

CASE 4236: Application of TEXACO  
FOR A WATERFLOOD PROJECT, LEA  
COUNTY, NEW MEXICO.

CASE No.

4936

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Application,

Transcripts,

Small Exhibits

ETC.

dearnley, meier & mc cormick

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
OIL CONSERVATION COMMISSION CONFERENCE ROOM  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO  
April 11, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc. for  
dissolution of a unit and approval  
of another unit, Lea County, New  
Mexico; and application for a  
waterflood project, Lea County,  
New Mexico.

Cases No. 4935 and 4936

BEFORE: Elvis A. Utz  
Examiner

TRANSCRIPT OF HEARING

1 MR. UTZ: Mr. Bateman, is the extent of 4935 and 4936  
2 the same?

3 MR. BATEMAN: Yes, it is, it's identical.

4 MR. UTZ: One is for dissolution and one is for enlarge-  
5 ment of the pool?

6 MR. BATEMAN: One for enlarging the unit and the esta-  
7 blishment of a waterflood project.

8 MR. UTZ: Call Cases 4935 and 4936.

9 MR. CARR: Case 4935, Application of Texaco, Inc. for  
10 dissolution of a unit and approval of another unit, Lea  
11 County, New Mexico. Case 4936, Application of Texaco, Inc.  
12 for a waterflood project, Lea County, New Mexico.

13 MR. UTZ: These cases will be consolidated for purposes  
14 of testimony, separate orders will be written.

15 Let the record show that the witness, Ken Peters, was  
16 sworn in previous cases.

17 MR. BATEMAN: Mr. Examiner, I am Ken Bateman of White,  
18 Koch, Kelly & McCarthy appearing for the Applicant.

19 DIRECT EXAMINATION

20 BY MR. BATEMAN:

21 Q Mr. Peters, would you please state your name and position  
22 for the record?

23 A My name is Kenneth Peters, I am employed by Texaco,  
24 Incorporated, in the Hobbs District Office as District  
25 Production Engineer.

1 Q As a part of your employment, are you familiar with the  
2 area in question and the two applications?

3 A Yes, sir, I am.

4 Q All right. Would you refer to Exhibit No. 1 which is an  
5 ownership map, and explain in detail what Texaco seeks by  
6 its application?

7 A In this application, Texaco makes the following recommenda-  
8 tions: That it be permitted to initiate secondary recovery  
9 operations of the 520 acres located in portions of Section  
10 21, 27, and 28, Township 26 South, Range 37 East, Lea  
11 County, New Mexico, consisting of both federal and state  
12 lands and the proposed project will consist of a total of  
13 12 wells located in the Rhodes Yates Pool. Texaco seeks  
14 that the State "JD" Unit operated by Texaco and authorized  
15 by Commission Order No. R-3889 on December 2, 1969, be  
16 resolved, and that Texaco be permitted to initiate secondary  
17 recovery operations in the proposed project by converting  
18 six producing wells to injection and drilling one injection  
19 well and one producing well on orthodox locations, and  
20 that Texaco be authorized to include additional lands and  
21 injection wells in the area of the project without hearing,  
22 subject to administrative approval of the Commission. It  
23 would be recommended that the proposed secondary recovery  
24 project be authorized and governed by the provisions of  
25 Rules 701, 702 and 703 of the Commission's rules and

1 regulations.

2 MR. UTZ: Just a moment, Mr. Peters. You stated that  
3 the "JD" Unit Order was 3889, I believe, and our advertisement  
4 shows 3886. Is the advertisement right or are you?

5 THE WITNESS: I will have to double check that, sir.  
6 My figures do show that it is 3889, but this can be verified  
7 and entered into the record.

8 MR. UTZ: You may proceed. We will check it out.

9 Q (By Mr. Bateman) Mr. Peters, you do seek authority to  
10 drill two new wells, is that correct?

11 A Yes, sir, that's correct.

12 Q One producer and one injection well?

13 A Yes, sir.

14 Q All right. Would you continue with Exhibit No. 2, which,  
15 I understand, is the Unit Agreement which has been proposed  
16 and executed in this matter?

17 A Yes, Exhibit No. 2 is the proposed Unit Agreement. The  
18 first page is the table of contents, or index. Of interest  
19 to this case would be Page 2, Section 2, which gives the  
20 legal description of the unit.

21 The entire unit will be in Township 26 South, Range 37  
22 East, and will include 520 acres, more or less, of the  
23 Eastern half of the Southeastern quarter of Section 21,  
24 the Western half of Section 27, and the Northern half  
25 of the Northeastern quarter and the Southeastern quarter

1 of the Northeastern quarter of Section 28. The unit  
2 unitized interval is shown on paragraph 2, section 2,  
3 paragraph (g) and it is as follows: It's defined as a  
4 stratigraphic interval in the Yates-Seven Rivers Formations  
5 encountered between the depths of 2912 feet and 3400 feet  
6 below the derrick floor elevation on the Lane Wells  
7 Radioactivity Log of the Amerada Petroleum Corporation  
8 State "JA" Well Number 2, and the corrected location would  
9 be 1875 from the North line and 765 feet from the West  
10 line of Section 27, Township 26 South, Range 37 East, Lea  
11 County, New Mexico.

12 I would refer to Exhibit 3, which is the reference log,  
13 and this depicts the top of the Yates at 2960 feet and the  
14 top of the Seven Rivers at 3245 feet. At Section 6, Page  
15 4, the Unit Agreement clearly defines that Texaco,  
16 Incorporated will be the unit operator, and I would like  
17 to also call your attention to Exhibit A of the Unit  
18 Agreement, which is in the back of this Unit Agreement.  
19 This shows a plat depicting portions of the proposed  
20 unit by tract number, showing federal and state acreage,  
21 and Exhibit B is a schedule showing the acreage comprising  
22 each tract, and percentage of the ownership, working  
23 interest ownership in each tract, together with the  
24 royalty percentage in each tract, and the ownership thereof.

25 The Commissioner of Public Lands has granted tentative

1 approval as to the form and content of the Unit Agreement  
2 on August 23, 1972, and the USGS has done likewise by  
3 letter dated October 6, 1972. At the present time there  
4 is 100% working interest signed up in the proposed unit  
5 and 100% of the over-riding royalty has been signed up.

6 Q Mr. Peters, for the record, the well referred to in  
7 Exhibit No. 3, which is the Amerada State "JA" Number 3,  
8 is well Number 3 in your State "JD" Unit, is that correct?

9 A Yes, sir, that is correct.

10 Q Which is shown on Exhibit 1?

11 A Yes, sir, and this difference was denoted when the State  
12 "JD" Unit was formed and the wells within the unit were  
13 renumbered.

14 Q All right. Continue with Exhibit No. 4, the structure map.

15 A Exhibit No. 4 is a structure map superimposed upon the  
16 proposed project area. The contour interval is in 25 feet.  
17 With this, I'll give a brief description of the field.  
18 The Rhodes Yates Pool was discovered in 1927 with produc-  
19 tion being derived from the Seven Rivers Formation and the  
20 White Horse Group, Guadalupe Upper Penn Permians, and the  
21 Rhodes is located on the Western slant on the central  
22 basin platform on the Southeastern corner of Lea County,  
23 New Mexico.

24 The Seven Rivers Formation is depicted a gray dolomite  
25 with associated thin beds of sand and the structure is



1 anticlinal trending Northwest to Southeast with oil  
2 accumulations found in stratigraphic traps formed as  
3 the sands wedge out up-dip. The Rhodes Yates Pool pro-  
4 duces by solution gas and a Gas Cap drive, and the oil is  
5 a sweet group with an average gravity of 35.1 api and  
6 the pool is in a late stage of primary depletion with  
7 many wells at or near their economic limit. To amplify  
8 this, as of February 1, 1973, the production records  
9 listed 31 wells producing from the pool. During January,  
10 1973, the pool produced 12,936 barrels of oil and 7,387  
11 barrels of water. The average GOR was 1,702 cubic feet  
12 per barrel of oil and the cumulative production, the  
13 cumulative oil production, to February 1, 1973, was  
14 6,619,568 barrels of oil.

15 Q Continue with Exhibit No. 5, if you will, and describe  
16 the project, that is, the secondary project.

17 A Okay. The proposed project area will consist of both  
18 state and federal lands. The "JD" Unit, operated by  
19 Texaco and, again, this is authorized by Commission Order  
20 R-3889, will be dissolved and included in the proposed  
21 project as can be seen in Exhibit 1. The State "JD" Unit  
22 consists of 160 acres and two producing wells and two  
23 other producing wells that were approved for conversion  
24 to injection but were never converted.

