

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY



2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

November 2, 1994

Texaco Exploration and Production, Inc.  
P.O. Box 730  
Hobbs, New Mexico 88241-0730

Attn: Mr. Terry L. Frazier

***RE: Injection Pressure Increase Vacuum Grayburg San Andres Unit  
Waterflood Project Lea County, New Mexico***

Dear Mr. Frazier:

Reference is made to your request dated September 19, 1994 to increase the surface injection pressure on two wells. This request is based on step rate tests conducted on these wells between September 6 and 7, 1994. The results of the tests have been reviewed by my staff and we feel an increase 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:

Well and Location	Maximum Injection Surface Pressure
Vacuum Grayburg San Andres Unit No.146 Unit B,	1475 PSIG
Vacuum Grayburg San Andres Unit No.147 Unit H,	1380 PSIG
Both wells located in Section 2, Township 17 South, Range 34 East, Lea County, New Mexico.	

*Injection Pressure Increase*

*Texaco Exploration and Production, Inc.*

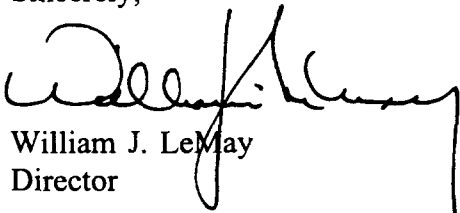
*November 2, 1994*

*Page 2*

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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,

A handwritten signature in black ink, appearing to read 'William J. LeMay', is written over the typed name and title.

William J. LeMay  
Director

WJL/BES

cc: Oil Conservation Division - Hobbs  
File: 4th Quarter PSI-X; PMX-173



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

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

April 15, 1997

Texaco Exploration & Production, Inc.  
P.O. Box 730  
Hobbs, New Mexico 88241-0730

Attn: Mr. Siamak Safargar

**RE:   Injection Pressure Increase,  
        Vacuum Grayburg San Andres Waterflood Unit,  
        Lea County, New Mexico**

Dear Mr. Safargar:

Reference is made to your request dated February 17, 1997 to increase the surface injection pressure on 14 wells in the above referenced project. This request is based on step rate tests conducted on these wells between January 27 and February 14, 1997. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on several wells is justified at this time.

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

Well and Location	Maximum Surface Injection Pressure
Vacuum Grayburg San Andres Unit Well No.4 Unit Letter M, Section 1, Township 18 South, Range 34 East	1500 PSIG
Vacuum Grayburg San Andres Unit Well No.16 Unit Letter I, Section 2, Township 18 South, Range 34 East	1480 PSIG
Vacuum Grayburg San Andres Unit Well No.18 Unit Letter K, Section 1, Township 18 South, Range 34 East	1930 PSIG
Vacuum Grayburg San Andres Unit Well No.30 Unit Letter K, Section 2, Township 18 South, Range 34 East	1400 PSIG
Vacuum Grayburg San Andres Unit Well No.32 Unit Letter L, Section 1, Township 18 South, Range 34 East	1730 PSIG
Vacuum Grayburg San Andres Unit Well No.44 Unit Letter F, Section 2, Township 18 South, Range 34 East	2100 PSIG

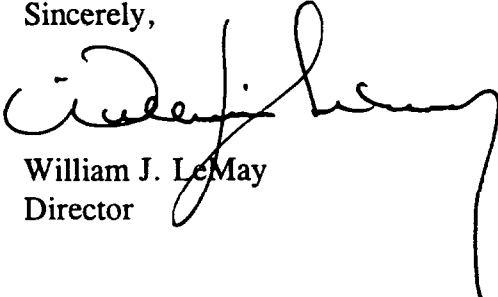
*Injection Pressure Increase  
Texaco Exploration & Production, Inc.  
April 15, 1997  
Page 2*

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<b>Well and Location</b>	<b>Maximum Surface Injection Pressure</b>
Vacuum Grayburg San Andres Unit Well No.59 Unit Letter E, Section 2, Township 18 South, Range 34 East	2370 PSIG
Vacuum Grayburg San Andres Unit Well No.60 Unit Letter D, Section 2, Township 18 South, Range 34 East	1720 PSIG
Vacuum Grayburg San Andres Unit Well No.62 Unit Letter C, Section 2, Township 18 South, Range 34 East	1745 PSIG
Vacuum Grayburg San Andres Unit Well No.63 Unit Letter B, Section 2, Township 18 South, Range 34 East	2115 PSIG
Vacuum Grayburg San Andres Unit Well No.65 Unit Letter M, Section 35, Township 17 South, Range 34 East	1935 PSIG
Vacuum Grayburg San Andres Unit Well No.67 Unit Letter L, Section 35, Township 17 South, Range 34 East	2050 PSIG
Vacuum Grayburg San Andres Unit Well No.146 Unit Letter B, Section 2, Township 18 South, Range 34 East	1800 PSIG
Vacuum Grayburg San Andres Unit Well No.147 Unit Letter H, Section 2, Township 18 South, Range 34 East	2030 PSIG

