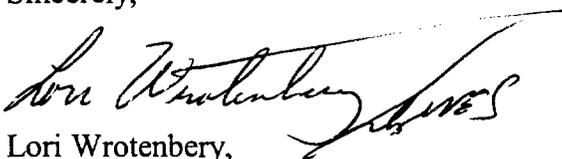
Reference is made to your requests dated July 8, 1998 to increase the surface injection pressure on three wells in the above referenced waterflood unit. These requests are based on step rate tests conducted on June 24, 1998. The results of the tests have been reviewed by my staff and we feel increases in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

<i>Well Name and Number</i>	<i>API Number</i>	<i>Location</i>	<i>Maximum Pressure</i>
SEMGSAU Well No.610	30-025-32888	Unit 'M' of Section 29	2415 PSIG
SEMGSAU Well No.710	30-025-33338	Unit 'O' of Section 29	2628 PSIG
SEMGSAU Well No.714	30-025-33869	Unit 'P' of Section 29	2823 PSIG
All located in Township 17 South, Range 33 East, Lea County, New Mexico.			

The Division Director may rescind these injection pressure increases if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,


Lori Wrottenbery,
Director

LW/BES/kv

cc: Oil Conservation Division – Hobbs
Files: Case No.3462; PSI-X 1st QTR99



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

October 19, 1998

Cross Timbers Operating Company
3000 North Garfield, Suite 175
Midland, Texas 79705

Attn: Mr. Ray F. Martin

**RE: Injection Pressure Increase,
Southeast Monument Grayburg-San Andres Unit
Well No.106,
Lea County, New Mexico**

Dear Mr. Martin:

Reference is made to your request dated September 14, 1998 to increase the surface injection pressure on the above referenced well. This request is based on data obtained from a step rate test conducted on September 2, 1998. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well:

<i>Well and Location</i>	<i>Maximum Injection Pressure</i>
SEMGSAU Well No.106	1573 PSIG
Located in Unit 'P' of Section 30, Township 17 South, Range 33 East, Lea County, New Mexico.	

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenbery
Director

LW/BES/kv

cc: Oil Conservation Division - Hobbs
Files: Case File No.3462; PSI-X 2ndQTR98





NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

August 2, 2000

Cross Timbers Operating Company
300 North Garfield, Suite 175
Midland, Texas 79705

Attn: Mr. D. Patrick Darden

**RE: Injection Pressure Increase,
SEMGSAU Well No. 908
Lea County, New Mexico**

Reference is made to your request dated July 27, 2000 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on July 17, 2000. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well:

<i>Well and Location</i>	<i>Maximum Injection Pressure</i>
SEMGSAU Well No. 908	923 PSIG
Located in Section 32, Township 17 South, Range 33 East, Lea County, New Mexico.	

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenbery
Director

LW/MWA/kv

cc: Oil Conservation Division - Hobbs
Files: Case No. 3462 (Order No. R-3134), WFX-753, IPI 3rd QTR-2000



ADMINISTRATIVE ORDER NO. WFX-731

APPLICATION OF CROSS TIMBERS OPERATING COMPANY TO EXPAND ITS WATERFLOOD PROJECT IN THE MALJAMAR GRAYBURG-SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-3469 as amended, Cross Timbers Operating Company has made application to the Division on December 4, 1997 for permission to expand its Southeast Maljamar Grayburg-San Andres Unit Waterflood Project in the Maljamar 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 waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Cross Timbers Operating Company, be and the same is hereby authorized to inject water into the Grayburg formation at approximately 4218 feet to approximately 4395 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 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 .2 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 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 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.