25 Injection will be on an 80-acre 5-spot pattern with an

1 anticipated initial injection rate of 1,000 barrels of  
2 water per day per well at a pressure of approximately  
3 500 psi, and the flood pattern will be completed by drilling  
4 one injection well and one producing well as shown on the  
5 base map in Exhibit 1.

6 For the record, the location of the proposed injection  
7 well, the H. G. Moberly "C", will be located 660 feet from  
8 the South line and 660 feet from the East line of Section  
9 21, Township 26 South, Range 37 East, and the producing  
10 well, the New Mexico "AD" State Well Number 3, will be  
11 located 660 feet from the North line, 660 feet from the  
12 East line, in Section 28, also Township 26 South, Range  
13 37 East.

14 All seven injection wells will be equipped with plastic  
15 coated tubing and a tension-type packer, and by referring  
16 to Exhibit No. 5, we have a typical sketch of an injection  
17 well, and this is the "JD" Unit Well Number 2. The  
18 cement is circulated on the 8 and 5/8 surface pipe and  
19 on the 5 and 1/2 inch casing, the cement top is at 1,008  
20 feet. In all wells, plastic coated tubing will be set  
21 with a tension-type packer. In this particular well, it  
22 will be at 3120 feet, a pressure gauge will be placed on  
23 the annulus of all wells, and all the annuluses will be  
24 filled with inhibited-type fluid.

25 Exhibit No. 6 is a data sheet of the proposed injection

1 wells showing the size, the depth, and the amount of the  
2 cement and cement top used for the surface casing, and  
3 the production casing, and also the injection interval is  
4 shown.

5 Exhibit No. 7 is entered into the record to show the  
6 locations, the legal locations, of the proposed injection  
7 wells. Coke Exploration initialed waterflooding in the  
8 pool, 2 and 1/2 mile. Southeast of the proposed project  
9 in November of 1959 and Texaco completed flooding with the  
10 W. H. Rhodes "B" Lease adjacent to the proposed unit in  
11 November, 1964, by converting two wells to injection.  
12 And, excellent response has been obtained on both of these  
13 waterflood projects. The ten existing wells in the project  
14 area produced 931 barrels of oil and no water with an  
15 average GOR of 3712 during January, 1973. The cumulative  
16 oil production for the project to February 1, 1973, was  
17 1,080,831 barrels of oil, which accounts for 95% of the  
18 alternate primary. Secondary recovery reserves for the  
19 proposed unit are 1,276,000 barrels of oil and a peak  
20 production rate of 900 barrels of oil per day will occur  
21 three years after the start of the injection.

22 Exhibit No. 8 is entered showing the current producing  
23 rates and the allowables for the wells in the proposed  
24 project; and, during January, these wells produced an  
25 average of three barrels of oil and no water, and therefore

1 this project will be a waterflood and not a pressure  
2 maintenance project.

3 Q Mr. Peters, what will be the source of the water?

4 A Texaco has a private water supply in the Southwestern  
5 quarter of Section 9, Township 26 South, Range 37 East,  
6 located about two miles Northwest of the proposed "JD"  
7 Unit, and Texaco has water rights of 450-acre feet per  
8 annum, which is 9,560 barrels of water per day, held  
9 under State Engineering Permits Numbers CP-452 through  
10 452-X-7, and four of those permits are for alluvial  
11 water to a depth of 150 feet, and for alluvial water to  
12 a depth of 550 feet, and these permits will provide a  
13 total of 450-acre feet of water per annum and any combina-  
14 tion of alluvial or non-alluvial water. And, there are  
15 45-acre feet per annum of Santa Rosa water rights which  
16 are held under Declaration CP-453 and 453-X. There are  
17 wells that are 525 feet deep which furnish injection water  
18 for Texaco's W. H. Rhodes "B" Federal Tract 1 Waterflood  
19 Project.

20 Q All right. Mr. Peters, will the granting of your appli-  
21 cation prevent waste and protect correlative rights?

22 A Yes, sir, it will.

23 Q Were Exhibits 1 through 8 prepared by you or under your  
24 direction?

25 A Yes, sir, they were.

1 MR. BATEMAN: I offer Exhibits 1 through 8 at this  
2 time.

3 MR. UTZ: Without objection, Exhibits 1 through 8  
4 will be entered into the record of these cases.

5 CROSS EXAMINATION

6 BY MR. UTZ:

7 Q Mr. Peters, does Exhibit No. 7 correctly state the designa-  
8 tion and location of all seven subject injection wells?

9 A Yes, sir, it does.

10 Q Now, Exhibit 5 is a schematic of the "JD" Number 2. Will  
11 this be the way that all seven wells will be completed  
12 for injection?

13 A Yes, this is just a sketch of this individual well and  
14 it is typical of the way the remaining other six wells  
15 will be completed.

16 MR. UTZ: Are there any other questions of the witness?

17 (No response)

18 MR. UTZ: He may be excused. Are there any statements  
19 in the case?

20 (No response)

21 MR. UTZ: Let's make a correction in regard to the  
22 order number. The order number for the "JD" Unit is 3886, for  
23 the waterflood is 3889, correct the record to show that. The  
24 advertisement, in other words, was correct.

25 THE WITNESS: The number given, R-3889 was for the

1 waterflood portion of that unit?

2 MR. UTZ: Correct.

3 \* \* \* \*

4  
5 STATE OF NEW MEXICO )  
6 ) ss.  
COUNTY OF BERNALILLO )

7 I, JOHN DE LA ROSA, a Court Reporter, do hereby certify  
8 that the foregoing and attached Transcript of Hearing before  
9 the New Mexico Oil Conservation Commission was reported by  
10 me; and that the same is a true and correct record of the  
11 said proceedings, to the best of my knowledge, skill and  
12 ability.

13  
14 John De La Rosa  
COURT REPORTER

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23 I do hereby certify that the foregoing is  
24 a correct record of the proceedings in  
the Examiner's Hearing of Case No. 45-35436  
heard by me on April 11, 1973.  
25 John De La Rosa, Examiner  
New Mexico Oil Conservation Commission

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25WITNESSPAGE

KENNETH PETERS

Direct Examination by Mr. Bateman

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Cross Examination by Mr. Utz

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EXHIBITSOfferedAdmitted

Exhibit No. 1 - ownership map

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Exhibit No. 2 - Unit Agreement

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Exhibit No. 3 - reference log

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Exhibit No. 4 - structure map

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Exhibit No. 5 - secondary project  
description

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Exhibit No. 6 - data sheet

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Exhibit No. 7 - legal locations of  
proposed injection  
wells

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Exhibit No. 8 - rates and allowables  
schedule for proposed  
project

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12



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2068 - SANTA FE

87501

GOVERNOR  
BRUCE KING  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMJO  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

May 21, 1973

Mr. Ken Bateman  
White, Koch, Kelly & McCarthy  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Re: Case No. 4936  
Order No. R-4521  
Applicant:  
Texaco Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X

Artesia OCC           

Aztec OCC           

Other State Engineer Office



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.

-2-

Case No. 4936  
Order No. R-4521

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" (NCT-2)	3	660' FSL and 660' FEL, Sec. 21

(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*  
I. R. TRUJILLO, Chairman

*Alex J. Armistead*  
ALEX J. ARMISTEAD, Member

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

dr/

Case 4736

Filed 4-11-73

Rec. 4-24-73

United States  
a copy of the 1966 Report on  
enteric and ~~provable~~ 7 injection  
vaccine tested & the results on  
exhibit 7 attached.

Specs by Rule 701-702-703.