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,



William J. LeMay  
Director

WJL/BES

cc: Oil Conservation Division - Hobbs  
Files: 3<sup>rd</sup> Q97 PSI-X; Case File No.4852; PMXs-43, 74, 111, 120, 173



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

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

May 6, 1999

Texaco Exploration & Production, Inc.  
P.O. Box 730  
Hobbs, New Mexico 88241-0730

Attn: Mr. Siamak Safargar

**RE:   Injection Pressure Increase,  
      Vacuum Grayburg San Andres Unit Waterflood Project,  
      Lea County, New Mexico**

Dear Mr. Safargar:

Reference is made to your request dated April 12, 1999 to increase the surface injection pressure on 5 wells in the above referenced project. This request is based on step rate tests conducted on these wells between March 17 and April 1, 1999. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on several wells is justified at this time.

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

Well and Location	Maximum Surface Injection Pressure
Vacuum Grayburg San Andres Unit Well No.16 Unit Letter I, Section 2, Township 18 South, Range 34 East	1575 PSIG
Vacuum Grayburg San Andres Unit Well No.46 Unit Letter H, Section 2, Township 18 South, Range 34 East	2090 PSIG
Vacuum Grayburg San Andres Unit Well No.60 Unit Letter D, Section 2, Township 18 South, Range 34 East	2110 PSIG
Vacuum Grayburg San Andres Unit Well No.62 Unit Letter C, Section 2, Township 18 South, Range 34 East	2060 PSIG
Vacuum Grayburg San Andres Unit Well No.146 Unit Letter B, Section 2, Township 18 South, Range 34 East	1990 PSIG

*Injection Pressure Increase*  
*Texaco Exploration & Production, Inc.*  
*May 6, 1999*  
*Page 2*

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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,

A handwritten signature in black ink, appearing to read "Lori Wrotenbery". The signature is fluid and cursive, with a large, stylized "L" and "W".

Lori Wrotenbery  
Director

LW/MWA/kv

cc: Oil Conservation Division - Hobbs /  
Files: 3<sup>rd</sup> QTR 99 PSI-X; Case File No.4852; PMXs-43, 74, 111, 120, 173



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
**Oil Conservation Division**

October 19, 2000

Texaco Exploration & Production, Inc.  
P.O. Box 3109  
Midland, Texas 79701

Attn: Mr. Stephen Guillot

**RE:   *Injection Pressure Increase,  
VGSAU Well No. 30 (API No. 30-025-24307)  
Lea County, New Mexico***

Reference is made to your request dated October 12, 2000 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on October 4, 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:

<b><i>Well and Location</i></b>	<b><i>Maximum Surface Injection Pressure Water</i></b>
<b><i>VGSAU Well No. 30 Unit K, Section 2, Township 18 South, Range 34 East</i></b>	<b><i>2000 PSIG</i></b>
<b><i>Lea County, New Mexico.</i></b>	

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.

*Injection Pressure Increase*  
*Texaco Exploration & Production, Inc.*  
*October 19, 2000*  
*Page 2*

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Sincerely,

*Lori Wrotenbery by MWA*

Lori Wrotenbery  
Director

LW/MWA/kv

cc: Oil Conservation Division - Hobbs

Files: Case No. 4852 (Order No. R-4442); PMX's 43, 74, 111, 120, 173; IPI 4<sup>th</sup> QTR-  
2000



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6614  
Order No. R-6094

APPLICATION OF TEXACO INC. FOR  
THE AMENDMENT OF ORDER NO. R-4442,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 8, 1979,  
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 10th day of September, 1979, the Division  
Director, having considered the testimony, the record, and the  
recommendations of the Examiner, and being fully advised in the  
premises,

FINDS:

(1) That due public notice having been given as required  
by law, the Division has jurisdiction of this cause and the  
subject matter thereof.

