

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3086
Order No. R-2748

APPLICATION OF TEXACO INC.
FOR A WATERFLOOD PROJECT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 22, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 29th day of July, 1964, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Texaco Inc., seeks permission to institute a waterflood project in the Rhodes Yates Oil Pool by the injection of water into the Yates and Seven Rivers formations through two injection wells in Section 26, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

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CASE No. 3086

Order No. R-2748

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the Rhodes Yates Oil Pool by the injection of water into the Yates and Seven Rivers formations through the following-described wells in Section 26, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico:

W. H. Rhodes "b" (NCT-1) Well No. 7, Unit L
W. H. Rhodes "b" (NCT-1) Well No. 10, Unit N

(2) That the subject waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

E. S. WALKER, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

esr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4271
Order No. R-2748-A

APPLICATION OF TEXACO INC. FOR A
WATERFLOOD EXPANSION AND AMENDMENT
OF ORDER NO. R-2748, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 25, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 3rd day of December, 1969, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Texaco Inc., is the operator of the Texaco Rhodes "B" Federal Waterflood Project in the Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico, approved by Commission Order No. R-2748.

(3) That the applicant now seeks authority to expand said waterflood project by the injection of water into the Yates and Seven Rivers formations through three additional wells in Units B, H, and P of Section 27, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(4) That the applicant further seeks to institute an additional waterflood project in said pool by the injection of

water into the Yates and Seven Rivers formations through one well located in Unit N of Section 22 of said Township and Range.

(5) That the wells in the project areas are in an advanced state of depletion and should properly be classified as "stripper" wells.

(6) That the proposed expansion of the Rhodes "B" Federal Waterflood Project authorized by said Order No. R-2748 and the institution of the proposed new waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) That the applicant further seeks the establishment of an administrative procedure whereby said projects could be expanded to include additional lands and injection wells in the area of said projects as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

(8) That the subject application should be approved and the projects should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to expand its Rhodes "B" Federal Waterflood Project in the Rhodes (Yates-Seven Rivers) Pool, authorized by Order No. R-2748, by the injection of water into the Yates and Seven Rivers formations through the following-described three additional wells in Section 27, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico:

W. H. Rhodes "b" (NCT-1) Well No. 5 located in Unit B
W. H. Rhodes "b" (NCT-1) Well No. 4 located in Unit H
W. H. Rhodes "b" (NCT-1) Well No. 9 located in Unit P

(2) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the Rhodes (Yates-Seven Rivers)

Pool, to be designated the Texaco Rhodes "A" Federal Waterflood Project, by the injection of water into the Yates and Seven Rivers formations through its W. H. Rhodes "A" Federal Well No. 4 located in Unit N of Section 22, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the subject waterflood projects shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the above-described waterflood projects to include such additional lands and injection wells in the area of said projects as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

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

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

STATE OF NEW MEXICO,
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

esr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4936
Order No. R-4521

APPLICATION OF TEXACO INC. FOR
A WATERFLOOD PROJECT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 11, 1973, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 17th day of May, 1973, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Texaco Inc., seeks authority to institute a waterflood project in the Rhodes Yates Unit Area, Rhodes-Yates Pool, by the injection of water into the Yates-Seven Rivers formations through seven injection wells in Sections 21, 27 and 28, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the Rhodes Yates Unit Area, Rhodes-Yates Pool, by the injection of water into the Yates-Seven Rivers formations through the following-described seven wells in Township 26 South, Range 37 East, NMPM, Lea County, New Mexico:

<u>LEASE</u>	<u>WELL NO.</u>	<u>LOCATION</u>
State "JD" Unit	2	660' FNL and 660' FWL, Sec. 27
State "JD" Unit	4	650' FNL and 2310' FWL, Sec. 27
N.M. "AD" State	1	660' FNL and 1980' FWL, Sec. 28
Morris	2	1980' FNL and 660' FWL, Sec. 27
Morris	3	990' FSL and 2970' FEL, Sec. 27
State "A" 28	1	1980' FNL and 660' FEL, Sec. 28
H.G. Moberly "C"	3	660' FSL and 660' FEL, Sec. 21

(NCT-2)

(2) That injection into each of said wells shall be through internally plastic-coated tubing set in a packer which shall be located as near as is practicable to the uppermost perforation, or in the case of open-hole completions, as near as is practicable to the casing-shoe; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface.