*[Signature]*

- CASE 4932: Application of Atlantic Richfield Company for a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 340.94-acre non-standard gas proration unit comprising the W/2 of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to its Pure Federal Well No. 1 located in Unit K of said Section 11.
- CASE 4933: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation through the perforated interval from 4280 feet to 4288 feet in its R. T. Wilson Federal Well No. 5 located in Unit J of Section 24, Township 26 South, Range 31 East, North Wilson-Delaware Pool, Lea County, New Mexico.
- CASE 4934: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 12,172 feet to 12,581 feet of its U. D. Sawyer Well No. 3 located in Unit I of Section 34, Township 9 South, Range 36 East, Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4935: Application of Texaco Inc. for dissolution of a unit and approval of another unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dissolution of the State "JD" Unit Area approved by Commission Order No. R-3886 and the approval of the Rhodes Yates Unit Area comprising 520 acres, more or less, of State and Federal lands in Township 26 South, Range 37 East, Lea County, New Mexico.
- CASE 4936: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Rhodes Yates Unit Area by the injection of water into the Yates-Seven Rivers formations through seven injection wells located in Sections 21, 27 and 28, Township 26 South, Range 37 East, Rhodes-Yates Pool, Lea County, New Mexico.
- CASE 4923: (Continued and Readvertised)
- Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 360-acre non-standard gas proration unit comprising Lots 14, 15, and 16 and the SE/4 and E/2 SW/4 of Section 4, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Meyer B-4 Well No. 4 located in Unit S of said Section 4.



UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION  
OF THE  
RHODES-YATES UNIT AREA  
LEA COUNTY, NEW MEXICO

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BEFORE EXAMINER UNIT
OIL CONSERVATION COMMISSION
EXHIBIT NO. <u>2</u>
UNIT NO. <u>4935-4936</u>
DATE <u>App.</u>
TIME <u>4-11-73</u>

UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION OF  
THE RHODES-YATES UNIT AREA  
LEA COUNTY, NEW MEXICO

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UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION OF  
THE RHODES-YATES UNIT AREA  
LEA COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 15th day of December, 1972, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto,"

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty or other oil or gas interests in the land subject to this agreement; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 88, Laws 1943, as amended by Chap. 162, Laws of 1951, Chap. 176, Laws of 1961, being Art. 11, Sec. 39 through 41, N.M.S. 1953 anno.) to consent to or approve this agreement on behalf of the State of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 3, Chap. 83, Laws of 1943, as amended by Sec. 1, Chap. 162, Laws of 1951, Chap. 7, Art. 11, Sec. 41, N.M.S. 1953 anno.) to amend with the approval of the lessee, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such unitized development and operation of State lands; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949, Chap. 65, Art. 3, Sec. 14, N.M.S. 1953 anno.) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the Mineral Leasing Act of February 25, 1920 (41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq.) authorizes Federal lessees and their representatives to unite with each other or jointly or separately with others in collectively adopting and operating a co-operative or unit plan of development or operation of any oil or gas pool, field or like area or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the Rhodes-Yates Unit Area, comprised of the land hereinafter designated, to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to enable institution and consummation of secondary recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this agreement under the terms, conditions and limitations herein set forth:

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their entire respective interests in the Unitized Formation underlying the Unit Area (as those terms are defined hereinafter), and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS: The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid, pertinent regulations, including operating and unit plan regulations heretofore issued thereunder and valid, pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this agreement; and as to non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal land is located, are hereby accepted and made a part of this agreement.



SECTION 2. UNIT AREA AND DEFINITIONS: The area described by tracts in Exhibit B and depicted on Exhibit A attached hereto is hereby designated and recognized as constituting the Unit Area, containing 520 acres, more or less, in Lea County, New Mexico. Said land is described as follows:

ALL IN TOWNSHIP 26 SOUTH, RANGE 37 EAST.

SECTION 21: E $\frac{1}{2}$  SE $\frac{1}{2}$

SECTION 27: W $\frac{1}{2}$

SECTION 28: N $\frac{1}{2}$  NE $\frac{1}{2}$  and SE $\frac{1}{2}$  NE $\frac{1}{2}$

For the purpose of this agreement, the following terms and expressions as used herein shall mean:

- (a) "Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.
- (b) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.
- (c) "Director" is defined as the Director of the United States Geological Survey.
- (d) "Secretary" is defined as the Secretary of the Interior of the United States of America.
- (e) "Department" is defined as the Department of the Interior of the United States of America.
- (f) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.
- (g) "Unitized formation" is defined as the stratigraphic interval in the Yates-Seven Rivers formations encountered between the depths of 2912 feet and 3400 feet below the derrick floor elevation on the Lane Wells Radioactivity Log of the Amerada Petroleum Corporation State "JA" Well No. 2, located 765 feet from the north line of Section 27, Township 26 South, Range 37 East, Lea County, New Mexico.
- (h) "Unitized Substances" is defined as all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within and produced from the Unitized Formation of the Unitized Land.
- (i) "Working Interest" is defined as an interest in Unitized Substances by virtue of a lease, operating agreement or otherwise, including a carried interest, which interest is chargeable with and obligated to pay or bear, either in cash or out of production or otherwise, all or a portion of the cost of drilling, developing, producing and operating the Unitized Formation. Any interest in Unitized Substances which is a Working Interest as of the date the owner thereof executes, ratifies or consents to this agreement shall thereafter be treated as a Working Interest for all purposes of this agreement.
- (j) "Royalty Interest" or "Royalty" is defined as any interest, other than a Working Interest, in or right to receive a portion of the Unitized Substances or the proceeds therefrom and includes the royalty interest reserved by the lessor by an oil and gas lease and any overriding royalty interest, oil payment interest, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances. "Basic Royalty Interest" is defined as the royalty interest reserved by the lessor by an oil and gas lease.
- (k) "Working Interest Owner" is defined as a party hereto who owns a Working Interest.
- (l) "Royalty Owner" is defined as a party hereto who owns a Royalty Interest.

- (m) "Tract" is defined as each parcel of land described as a Tract and given a Tract number in Exhibit "B".
- (n) "Tract Participation" is defined as the percentage of Unitized Substances allocated hereunder to a Tract.
- (o) "Unit Participation" is defined as the sum of the percentages obtained by multiplying the percentage of the Working Interest a Working Interest Owner owns in each Tract having Tract Participation by the Tract Participation of such Tract.
- (p) "Tract Ultimate Primary Recovery" is defined as the cumulative total number of barrels of oil produced from the Unitized Formation by wells on such Tract prior to December 1, 1971, as officially reported to the Commission, plus the Tract Remaining Primary Reserves credited to the Tract.
- (q) "Unit Area Ultimate Primary Recovery" is defined as the total Tract Ultimate Primary Recovery of all Tracts within the Unit Area.
- (r) "Unit Operating Agreement" is defined as any agreement or agreements (whether one or more) entered into (separately or collectively) by and between the Unit Operator and the Working Interest Owners as provided in Section 9, ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT, infra, and shall be styled "Unit Operating Agreement, Rhodes-Yates Unit, Lea County, New Mexico."
- (s) "Tract Remaining Primary Reserves" is defined as the number of barrels of oil heretofore estimated by the Working Interest Owners to be the remaining primary oil reserves of such Tract as of December 1, 1971.
- (t) "Unit Area Remaining Primary Reserves" is defined as the summation of the Tract Remaining Primary Reserves of all Tracts within the Unit Area.
- (u) "Paying Quantities" is defined as production of Unitized Substances in quantities sufficient to pay for the cost of producing same from wells on the Unitized Land.
- (v) "Tract Developed Acres" is defined as the number of developed acres contained in each Tract as shown in Exhibit A.
- (w) "Unit Developed Acres" is defined as the sum of "Tract Developed Acres" for all Tracts within the Unit Area.

SECTION 3. EXHIBITS: Exhibit "A" attached hereto is a map showing the Unit Area and, to the extent known to Unit Operator, the boundaries and identity of Tracts and leases in the Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to Unit Operator, the acreage comprising each Tract and the percentage of ownership of each Working Interest Owner in each Tract, together with the royalty interests in each tract and the ownership thereof. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as being owned by such party. Exhibit "C" attached hereto is a schedule showing the Tract Participation of each Tract, which Tract Participation has been calculated upon the basis of all Tracts being committed to this agreement as of the effective date hereof.

Exhibits "A", "B", and "C" shall be revised by Unit Operator whenever changes render such revision necessary, or when requested by the Supervisor or the Commissioner, and at least two copies of such revision shall be filed with the Commissioner and not less than six copies thereof shall be filed with the Supervisor.