(2) That the applicant, Texaco Inc., seeks the amendment  
of Order No. R-4442 to remove the top unit allowable restriction  
from producing wells in the Vacuum Grayburg San Andres Unit  
which are offset by "lease line" injection wells.

(3) That the applicant is conducting a pressure maintenance  
project in said Vacuum Grayburg San Andres Unit Area.

(4) That lease line injection wells are in operation along  
or around over 50 percent of the unit boundary.

(5) That the top unit allowable restrictions for producing  
wells along the border of said Vacuum Grayburg San Andres Unit  
should be removed.

(6) That Rule 3 of the Special Rules and Regulations for the Texaco Inc. Vacuum Grayburg San Andres Pressure Maintenance Project as promulgated by Division Order No. R-4442 should be amended to read in its entirety as follows:

"RULE 3. That the project area allowable may be produced from any well within the project area in any proportion provided, however, that any proration unit situated on the boundary of the Vacuum Grayburg San Andres Unit which proration unit is not directly or diagonally offset by a San Andres injection well located either closer to the boundary of or outside the Vacuum Grayburg San Andres Unit shall not be permitted to produce in excess of 80 barrels of oil per day until it has been established after notice and hearing that such well has experienced a substantial response to water injection."

IT IS THEREFORE ORDERED:

(1) That effective September 1, 1979, Rule 3 of the Special Rules and Regulations for the Texaco Inc. Vacuum Grayburg San Andres Pressure Maintenance Project as promulgated by Division Order No. R-4442 is hereby amended to read in its entirety as follows:

"RULE 3. That the project area allowable may be produced from any well within the project area in any proportion provided, however, that any proration unit situated on the boundary of the Vacuum Grayburg San Andres Unit which proration unit is not directly or diagonally offset by a San Andres injection well located either closer to the boundary of or outside the Vacuum Grayburg San Andres Unit shall not be permitted to produce in excess of 80 barrels of oil per day until it has been established after notice and hearing that such well has experienced a substantial response to water injection."

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY  
Director

S E A L  
fd/

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 7591  
Order No. R-7010

APPLICATION OF TEXACO, INC. FOR  
AMENDMENT OF DIVISION ORDER NO.  
R-4442 AND APPROVAL OF A TERTIARY  
OIL RECOVERY PROJECT UNDER THE CRUDE  
OIL WINDFALL PROFITS TAX ACT OF 1980,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 26, 1982,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 30th day of June, 1982, the Division  
Director, having considered the testimony, the record, and the  
recommendations of the Examiner, and being fully advised in the  
premises,

FINDS:

- (1) That due public notice having been given as required  
by law, the Division has jurisdiction of this cause and the  
subject matter thereof.
- (2) That the applicant, Texaco, Inc., seeks authority to  
convert its Vacuum Grayburg-San Andres pressure maintenance  
project to a polymer-augmented waterflood, and pursuant to  
Section 212.78 of the United States Department of Energy  
Regulations and Section 4993 of the Internal Revenue Code seeks  
certification of said project as a Qualified Tertiary Oil  
Recovery Project.
- (3) That said pressure maintenance project lies within the  
Vacuum Grayburg-San Andres Pool, Lea County, New Mexico.
- (4) That said pool was discovered in May, 1929, by Socony  
Vacuum Oil Company, experienced substantial development  
thereafter with waterflooding being initiated during 1973.
- (5) That Texaco, Inc., Vacuum Grayburg-San Andres Pressure  
Maintenance Project, consisting of approximately 1486 acres was

approved by said Division Order No. R-4442 on November 27, 1972 and water injection was commenced within said Project beginning in 1973.

(6) That the applicant now seeks approval for the installation of tertiary recovery polymer-augmented waterflood by the injection of polyacrylamide polymers into 25 project wells, and the designation of a qualifying tertiary recovery project area covering said pressure maintenance project.

(7) That the New Mexico Oil Conservation Division has been designated by the Governor of the State of New Mexico as the appropriate agency to approve Qualified Tertiary Recovery Projects in New Mexico for purpose of the Crude Oil Windfall Profits Tax Act of 1980.

(8) That the proposed Qualifying Tertiary Project Area (QTP Area) lies wholly within said Vacuum Grayburg-San Andres Pressure Maintenance Project in the Texaco Vacuum Grayburg San Andres Unit Area and consists of the following described acreage:

TOWNSHIP 17 SOUTH, RANGE 34, EAST, NMPM  
Section 35: E/2 SW/4

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM  
Sections 1 and 2: All  
Section 11: NE/4 NE/4  
Section 12: N/2 NW/4

containing 1486 acres more or less.