(3) That the subject waterflood project is hereby designated the Texaco Rhodes-Yates Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

S E A L

ALEX J. ARMIJO, Member

dr/

A. L. PORTER, Jr., Member & Secretary

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

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

**CASE NO. 10572
Order No. R-9847**

**APPLICATION OF TEXACO EXPLORATION
& PRODUCTION INC. FOR WATERFLOOD
EXPANSION, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on February 4, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 17th day of February, 1993, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) Division Case Nos. 10572 and 10573 were consolidated at the time of the hearing for the purpose of testimony.

(3) By Order No. R-2748 dated July 29, 1964, the Division authorized Texaco Inc. to institute a waterflood project on its W. H. Rhodes "B" Federal (NCT-1) Lease, comprising portions of Sections 26 and 27, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Rhodes Yates-Seven Rivers Pool through two initial injection wells.

(4) The applicant, Texaco Exploration & Production Inc., seeks authority to expand its W. H. Rhodes "B" Federal Waterflood Project by converting the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13 located, respectively, 1980 feet from the South line and 660 feet from the East line (Unit D), and 990 feet from the South line and 1650 feet from the East line (Unit O), both in Section 27, Township 26 South, Range 37 East, NMPM, Rhodes Yates-Seven Rivers Pool, Lea County, New Mexico, from producing oil wells to water injection wells.

(5) The application to expand the W. H. Rhodes "B" Federal Waterflood Project was originally filed on August 31, 1992, for Division administrative approval; however, an objection to the proposed expansion from Doyle Hartman, Oil Operator, necessitated the placement of this application on the Division Examiner Docket.

(6) Doyle Hartman, Oil Operator, appeared through counsel at the hearing but presented no evidence or testimony in this case.

(7) The W. H. Rhodes "B" Federal Waterflood Project is located directly adjacent to the applicant's Rhodes Yates Unit Waterflood Project, approved by Division Order No. R-4521 and located in portions of Sections 21, 27 and 28, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(8) Within the W. H. Rhodes "B" Federal (NCT-1) Well No. 6, the applicant proposes to inject water into the Rhodes Yates-Seven Rivers Pool through the perforated and open hole interval from approximately 3,048 feet to 3,300 feet.

(9) Within the W. H. Rhodes "B" Federal (NCT-1) Well No. 13, the applicant proposes to inject into the Rhodes Yates-Seven Rivers Pool through the perforated and open hole interval from approximately 3,050 feet to 3,327 feet.

(10) The proposed waterflood expansion, effectively carried out in conjunction with the drilling of infill producing wells, will enable the applicant to establish an efficient production and injection pattern which should result in the recovery of additional oil reserves from the project area, thereby preventing waste.

(11) The applicant should 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 from injection, production, or plugged and abandoned wells.

(12) The injection of water into the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13 should be accomplished through 2 3/8-inch internally cement-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(13) Prior to commencing injection operations into the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(14) The injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 610 psi.

(15) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described in Finding No. (14) above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(16) The operator should give advance notification to 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 pressure tests in order that the same may be witnessed.

(17) The proposed waterflood expansion should be approved and waterflood operations should be governed by the provisions of Division Order No. R-2748 and Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Texaco Exploration & Production Inc., is hereby authorized to expand its W. H. Rhodes "B" Federal Waterflood Project by converting the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13 located, respectively, 1980 feet from the South line and 660 feet from the East line (Unit I), and 990 feet from the South line and 1650 feet from the East line (Unit O), both in Section 27, Township 26 South, Range 37 East, NMPM, Rhodes Yates-Seven Rivers Pool, Lea County, New Mexico, from producing oil wells to water injection wells.

(2) Injection into the W. H. Rhodes "B" Federal (NCT-1) Well No. 6 shall occur into the perforated and open hole interval from approximately 3,048 feet to 3,300 feet, and injection into the W. H. Rhodes "B" Federal (NCT-1) Well No. 13 shall occur into the perforated and open hole interval from approximately 3,050 feet to 3,327 feet.

(3) The applicant 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 from injection, production, or plugged and abandoned wells.

(4) Injection into the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13 shall be accomplished through 2 3/8-inch internally cement-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(5) Prior to commencing injection operations into the W. H. Rhodes "B" Federal (NCT-1) Well Nos. 6 and 13, the casing in each well shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(6) The injection wells or pressurization system shall be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 610 psi.