SECTION 4. EXPANSION: The Unit Area may, when practicable, be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable for the purposes of this agreement. Such expansion shall be effected in the following manner:

- (a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into the Unit Area shall file an application therefor with Unit Operator requesting such admission.
- (b) Unit Operator shall circulate a notice to each Working Interest Owner of the proposed expansion, setting out the basis for admission, the Tract Participation proposed to be allocated to such Tract or Tracts and other pertinent data. After negotiation (at Working Interest Owner's meeting or otherwise) if Working Interest Owners having a combined Unit Participation of eighty five (85%) or more have agreed to such Tract or Tracts being brought into the Unit Area, then Unit Operator shall, after preliminary concurrence by the Commissioner and Director:
  - (1) Prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional Tract or Tracts, the Tract Participation to be allocated thereto and the proposed effective date thereof; and
  - (2) Furnish copies of said notice to the Commissioner, Supervisor, each Working Interest Owner and to the lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objections to such proposed expansion; and
  - (3) File, upon the expiration of said thirty-day period as set out in Subsection (2) immediately above, with the Commissioner and the Supervisor the following: (a) Evidence of mailing copies of said notice of expansion; (b) An application for such expansion; (c) An instrument containing the appropriate joinders in compliance with the qualification requirements of Section 15, TRACTS QUALIFIED FOR PARTICIPATION, infra; and (d) Copy of any objections received.

The expansion shall, after due consideration of all pertinent information and upon approval by the Commissioner, the Commission, if appropriate, and the Supervisor, become effective as of the date prescribed in the notice thereof or on such other date as set by the Commissioner, the Commission, if appropriate, and the Supervisor in the order or instrument approving such expansion. The revised Tract Participation of the respective Tracts Unitized prior to such enlargement shall remain in the same ratio one to another.

SECTION 5. UNITIZED LAND AND UNITIZED SUBSTANCES: All land committed to this agreement as to the Unitized Formation shall constitute land referred to herein as "Unitized Land" or "land subject to this agreement." All oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons produced from the lands committed to this agreement as to the Unitized Formation are unitized under the terms of this agreement and herein are called "Unitized Substances." Nothing herein shall be construed to unitize, pool or in any way affect the oil, gas and other minerals that may be produced from any formation other than the Unitized Formation as above described.

SECTION 6. UNIT OPERATOR: TEXACO Inc. is hereby designated as Unit Operator, and by signing this instrument as Unit Operator it agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners, the Commissioner and the Supervisor, and until all Unit wells are placed in a condition satisfactory to the Supervisor and the Commissioner for suspension, abandonment, or operations, whichever is required by the Supervisor and the Commission, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The Unit Operator shall, upon default or failure in the performance of its duties and obligations hereunder, be subject to removal by vote of Working Interest Owners having a combined Unit Participation of eighty-five percent (85%) or more, exclusive of the Unit Participation of the Unit Operator. Such removal shall be effective upon notice thereof to the Supervisor and the Commissioner.

In all such instances of effective resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of the Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a unit manager to represent them in any action to be taken hereunder.

The resignation or removal of Unit Operator under this agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, books and records, materials, appurtenances and any other assets used in conducting the Unit operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unitized Land) to the new duly qualified successor Unit Operator or to the unit manager if no such new Unit Operator is elected, to be used for the purpose of conducting Unit Operations hereunder. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder from any liability or duties accruing to or performable by it prior to the effective date of such resignation or removal. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of any wells.

SECTION 8. SUCCESSOR UNIT OPERATOR: Whenever Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall, by affirmative vote of three or more Working Interest Owners having a combined Unit Participation of not less than seventy percent (70%), select a successor Unit Operator; provided, however, that should any Working Interest Owner have a voting interest of more than thirty percent (30%), its negative vote or failure to vote shall not serve to disapprove the selection of a new Unit Operator approved by a majority of the remaining voting interests unless such negative vote or abstention from voting is supported by the negative vote of one or more Working Interest Owners having a voting interest of at least five percent (5%), and provided, further, that the vote of the outgoing Unit Operator shall not be considered for any purpose if it votes only to succeed itself. Such selection shall not become effective until: (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and (b) the selection shall have been approved by the Supervisor and the Commissioner and written notice of such selection shall have been filed with the Supervisor and Commissioner. If no successor Unit Operator is selected and approved as herein provided, the Director and the Commissioner, at their election, may declare this agreement terminated.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT: Costs and expenses incurred by Unit Operator in conducting Unit operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners in accordance with the Unit Operating Agreement. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereunder in conformity with their underlying operating agreements, leases or other independent contracts and such other rights and obligations between Unit

Operator and the Working Interest Owners as may be agreed upon by the Unit Operator and the Working Interest Owners; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this agreement or to relieve the Unit Operator of any right or obligation established under this agreement, and in case of any inconsistency or conflict between this agreement and the Unit Operating Agreement, this agreement shall prevail. Two true copies of any Unit Operating Agreement executed pursuant to this Section shall be filed with the Commissioner and three true copies thereof shall be filed with the Supervisor prior to approval of this agreement.

SECTION 10. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator and, together with this agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 11. USE OF SURFACE AND USE OF WATER.

- (a) The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest Owners the right to use as much of the surface of the land within the Unit Area as may reasonably be necessary for unit operations except a site for a gas injection, processing or other plant site.
- (b) Working Interest Owners shall have free use of brine or water or both from the Unit Area for unit operations, except water from any well, lake, pond, or irrigation ditch of a Surface Owner.
- (c) Working Interest Owners shall pay the owner for damages to growing crops, timber, fences, improvements, and structures on the Unit Area that result from unit operations.

SECTION 12. PLAN OF OPERATIONS: It is recognized and agreed by the parties hereto that all of the land subject to this agreement has been reasonably proved to be productive of Unitized Substances or is necessary for unit operations and that the object and purpose of this agreement is to formulate and to put into effect a secondary recovery project in order to effect a greater recovery of Unitized Substances, prevent waste and conserve natural resources consistent with good engineering practices expected of a prudent operator. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Working Interest Owners, the Commissioner and the Supervisor, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, liquefied petroleum gas, and any other substance or a combination of any of said substances, whether produced from the Unitized Formation or not, and that the location of input wells and the rates of injection therein and the rate of production shall be governed by standards of good petroleum engineering practices and conservation methods. Reasonable diligence shall be exercised by Unit Operator in complying with the obligations of any approved plan of operation. The Working Interest Owners, the Commissioner and the Supervisor shall be furnished periodic reports on the progress of the plan of operation and any recommendations for major revisions or changes thereto to meet changed conditions or to protect the interests of parties to this agreement, which revisions and changes shall be subject to prior approval of the Working Interest Owners, the Commission, if appropriate, the Commissioner and the Supervisor.

Concurrently with the filing of this agreement for final approval by the Commissioner and the Supervisor, Unit Operator shall submit to the Commissioner and to the Supervisor for approval, a plan of operation for the Unitized Land, and, upon approval thereof by the Supervisor and the Commissioner, such plan shall constitute the future operating obligations of the Unit Operator under

this agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for like approval a plan for an additional specified period of operation. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation.

Notwithstanding anything to the contrary herein contained, should the Unit Operator fail to commence operations for the secondary recovery of Unitized Substances from the Unit Area within one (1) year after the effective date of this agreement, or any extension thereof approved by the Supervisor and the Commissioner, this agreement shall terminate automatically as of the date of default. After such operations are commenced, Unit Operator shall carry on such operations as would a reasonably prudent operator under the same or similar circumstances.

SECTION 13. TRACT PARTICIPATION: In Exhibit "C" attached hereto, there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation allocated to that Tract calculated upon the basis of all of said Tracts being committed to this agreement as of the effective date hereof. The Tract Participation of each Tract as set forth in Exhibit "C" has been calculated and determined in accordance with the factors and formula set forth in Section 14, TRACT PARTICIPATION FORMULA, hereof, and if all Tracts are qualified for participation on the effective date hereof such Tract Participation shall govern the allocation of all Unitized Substances produced from the Unit Area on and after the effective date hereof, subject, however, to any revision or revisions of the Unit Area and/or Exhibit "C" in accordance with the provisions hereof.

In the event less than all of the Tracts within the Unit Area are qualified for participation on the effective date hereof, Unit Operator shall, as soon as practicable after said effective date, prepare a revised Exhibit "C" setting forth the qualified Tracts within the Unit Area and showing the revised Tract Participation of each qualified Tract, which Tract Participation shall be calculated and determined by using the factors and formula set forth in Section 14, TRACT PARTICIPATION FORMULA, hereof, but applying the same only to the qualified Tracts. Unit Operator shall promptly file copies of such revised Exhibit "C" with the Commissioner and the Supervisor, and upon approval thereof by the Commissioner and the Supervisor, the revised Exhibit "C" shall be effective as of the effective date of this agreement and shall thereafter govern the allocation of all Unitized Substances, subject, however, to any further revision or revisions of the Unit Area and/or Exhibit "C" in accordance with the provisions hereof.