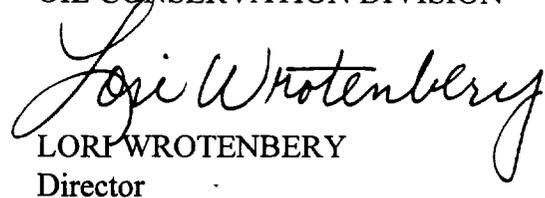
The subject wells shall be governed by all provisions of Division Order No. R-3134, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 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 10th day of February, 1998.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

SEAL

LW/BES/kv

cc: Oil Conservation Division - Hobbs
Case File No.3462 /

EXHIBIT "A"
 DIVISION ORDER NO. WFX-731
SOUTHEAST MALJAMAR GRAYBURG-SAN ANDRES UNIT WATERFLOOD PROJECT
 APPROVED INJECTION WELLS

<i>Well Name</i>	<i>Well No.</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>	<i>Injection Interval</i>	<i>Packer Depth</i>	<i>Tubing Size</i>	<i>Pressure Gradient</i>	<i>Injection Pressure</i>
SEMGSAU	15	500' FNL & 330' FWL	D	32-17S-33E	4322'-4395'	4262'	2 3/8"	.2 psi/ft	864 PSIG
SEMGSAU	106	1040' FSL & 420' FEL	P	30-17S-33E	4218'-4279'	4158'	2 3/8"	.2 psi/ft	844 PSIG
SEMGSAU	610	1310' FSL & 750' FWL	M	29-17S-33E	4252'-4278'	4192'	2 3/8"	.2 psi/ft	838 PSIG
SEMGSAU	614	1070' FSL & 1888' FWL	N	29-17S-33E	4250'-4308'	4190'	2 3/8"	.2 psi/ft	850 PSIG
SEMGSAU	710	1165' FSL & 2010' FEL	O	29-17S-33E	4272'-4324'	4212'	2 3/8"	.2 psi/ft	854 PSIG
SEMGSAU	714	1200' FSL & 900' FEL	P	29-17S-33E	4282'-4332'	4222'	2 3/8"	.2 psi/ft	856 PSIG

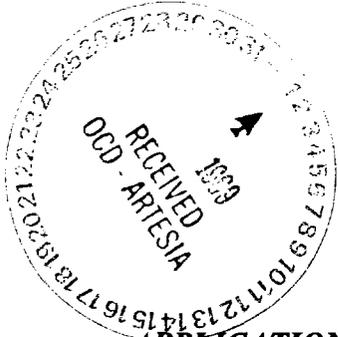
All wells in Lea County, New Mexico



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

CASE NO. 3462



ADMINISTRATIVE ORDER NO. WFX-753

**APPLICATION OF CROSS TIMBERS OPERATING COMPANY TO EXPAND ITS
WATERFLOOD PROJECT IN THE MALJAMAR GRAYBURG-SAN ANDRES POOL IN LEA
COUNTY, NEW MEXICO**

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-3134, Cross Timbers Operating Company has made application to the Division on May 24, 1999 for permission to expand its Southeast Maljamar Grayburg-San Andres Unit Waterflood Project in the Maljamar Grayburg-San Andres Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The original application was filed in due form.
- (2) Satisfactory information was provided that all offset operators had been duly notified of the application.
- (3) No objection had 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 for reinstatement should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Cross Timbers Operating Company, be and the same is hereby authorized to inject water into the Grayburg-San Andres formations through perforations at approximately 4261 feet to approximately 4399 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 well for purposes of

secondary recovery, to wit:

SEMGS AU Well No. 908
Unit 'A' of Section 32, Township 17 South, Range 33 East
Injection Interval: 4261 feet to 4399 feet
Maximum Injection Pressure: 852 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 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 .2 psi per foot of depth to the uppermost injection perforations of the well.

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 upper Grayburg-San Andres formations. 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.

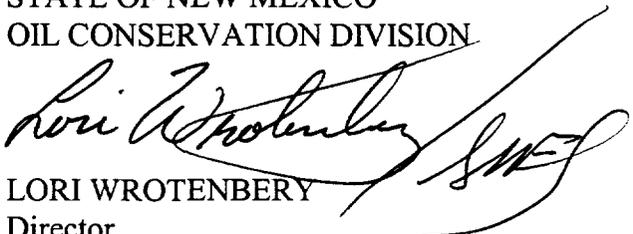
The subject well shall be governed by all provisions of Division Order No. R-3134, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 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 29th day of June, 1999.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

S E A L

LW/MWA/kv

cc: Oil Conservation Division - Hobbs
Case File No. 3462 /