(7) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(8) The operator shall give advance notification to 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 pressure tests in order that the same may be witnessed.

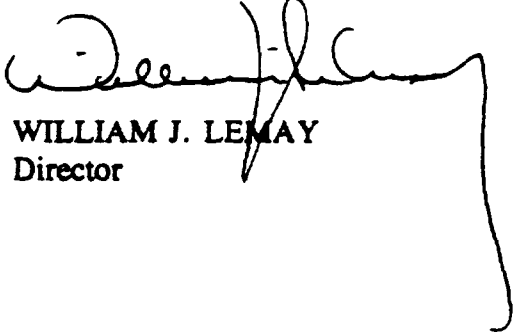
(9) Waterflood operations shall be governed by the provisions of Division Order No. R-2748 and Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(10) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

CASE NO. 10572
Order No. R-9847
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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the printed name and title. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

WILLIAM J. LEMAY
Director

S E A L

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

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

**CASE NO. 10573
Order No. R-9848**

**APPLICATION OF TEXACO EXPLORATION
& PRODUCTION INC. FOR WATERFLOOD
EXPANSION, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on February 4, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 18th day of February, 1993, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) Division Case Nos. 10572 and 10573 were consolidated at the time of the hearing for the purpose of testimony.

(3) By Order No. R-4521 dated May 17, 1973, the Division authorized Texaco Inc. to institute a waterflood project in its Rhodes Yates Unit Area, comprising portions of Sections 21, 27 and 28, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Rhodes Yates-Seven Rivers Pool through seven initial injection wells.

(4) The applicant, Texaco Exploration & Production Inc., seeks authority to expand its Rhodes Yates Unit Waterflood Project by converting the Rhodes Yates Unit Well Nos. 8 and 13 located, respectively, 1875 feet from the North line and 765 feet from the West line (Unit E), and 660 feet from the South and West lines (Unit M), both in Section 27, Township 26 South, Range 37 East, NMPM, Rhodes Yates-Seven Rivers Pool, Lea County, New Mexico, from producing oil wells to water injection wells.

(5) The application to expand the Rhodes Yates Unit Waterflood Project was originally filed on August 31, 1992, for Division administrative approval, however, an objection to the proposed expansion from Doyle Hartman, Oil Operator, necessitated the placement of this application on the Division Examiner Docket.

(6) Doyle Hartman, Oil Operator, appeared through counsel at the hearing but presented no evidence or testimony in this case.

(7) The Rhodes Yates Unit Waterflood Project is located directly adjacent to the applicant's W. H. Rhodes "B" Federal Waterflood Project approved by Division Order No. R-2748 and located in portions of Sections 26 and 27, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(8) Within the Rhodes Yates Unit Well No. 8, the applicant proposes to inject water into the Rhodes Yates-Seven Rivers Pool through the perforated and open hole interval from approximately 3,092 feet to 3,320 feet.

(9) Within the Rhodes Yates Unit Well No. 13, the applicant proposes to inject into the Rhodes Yates-Seven Rivers Pool through the perforated interval from approximately 3,167 feet to 3,349 feet.

(10) The proposed waterflood expansion, effectively carried out in conjunction with the drilling of infill producing wells, will enable the applicant to establish an efficient production and injection pattern which should result in the recovery of additional oil reserves from the project area, thereby preventing waste.

(11) The applicant should 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 from injection, production, or plugged and abandoned wells.

(12) The injection of water into the Rhodes Yates Unit Well Nos. 8 and 13 should be accomplished through 2 3/8-inch internally cement-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(13) Prior to commencing injection operations into the Rhodes Yates Unit Well Nos. 8 and 13, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(14) The injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 610 psi.

(15) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described in Finding No. (14) above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(16) The operator should give advance notification to 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 pressure tests in order that the same may be witnessed.

(17) The proposed waterflood expansion should be approved and waterflood operations should be governed by the provisions of Division Order No. R-4521 and Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Texaco Exploration & Production Inc., is hereby authorized to expand its Rhodes Yates Unit Waterflood Project by converting the Rhodes Yates Unit Well Nos. 8 and 13 located, respectively, 1875 feet from the North line and 765 feet from the West line (Unit E), and 660 feet from the South and West lines (Unit M), both in Section 27, Township 26 South, Range 37 East, NMPM, Rhodes Yates-Seven Rivers Pool, Lea County, New Mexico, from producing oil wells to water injection wells.