SECTION 14. TRACT PARTICIPATION FORMULA: The percentages of Tract Participation set forth in Exhibit "C" for each Tract within the Unit Area have been calculated and determined in accordance with the following formula:

$$\text{Sum of } 90\% \times \frac{\text{Tract Ultimate Primary Recovery}}{\text{Unit Ultimate Primary Recovery}}$$

$$5\% \times \frac{\text{Tract Remaining Primary Reserves as of December 1, 1971}}{\text{Unit Remaining Primary Reserves as of December 1, 1971}}$$

$$5\% \times \frac{\text{Tract Developed Acres}}{\text{Unit Developed Acres}}$$

The percentages of Tract Participation set forth in Exhibit "C" have been calculated upon the basis of all Tracts within the Unit Area being committed to this agreement as of the effective date hereof. In the event less than all of said Tracts are so committed as of said date, Exhibit "C" and the Tract Participations set forth therein shall be revised by Unit Operator in accordance with the provisions of Section 13, TRACT PARTICIPATION.

SECTION 15. TRACTS QUALIFIED FOR PARTICIPATION. As the objective of this agreement is to have lands in the Unit Area operated and entitled to participation under the terms hereof, it is agreed that, notwithstanding anything else herein, no joinder shall be considered a commitment to this agreement unless the Tract involved is qualified under this Section. On and after the effective date

hereof, the Tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be the Tracts that qualify as follows (The lessee of record shall replace the royalty interest with respect to Federal lands for the purposes of this section):

- (a) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning seventy-five percent (75%) or more of the Basic Royalty Interest therein have become parties hereto.
- (b) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning less than seventy-five percent (75%) of the Basic Royalty Interest therein have become parties hereto, and further, as to which:
  - (i) All Working Interest Owners in any such Tract have joined in a request for the inclusion of such Tract in participation under this agreement, and
  - (ii) Seventy-five percent (75%) of the combined voting interests of Working Interest Owners in all Tracts meeting the requirements of Section 15 (a) hereof have voted in favor of the acceptance of such Tract.

For the purposes of this Section 15(b), a Working Interest Owner's "voting interest" shall be equal to the ratio (expressed in percent) which its aggregate Unit Participation in all Tracts qualifying under Section 15 (a) bears to the total Unit Participation of all Working Interest Owners in all Tracts qualifying under Section 15 (a), as such Unit Participation is determined from the Tract Participations set out in Exhibit "C".

- (c) Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the Working Interest therein have become parties hereto, regardless of the percentage of Royalty Interest therein which is committed hereto and, further, as to which:
  - (i) The Working Interest Owner operating any such Tract and all of the other Working Interest Owners in such Tract who have become parties hereto have joined in a request for the inclusion of such Tract in participation under this agreement and have executed and delivered an indemnity agreement indemnifying and agreeing to hold harmless the other owners of committed Working Interest, their successors and assigns, against all claims and demands which may be made by the owners of working interests in such Tract who are not parties hereto and which arise out of the inclusion of such Tract in participation to this agreement, and
  - (ii) Seventy-five percent (75%) of the combined voting interests of Working Interest Owners in all Tracts meeting the requirements of Section 15 (a) and 15 (b) have voted in favor of the inclusion of such Tract of the indemnity agreement.

For the purpose of this Section 15 (c), a Working Interest Owner's "voting interest" shall be equal to the ratio (expressed in percent) which its aggregate Unit Participation in all Tracts qualifying under Section 15 (a) and 15 (b) bears to the total Unit Participation of all Working Interest Owners in all Tracts qualifying under Section 15 (a) and 15 (b) as such Unit Participation is determined from the Tract Participation set out in Exhibit "C". Upon the commitment of such a Tract to this agreement, the Unit Participation that would have been attributed to the nonsubscribing owners of the Working Interest in such Tract, had they become parties to this agreement and the Unit Operating Agreement, shall be attributed

to the Working Interest Owners in such Tract who have become parties to such agreements in proportion to their respective Working Interests in the Tract.

SECTION 16. ALLOCATION OF UNITIZED SUBSTANCES: All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances which is used in conformity with good operating practices on the Unitized Land for drilling, operating, camp and other production, development and pressure maintenance purposes, or which is unavoidably lost) shall be apportioned among and allocated to the qualified Tracts within the Unit Area in accordance with the respective Tract Participation as set forth in Exhibit "C". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract), shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among or accounted for to the parties hereto entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this agreement not been entered into, and with the same legal force and effect.

No tract committed to this agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the joinder of any Tract.

If the Working Interest or the Royalty Interest in any Tract is, on or after the effective date hereof, divided with respect to separate parcels or portions of such Tract and owned severally by different persons, the Tract Participation assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owners and parties entitled thereto by virtue of the ownership of oil and gas rights therein or by purchase from such owners. Each Working Interest Owner and the parties entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on the Unit Area, provided the same are so constructed, maintained and operated as not to interfere unduly with operations carried on pursuant hereto or with operations upon or with regard to formations other than the Unitized Formation conducted within the Unit Area. Subject to Section 18, ROYALTY SETTLEMENT, hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party receiving the same in kind.

In the event any party hereto shall fail to take or otherwise adequately dispose of its proportionate share of the Unitized Substances, Unit Operator, in order to avoid curtailing unit operations, may sell or otherwise dispose of such production to itself or others on a day-to-day basis at not less than the prevailing market price in the area for like production; and the account of such party shall be charged therewith as having received such production. Unit Operator shall not make a sale into interstate commerce of any Working Interest Owner's share of gas production without first giving such Working Interest Owner sixty (60) days' notice of such intended sale.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract or receiving the proceeds therefrom shall be responsible for making payment therefor to the parties entitled thereto, and shall indemnify all parties hereto, including Unit Operator against any liability for all royalties, overriding royalties, production payments, and all other payments chargeable against or payable out of such Unitized Substances or the proceeds therefrom.



SECTION 17. OIL IN LEASE TANKAGE ON EFFECTIVE DATE: Unit Operator shall make a proper and timely gauge of all lease and other tanks on the Unitized Land in order to ascertain the amount of merchantable oil above the pipe line connection in such tanks on the effective date hereof. All such oil which has then been produced legally shall be and remain the property of the Working Interest Owner entitled thereto the same as if this agreement had not become effective and such Working Interest Owner shall promptly remove said oil from the Unitized Land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owner, subject to the payment of all royalty to Royalty Owners under the terms and provisions of the applicable lease or leases and other contracts. All such oil as is in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced on or after the effective date hereof. If, as of the effective date hereof, any Tract is overproduced with respect to the allowable of the well or wells on that Tract and the amount of such overproduction has been sold or otherwise disposed of, such overproduction shall be regarded and included as a part of the Unitized Substances produced after the effective date hereof and the amount thereof charged to such Tract as having been delivered to the persons entitled to Unitized Substances allocated to such Tract.

SECTION 18. ROYALTY SETTLEMENT: The United States and the State of New Mexico and all Royalty Owners who, under existing contracts, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall hereafter be entitled to take in kind their share of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interests not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws and regulations, on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this agreement.

If gas obtained from lands or formation not subject to this agreement is introduced into the Unitized Formation for use in repressuring, stimulation or production or increasing ultimate recovery in conformity with a plan approved by the Supervisor, a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, royalty-free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor and Commissioner, and provided further that such right of withdrawal shall terminate as of the effective date of termination of this agreement.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rate specified in the respective Federal leases or at such lower rate or rates as may be authorized by law or regulation; provided, that for leases on which the royalty rate depends on the daily average production per well, such average production shall be determined in accordance with the operating regulations as though the Unitized Lands were a single consolidated lease.

Royalty due on account of State lands shall be computed and paid on the basis of all Unitized Substances allocated to such lands.

SECTION 19. RENTAL SETTLEMENT: Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental for lands of the State of New Mexico subject to this agreement shall be paid at the rate specified in the respective leases from the State of New Mexico. Rental or minimum royalty for lands of the United States of America subject to this agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 20. CONSERVATION: Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 21. DRAINAGE: The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this agreement.

SECTION 22. LEASES AND CONTRACTS CONFORMED AND EXTENDED: The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Supervisor and the Commissioner, respectively, shall and by their approval hereof or by the approval hereof by their duly authorized representatives, do hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto conform said requirements to the provisions of this agreement.