(9) The proposed project is a tertiary recovery method described in Section 212.78(c) of the Department of Energy Regulations, and as defined in Section 4993(d)(1) of the Internal Revenue Code, and Section 150.4933-1(c).

(10) The proposed Tertiary Recovery Project is expected to result in the recovery of an additional 1,700,000 barrels of crude oil which the Division finds is more than an insignificant increase in the ultimate recovery of crude oil.

(11) The injection of polyacrylamide polymers will improve mobility ratio and vertical conformance, and the Texaco QTP Area project is designed, and will be operated, in accordance with sound engineering principles.

(12) The entire Vacuum Grayburg-San Andres Pressure Maintenance Project will be affected and it is adequately delineated.

(13) That the QTP Area tertiary recovery operations beginning date is after May, 1979, as scheduled polymer injection will begin during July, 1982.

(14) That past production from the Vacuum Grayburg-San Andres Pool underlying the Vacuum Grayburg-San Andres Unit Area is 33,440,000 barrels through June 30, 1982. Future recovery without the proposed tertiary recovery project is estimated to be 30,390,000 barrels of oil. With the proposed tertiary recovery project an additional 1,700,000 barrels of oil will be recovered resulting in a total production of 32,090,000 barrels of oil.

(15) The Vacuum Grayburg-San Andres Unit presently has thereon 46 producing wells, 13 injection wells and 3 shut-in production wells, and 1 water supply well. Twelve production wells will be converted to injection wells which will change the injection pattern from an inverted nine spot to a five spot with 40 acre injection patterns. In addition, lease line injections are also planned along the northwestern unit boundary. All injection wells located in the Vacuum Grayburg-San Andres Unit will receive polymer-augmented injection.

(16) The projected future expense for the proposed tertiary project is nine million six hundred forty thousand dollars (\$9,640,000) for the cost of the polymer and ninety thousand dollars (\$90,000) for polymer handling equipment.

(17) That the proposed tertiary recovery operations within said QTP Area meet all requirements of Section 4993 of the Internal Revenue Code.

(18) That the approval of this application will prevent waste, protect correlative rights and promote conservation, provided however, that the production limitation provisions of Rules 2 through 6 of Division Order No. R-4442, dated November 27, 1972, as amended by Division Order No. R-6094, dated September 1, 1979, should remain in effect.

IT IS THEREFORE ORDERED:

(1) That effective July 1, 1982, the Qualifying Tertiary Recovery Project Area, described in Finding No. (8) of this Order, being The Texaco Inc. Vacuum Grayburg-San Andres Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, is hereby approved as a Qualified Tertiary Recovery Project under the Crude Oil Windfall Profits Tax Act of 1980.

(2) That the applicant, Texaco Inc., is hereby authorized to inject water and polyacrylamide polymers into the approved

-4-  
Case No. 7591  
Order No. R-7010

injection wells in this unit, and that Division Order No. R-4442 dated November 27, 1972, is hereby amended to allow the injection of said polymers.

IT IS FURTHER ORDERED:

(1) That the production limitation provisions of Rules 2 through 6 of Division Order No. R-4442, as amended by Division Order No. R-6094, shall remain in full force and effect until further order of the Division.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY,  
Director

S E A L

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

CASE NO. 7591  
Order No. R-7010-A

APPLICATION OF TEXACO, INC. FOR  
AMENDMENT OF DIVISION ORDER NO.  
R-4442 AND APPROVAL OF A TERTIARY  
OIL RECOVERY PROJECT UNDER THE CRUDE  
OIL WINDFALL PROFITS TAX ACT OF 1980,  
LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-7010, dated June 30, 1982, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Finding No. (8) on page 2 of Order No. R-7010 is hereby amended to read in its entirety as follows:

"(8) That the proposed Qualifying Tertiary Project Area (QTP Area) lies wholly within said Vacuum Grayburg-San Andres Pressure Maintenance Project in the Texaco Vacuum Grayburg San Andres Unit Area and consists of the following described acreage:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM  
Section 35: W/2 SW/4

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM  
Sections 1 and 2: All  
Section 11: NE/4 NE/4  
Section 12: N/2 NW/4

containing 1486 acres more or less."

(2) That the corrections set forth in this order be entered nunc pro tunc as of June 30, 1982.