(2) Injection into the Rhodes Yates Unit Well No. 8 shall occur into the perforated and open hole interval from approximately 3,092 feet to 3,320 feet, and injection into the Rhodes Yates Unit Well No. 13 shall occur into the perforated interval from approximately 3,167 feet to 3,349 feet.

(3) The applicant 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 from injection, production, or plugged and abandoned wells.

(4) Injection into the Rhodes Yates Unit Well Nos. 8 and 13 shall be accomplished through 2 3/8-inch internally cement-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(5) Prior to commencing injection operations into the Rhodes Yates Unit Well Nos. 8 and 13, the casing in each well shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(6) The injection wells or pressurization system shall be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 610 psi.

(7) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

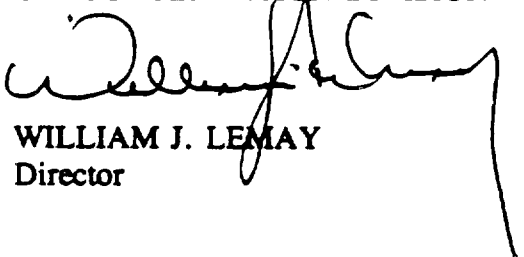
(8) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure tests in order that the same may be witnessed.

(9) Waterflood operations shall be governed by the provisions of Division Order No. R-4521 and Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(10) Jurisdiction is hereby 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



WILLIAM J. LEMAY
Director



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



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

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

ADMINISTRATIVE ORDER NO. WFX-645

APPLICATION OF TEXACO EXPLORATION AND PRODUCTION, INC. TO EXPAND ITS W.H. RHODES "B" FEDERAL UNIT WATERFLOOD PROJECT IN THE RHODES YATES SEVEN RIVERS POOL IN LEA COUNTY, NEW MEXICO

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order Nos. R-2748, R-2748-A and R-9847, Texaco Exploration and Production, Inc. has made application to the Division on April 15, 1993 for permission to expand its W.H. Rhodes "B" Federal Unit Waterflood Project in the Rhodes Yates Seven Rivers 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 W.H. Rhodes "B" Federal Unit Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Texaco Exploration and Production, Inc., be and the same is hereby authorized to inject water into the Yates and Seven Rivers formations at approximately 3000 feet to approximately 3318 feet through 2 3/8 or 2 7/8-inch plastic lined tubing set in a packer within 100 feet of the uppermost perforations in the wells further described in 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 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 .2 psi/ft. of depth to the uppermost injection perforation.

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 Yates and Seven Rivers 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 tests so that the same may be inspected and witnessed.

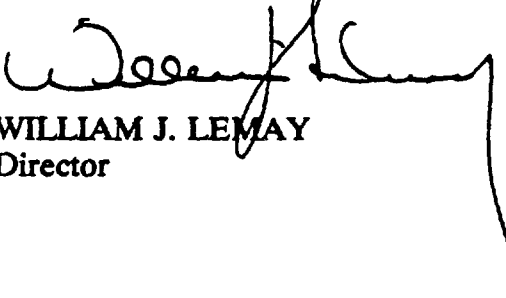
The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order Nos. R-2748, R-2748-A and R-9847 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.

DONE at Santa Fe, New Mexico, on this 17th day of June, 1993.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