Without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

- (a) The development and operation of lands subject to this agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned Tract subject to this agreement, regardless of whether there is any development of any particular part or Tract of the Unit Area, notwithstanding anything to the contrary in the lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.
- (b) Drilling, producing or secondary recovery operations performed hereunder upon any Tract of Unitized Land shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of unitized land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.
- (c) Suspension of drilling or producing operations on all Unitized Land pursuant to direction or consent of the Commissioner and the Supervisor or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Land.
- (d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas which by its terms might expire prior to the termination of this agreement, is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for and during the term of this agreement.
- (e) Termination of this agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws, shall continue in force and effect thereafter.
- (f) Any lease which is made subject to this agreement shall continue in force beyond the term provided therein as to the lands committed hereto as long as such lands remain subject hereto.
- (g) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto, shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the effective date hereof; provided, however, that

notwithstanding any of the provisions of this agreement to the contrary, such lease shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease if oil or gas is, or has heretofore been, discovered in paying quantities on some part of the lands embraced in such lease committed to this agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this agreement, allocated to the portion of the lands covered by such lease committed to this agreement or at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the lessee or the Unit Operator is then engaged in bona fide drilling, reworking, or secondary recovery operations on any part of the lands embraced in such lease, then the same as to all lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil or gas in paying quantities is being produced from any portion of said lands.

- (h) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Section 17 (j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960, (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 23. CORRECTION OF ERRORS: It is hereby agreed by all parties to this agreement that Unit Operator is empowered to correct any mathematical or clerical errors which may exist in the pertinent exhibits to this agreement; provided, however, that correction of any error other than mathematical or clerical shall be made by Unit Operator only after first having obtained approval of Working Interest Owners having a Unit Participation of fifty percent (50%) or more, the Commissioner and the Supervisor.

SECTION 24. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 25. EFFECTIVE DATE AND TERM: This agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective as of the first day of the month next following, the approval of this agreement by the Commissioner and the Supervisor; provided that if this agreement is not submitted for such approval on or before July 1, 1973, it shall expire ipso facto on said date (hereinafter called "expiration date") and thereafter be of no further force and effect, unless prior thereto this agreement has been executed or ratified by Working Interest Owners having a combined Unit Participation of at least sixty-five percent (65%), and the Working Interest Owners having a combined Unit Participation of at least eighty percent (80%) committed to this agreement have decided

to extend said expiration date for a period not to exceed one (1) year (hereinafter called "extended expiration date"). If said expiration date is so extended and this agreement is not filed for approval by the Commissioner and the Supervisor on or before said extended expiration date this agreement shall expire ipso facto on said extended expiration date and thereafter be of no further force or effect.

The term of this agreement shall be for and during the time that Unitized Substances are or can be produced in paying quantities from the Unit Area and if production ceases, as long thereafter as drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, and if production is restored so long thereafter as unitized substances are or can be produced as aforesaid, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

This agreement may be terminated at any time with the approval of the Commissioner and the Supervisor by Working Interest Owners having at least ninety percent (90%) Unit Participation, as determined from Exhibit "C". Notice of such termination shall be given by Unit Operator to all parties hereto.

Upon termination of this agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts.

Unit Operator shall, within thirty (30) days after the termination of this agreement, file for record in each office where a counterpart of this agreement is recorded, a certificate to the effect that this agreement has terminated according to its terms and stating further the termination date.

If not otherwise provided by the leases unitized under this agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after termination of this agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit operations.

**SECTION 26. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION:** The Director is hereby vested with authority to alter or modify from time to time, in his discretion, the quantity and rate of production under this agreement when such quantity and rate of production is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion, the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any applicable Federal or State law. It is agreed, further, that no such alteration or modification shall be effective as to any land of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

Powers in this Section vested in the Director and Commissioner shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice.

**SECTION 27. NONDISCRIMINATION:** In connection with the performance of work under this agreement, Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive of Executive Order 11246 (30 F. R. 12319), which are incorporated by reference in this agreement.

**SECTION 28. APPEARANCES:** Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Commissioner, and the Department, and to appeal from any order issued under the rules and regulations of the Commissioner or the Department, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Commissioner or the Department, or any other legally constituted authority;

provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceedings.

SECTION 29. NOTICES: All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified mail addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 30. NO WAIVER OF CERTAIN RIGHTS: Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive; provided, however, that each party hereto covenants that during the existence of this agreement such party will not resort to any action at law or in equity to partition the Unit Area or the facilities used in the development or operation hereof and to that extent waives the benefits of all laws authorizing such partition.

SECTION 31. UNAVOIDABLE DELAY: All obligations under this agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this agreement shall be suspended while, but only so long as, the Unit Operator, despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 32. LOSS OF TITLE: In the event any Tract ceases to have sufficient Working Interest Owners or Royalty Owners committed to this agreement to meet the conditions of Section 15, TRACTS QUALIFIED FOR UNIT PARTICIPATION, because of failure of title of any party hereto, such Tract shall be automatically regarded as not committed to this agreement effective as of the first day of the calendar month in which the failure of title is finally determined; provided, however, that such Tract shall not be so regarded if said Tract can be requalified for admission under Section 15, TRACTS QUALIFIED FOR PARTICIPATION, within ninety (90) days after the date on which such title failure was finally determined.

If any such Tract cannot be so requalified, Unit Operator shall revise the schedule previously filed with the Commissioner and Supervisor setting forth the Tracts qualified hereunder to show the Tracts in the Unit Area that remain qualified hereunder and the Tract Participation of each said Tracts, which revised Tract Participation shall be calculated and determined on the basis that the Tract Participation of each of said Tracts shall remain in the same ratio one to the other. Copies of the revised schedule and exhibit shall be filed with the Commissioner and the Supervisor and same shall be effective after approval by the Supervisor and the Commissioner on the first day of the calendar month in which such failure of title is finally determined.

If title to a Working Interest fails, the rights and obligations of Working Interest Owners, by reason of such failure, shall be governed by the Unit Operating Agreement. If title to a Royalty Interest fails, but the Tract to which it relates remains committed to this agreement, the party whose title failed shall not be entitled to participate hereunder insofar as its participation is based on such lost Royalty Interest.

In the event of a dispute as to the title to any Working Interest or Royalty Interest subject hereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to State or Federal land or leases, no payments of funds due the State of New Mexico or the United States of America shall be withheld, but such funds shall be deposited as directed by the Commissioner and/or the Supervisor

(as the case may be), to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator, as such, is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 33. NONJOINDER AND SUBSEQUENT JOINDER: If the owner of any interest in a Tract within the Unit Area fails or refuses to subscribe or consent in writing to this agreement, such Tract shall not be deemed committed to this agreement unless such Tract may be and is qualified as provided in Section 15, TRACTS QUALIFIED FOR PARTICIPATION, hereof. Joinder in this agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder to the Unit Operating Agreement in order for the interest to be regarded as effectively committed to this agreement. Joinder by any owner of a Royalty Interest, at any time, must be accompanied by appropriate joinder by the owner of the corresponding Working Interest in order for the interest to be regarded as committed hereto.

Any oil or gas interest in the Unitized Formation in lands within the Unit Area not committed hereto prior to final approval of this agreement by the effective date hereof may thereafter be committed hereto upon compliance with the applicable provisions of Section 15, TRACTS QUALIFIED FOR PARTICIPATION, hereof, within a period of two (2) months after the effective date hereof, on the same basis of participation as provided for in Section 13, TRACT PARTICIPATION, and as set forth in Exhibit "C", by the owner or owners thereof subscribing or consenting in writing to this agreement, and if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that after two (2) months from the effective date hereof, the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such equitable basis as may be agreed upon by Working Interest Owners having a combined Unit Participation of not less than ninety percent (90%), provided that the Tract Participation of each previously committed Tract shall remain in the same ratio one to the other. Such joinder by a Working Interest Owner must be evidenced by its execution or ratification of this Unit Agreement and the Unit Operating Agreement. Such joinder by a Royalty Owner must be evidenced by its execution or ratification of this Unit Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such Royalty Owner. Except as may be otherwise herein provided, subsequent joinders to this agreement shall be effective on the first day of the month following the filing thereof with the Commissioner and the Supervisor, of duly executed counterparts of all and any papers necessary to establish commitment of any Tract to this agreement unless objection to such joinder is duly made within sixty (60) days by the Supervisor or the Commissioner.