DONE at Santa Fe, New Mexico, on this 30th day of November, 1982.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY  
Director

S E A L  
fd/

APPLICATION OF TEXACO INC. TO EXPAND ITS  
PRESSURE MAINTENANCE PROJECT IN THE  
VACUUM GRAYBURG-SAN ANDRES POOL IN  
LEA COUNTY, NEW MEXICO

ORDER No. PMX-120

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Order No. R-4442, Texaco Inc. has made application to the Division on November 2, 1982, for permission to expand its Vacuum Grayburg-San Andres Unit Pressure Maintenance Project in the Vacuum Grayburg-San Andres Pool in Lea County, New Mexico.

NOW, on this 17th day of November, 1982, the Division Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701 B.
4. That the proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above referenced pressure maintenance project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Texaco Inc, be and the same is hereby authorized to inject water into Grayburg-San Andres formations through plastic-lined tubing set in a packer at approximately 50 feet above the top most perforations in the following described wells for purposes of pressure maintenance to wit:

- Vacuum Grayburg San Andres Unit Well No. 18, K-1-18S-34E;
- ✓ Vacuum Grayburg San Andres Unit Well No. 62, C-2-18S-34E;
- ✓ Vacuum Grayburg San Andres Unit Well No. 63, B-2-18S-34E;
- ✓ Vacuum Grayburg San Andres Unit Well No. 65, M-35-17S-34E;
- ✓ Vacuum Grayburg San Andres Unit Well No. 67, L-35-17S-34E;

all in Lea County, New Mexico.

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.

That the casing-tubing annulus (in each well) shall be loaded with an inert fluid and



at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That the injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure to a maximum of 875 pounds per square inch; provided however that the Division Director may administratively authorize a pressure limitation in excess of the above upon the operator's establishing that such higher pressure will not result in fracturing of the confining strata.

That the operator shall notify the supervisor of the Division's Hobbs District Office before injection is commenced through said wells.

That the operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing, or packer in said wells or the leakage of water from or around said wells and shall take such steps as may be timely or necessary to correct such failure or leakage.

That the subject wells shall be governed by all provisions of Division Order No. R-4442 and Rules 702, 703, 704, 705 and 706 not inconsistent herewith.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY,  
Division Director

S E A L



BRUCE KING  
GOVERNOR

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

RSR	JLA
MCA	JWB
DDO	MLG
RRD	PLH
MCD	PDH
REH	JDL
LWJ	CPM
WTL	MGR
OLM	SDU
RTM	JY
TWM	
LDR	HMC
RJR	OLH
CES	RWB

2-17-92

WELL FILE



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

ADMINISTRATIVE ORDER NO. PMX-167

**APPLICATION OF TEXACO EXPLORATION & PRODUCTION, INC. 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**

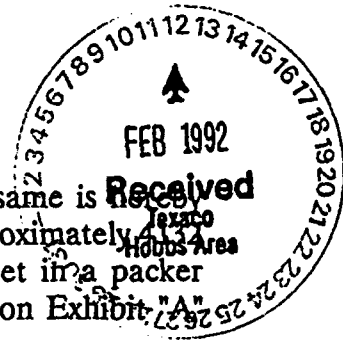
Under the provisions of Division Order No. R-4442, Texaco Exploration & Production, Inc. has made application to the Division on January 27, 1992, for permission to expand its Vacuum Grayburg San Andres Pressure Maintenance Project in the Vacuum Grayburg San Andres Pool in Lea County, New Mexico.

**THE DIVISION DIRECTORS 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 well is eligible for conversion to water injection under the terms of Rule 701.
- (5) The proposed expansion of the above-referenced Vacuum Grayburg San Andres Pressure Maintenance Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Texaco Exploration & Production, Inc., be and the same is authorized to inject water into the Grayburg - San Andres formation at approximately 4690 feet to approximately 4690 feet through 2 3/8 inch plastic lined tubing set in a packer located within 100 feet of the uppermost perforations in the wells shown on Exhibit "A" attached hereto for purposes of pressure maintenance to wit.



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 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/ft. of depth to the uppermost perforation.

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 - 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 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 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-4442 and Rules 701-708 of the Division Rules and Regulations not inconsistent herewith.

Administrative Order PMX-167  
Texaco Exploration & Production, Inc.  
February 10, 1992  
Page 3

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.

Approved at Santa Fe, New Mexico, on this 10th day of February, 1992.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

jc\

cc: OCD - Hobbs  
U.S. BLM - Carlsbad