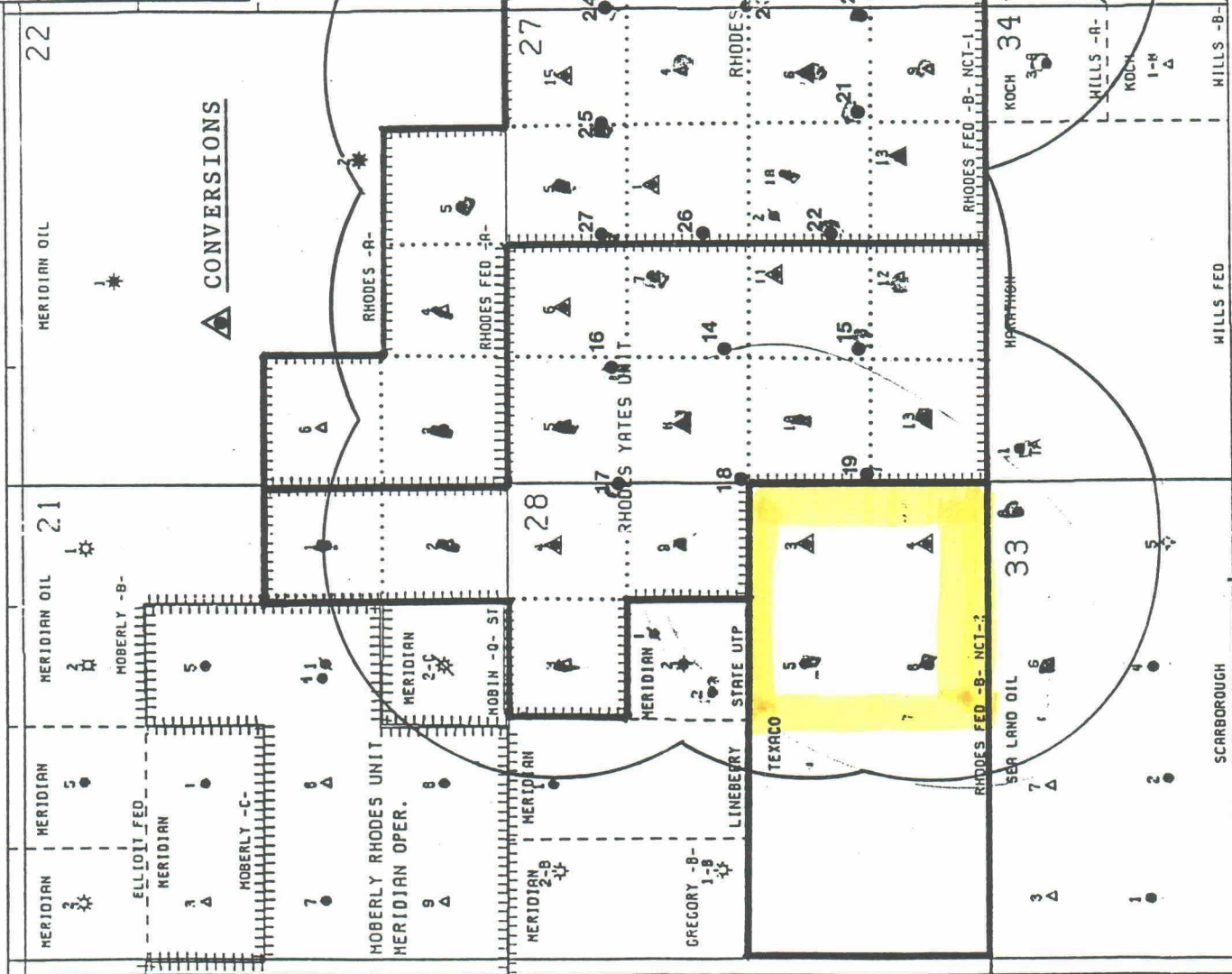
cc: Oil Conservation Division - Hobbs
US Bureau of Land Management - Carlsbad

EXHIBIT "A"
DIVISION ORDER NO. WFX-645

TEXACO EXPLORATION AND PRODUCTION, INC.
W.H. RHODES "B" FEDERAL UNIT WATERFLOOD
LEA COUNTY, NEW MEXICO

APPROVED INJECTION WELLS

<i>Well Name</i>	<i>Well No.</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>	<i>Injection Perforations</i>	<i>Packer Depth</i>	<i>Tubing Size</i>	<i>Injection Pressure (psig)</i>
W.H. Rhodes "B" Fed. NCT-1	1	1650' FNL- 1650' FEL	G	27-26S-37E	3071' - 3260' (OH)	3050'	2 3/8"	614
"	8	660' FSL - 660' FWL	M	26-26S-37E	3128' - 3255' (OH)	3100'	2 3/8"	626
"	14	1980' FNL - 864' FWL	E	26-26S-37E	3000' - 3200	2980'	2 3/8"	600
"	15	660' FNL - 660' FEL	A	27-26S-37E	3080' - 3195'	3050'	2 3/8"	617
W.H. Rhodes "B" Fed. NCT-2	3	1980' FSL - 660' FEL	I	28-26S-37E	3116' - 3300' (OH)	3080'	2 7/8"	623
"	4	660' FSL - 660' FEL	P	28-26S-37E	3122' - 3318'	3100'	2 3/8"	624



STATUTE MILES	0	100	200	300	400	500 FEET
112000						
	.1	.2	.3	.4	.5	STATUTE MILES