SECTION 34. COUNTERPARTS. This agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described Unit Area.

SECTION 35. JOINDER IN DUAL CAPACITY: Execution as herein provided by any party either as a Working Interest Owner or as a Royalty Owner shall commit all interests that may be owned or controlled by such party, provided the party also executes the Unit Operating Agreement as the owner of a Working Interest.

SECTION 36. TAXES: Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, responsible for the taxes on their respective allocated share of said Unitized Substances. No taxes shall be charged to the United States or to the State of New Mexico, or to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 37. CONFLICT OF SUPERVISION: Neither the Unit Operator nor the Working Interest Owners, nor any of them, shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provisions thereof to the extent that the said Unit Operator or the Working Interest Owners, or any of them, are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain, in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or things concerning which it is required herein that such concurrence be obtained.

SECTION 38. BORDER AGREEMENTS: Unit Operator, with concurrence of Working Interest Owners having a combined Unit Participation of sixty-five percent (65%) or more, may, subject to approval of the Commissioner and the Supervisor, enter into a border-protection agreement or agreements with the Working Interest Owners of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 39. PERSONAL PROPERTY EXCEPTED: Working Interest Owners have each individually heretofore placed in or on their wells and in or on lands affected by this agreement, various items of personal property which are lease and well equipment, that Working Interest Owners have the right, as provided in their respective leases, to remove from the premises, said installations were made with the intention and understanding that they would be and remain personal property of the Working Interest Owners and that no part thereof would be or become a part of the realty. Working Interest Owners except from the terms and provisions of this agreement, and hereby sever from said lands, for all purposes, all such equipment which may be or may hereafter become located in or on the lands or in the wells on the lands affected hereby. To conform their respective investments in such equipment, Working Interest Owners have made a separate agreement with each other with respect thereto.

SECTION 40. NO PARTNERSHIP: The duties, obligations, and liabilities of the parties hereto are intended to be several and not joint or collective. This agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation, or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligations as herein provided.

SECTION 41. LIEN OF UNIT OPERATOR: Unit Operator shall have a lien upon the interests of Working Interest Owners in the Unit Area to the extent provided in the Unit Operating Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed as of the date first above written and have set opposite their respective names the date of execution.

TEXACO Inc.

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Its Attorney-in-Fact

STATE OF

I

COUNTY OF

I

I

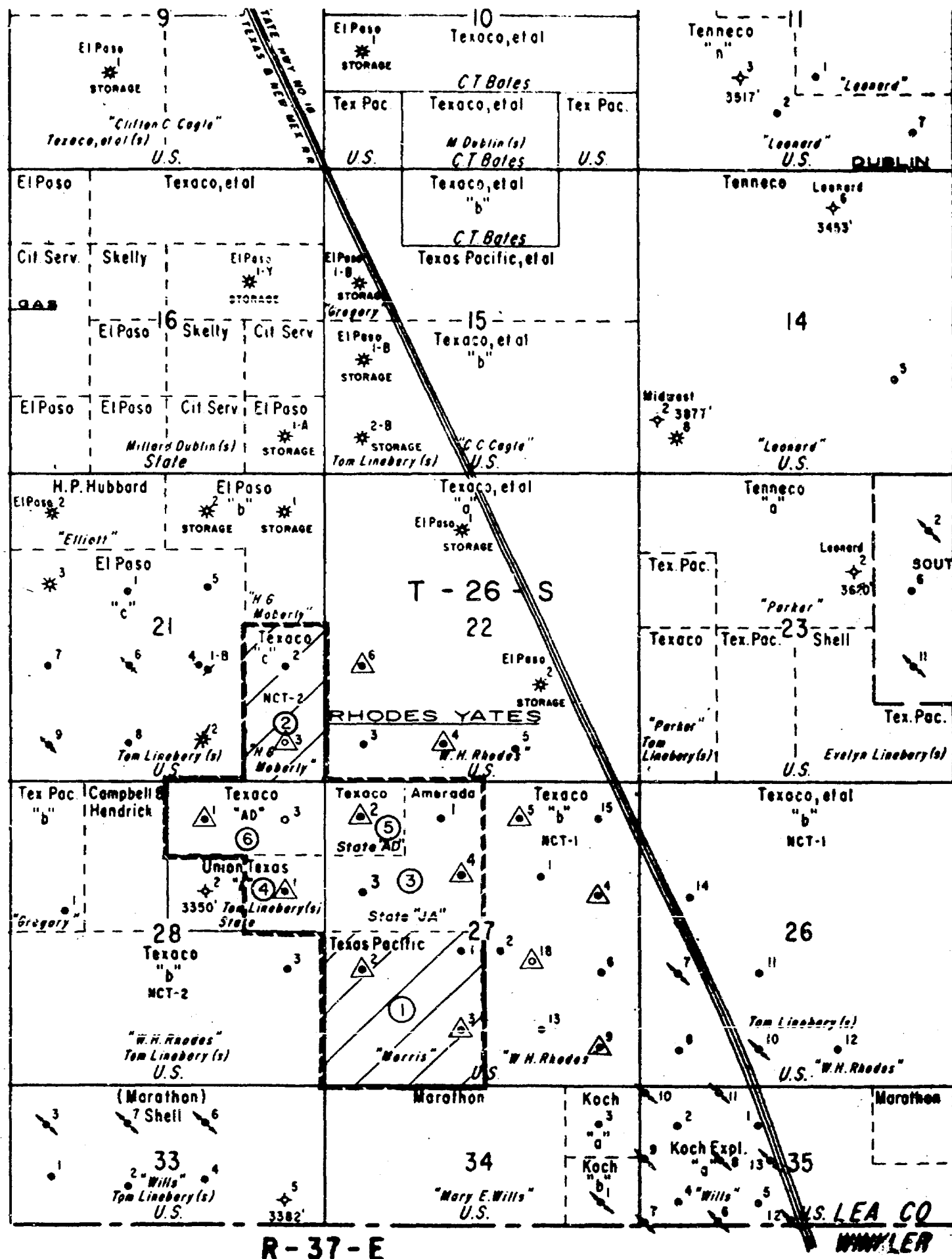
The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by \_\_\_\_\_, Attorney-in-Fact, for TEXACO Inc., a Delaware corporation, on behalf of said corporation.

\_\_\_\_\_  
Notary Public in and for  
County, \_\_\_\_\_

My Commission Expires:

\_\_\_\_\_





— LEGEND —

- Injection Well
- Proposed Injection Well
- Proposed Location
- Unit Boundary
- Tract Number
- Federal Acreage Within Unit Area

10-20-72

TEXACO INC

EXHIBIT "A"

RHODES YATES UNIT AREA

RHODES YATES FIELD  
LEA COUNTY, NEW MEXICO

0' 2000' 4000'

T - 26 - S, R - 37 - E

EXHIBIT "B"  
SCHEDULE SHOWING TRACT PARTICIPATIONS AND PERCENTAGE AND KIND OF OWNERSHIP  
OF ALL LANDS WITHIN THE RHODES-YATES UNIT AREA  
TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & DATE OF LEASE OR APPLICATION	BASIC ROYALTY PERCENTAGE	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE	PERCENTAGE TRACT PARTICIPATION
1	T26S - R37E Sec. 27; SW $\frac{1}{4}$	160	LC-032510(b) 7-29-37	USA All (Sliding Scale) 12 $\frac{1}{2}$ to 33 1/3 - (7/12) Oil 12 $\frac{1}{2}$ to 16 2/3 - Corp. (5/12) Gas	Texas Pacific Oil Co., Inc.	1.56250 (Selma L. Richelieu)	58.33333% - Texas Pacific Oil Co., Inc. 41.66667% - Allied Chemical Corporation	18.64968 13.32114 31.97082
2	T26S - R37E Sec. 21; E $\frac{1}{2}$ SE $\frac{1}{4}$	80	LC-055262 12-1-67	USA All (Sliding Scale) 12 $\frac{1}{2}$ to 33 1/3 - Oil 12 $\frac{1}{2}$ to 16 2/3 - Gas	Texaco	None	100% - Texaco	2.40995
Two (2) Federal Tracts - 240 acres - consisting of 46.15385% of Unit Area								
3	T26S - R37E Sec. 27; E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$	120	B-1431-3 12-5-32	State of New Mexico 12.50	Amerada	None	100% - Amerada	41.36917
4	T26S - R37E Sec. 28; SE $\frac{1}{4}$ NE $\frac{1}{4}$	40	B-7606-5 5-10-38	State of New Mexico 12.50	The Ohio Oil Co.	6.25% - Marathon Oil Co.	83.33333% - Allied Chemical Corp. 16.66667% - Texas Pacific Oil Co., Inc.	6.73448 1.34694 8.08142

EXHIBIT "B"  
RHODES-YATES UNIT AREA

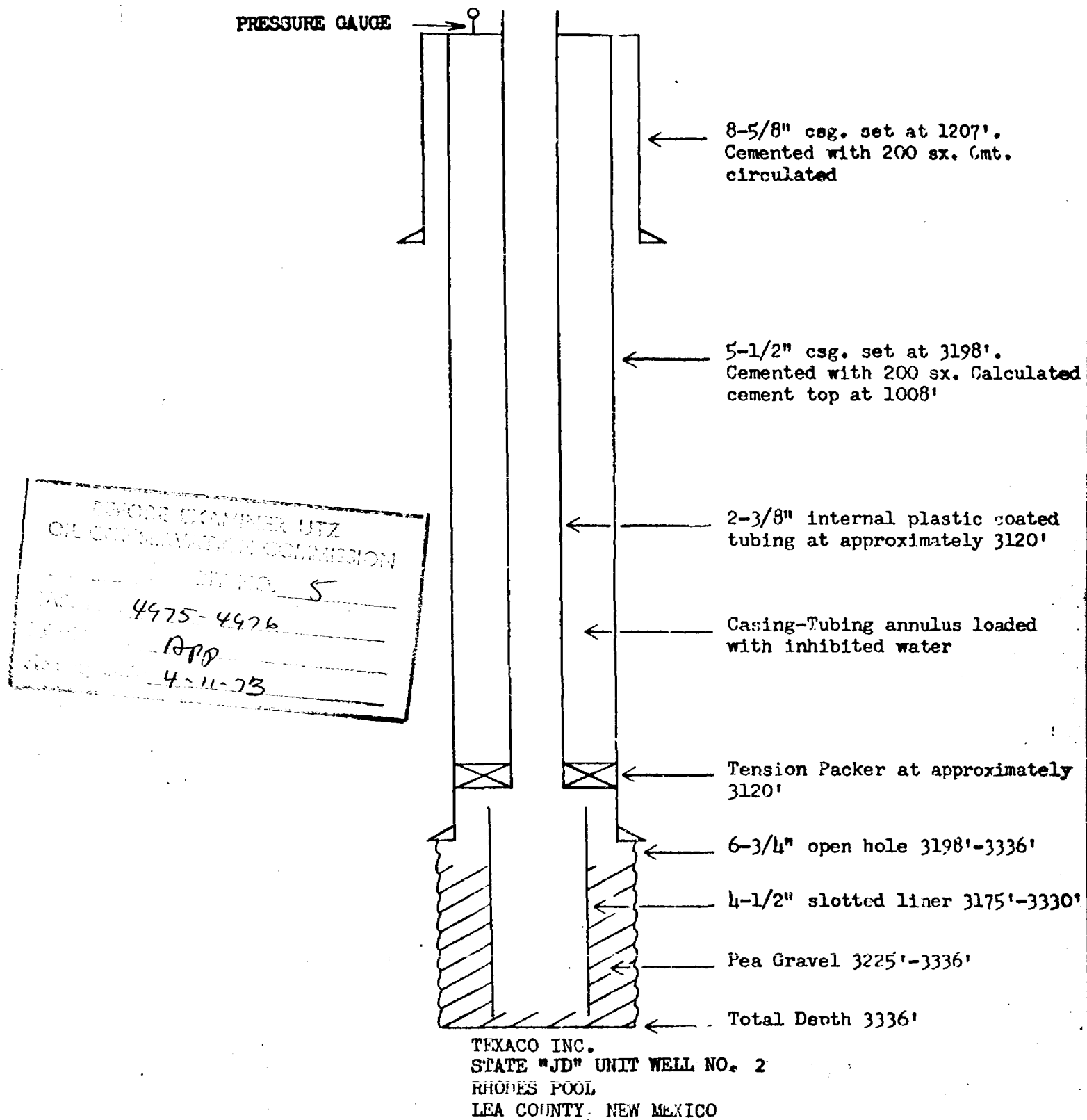
TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & DATE OF LEASE OR APPLICATION	BASIC ROYALTY PERCENTAGE	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE	PERCENTAGE TRACT PARTICIPATION
5	T26S - R37E Sec. 27; NW $\frac{1}{2}$ NW $\frac{1}{2}$	40	B-8580-1 3-11-40	State of New Mexico 12.50	Texaco	None	100% - Texaco	13.78965
6	T26S - R37E Sec. 28; N $\frac{1}{2}$ NE $\frac{1}{2}$	80	B-3580-1 3-11-40	State of New Mexico 12.50	Texaco	None	100% - Texaco	2.37899
TOTAL								100.00000

Four (4) State of New Mexico Tracts - 280 acres - consisting of 53.84615% of Unit Area

RECAPITULATION OF NUMBER OF ACRES			
Federal Lands	240 Acres	46.15385% of Unit Area	
State Lands	280 Acres	53.84615% of Unit Area	
	520 Acres	100.00000% of Unit Area	

EXHIBIT "B"  
RHODES-YATES UNIT AREA

<u>SUMMARY</u>		
<u>WORKING INTEREST OWNER</u>	<u>UNIT TRACT NO.</u>	<u>UNIT PARTICIPATION</u>
Allied Chemical Corporation	2	13.32114
	4	<u>6.73448</u>
		20.05562
Amerada Hess Corporation	3	<u>41.36917</u>
		41.36917
Texaco Inc.	2	2.40995
	5	13.78965
	6	<u>2.37899</u>
		18.57859
Texas Pacific Oil Company, Inc.	1	18.64968
	4	<u>1.34694</u>
		19.99662
		<u>100.00000</u>
	TOTAL	100.00000



DIAGRAMMATIC SKETCH OF TYPICAL INJECTION WELL

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION

EXAMINER NO. 6

DATE 4-11-73

BY 1874

DATA OF PROPOSED INJECTION WELLS  
PROPOSED RHODES YATES UNIT  
LEA COUNTY, NEW MEXICO

Lease & Well No.	Surface Casing				Production Casing				Injection Interval		
	Size	Depth	Cement (sx)	Top of Cement	Size	Depth	Cement (sx)	Calc. Top of Cement	Total Depth	From	To
State "JD" Unit No. 2	8 5/8"	1207'	200	Circ.	5 1/2"	3198'	200	979'	3336'	3198'	3336'
State "JD" Unit No. 4	7 5/8"	676'	175	Circ.	5 1/2"	3115'	200	852'	3279'	3115'	3279'
N.M. "AD" State No. 1	8 5/8"	1150'	350	Circ.	5 1/2"	3135'	300	2000'	3310'	3135'	3310'
Morris No. 2	8 5/8"	595'	175	Circ.	5 1/2"	3158'	650	Circ.	3327'	3158'	3327'
Morris No. 3	8 5/8"	688'	250	Circ.	5 1/2"	3174'	600	Circ.	3330'	3174'	3330'
State "A" 28 No. 1	8 5/8"	574'	175	Circ.	5 1/2"	3139'	650	Circ.	3275'	3139'	3275'
H. G. Moberly "C" (NCT-2) #3	7 5/8"	1200'	580	Circ.	4 1/2"	3350'	300	2050'	3350'	3135'	3330'

TEXACO INC.

LOCATIONS OF PROPOSED INJECTION WELLS  
PROPOSED RHODES YATES UNIT  
LEA COUNTY, NEW MEXICO

<u>LEASE</u>	<u>WELL NO.</u>	
State "JD" Unit	2	660' FNL & 660' FWL Sec. 27, T-26-S, R-37-E
State "JD" Unit	4	650' FNL & 2310' FWL Sec. 27, T-26-S, R-37-E
N.M. "AD" State	1	660' FNL & 1980' FWL Sec. 28, T-26-S, R-37-E
Morris	2	660' FWL & 1980' FNL Sec. 27, T-26-S, R-37-E
Morris	3	990' FSL & 2970' FEL Sec. 27, T-26-S, R-37-E
State "A" 28	1	660' FEL & 1980' FNL Sec. 28, T-26-S, R-37-E
H.G. Moberly "C" (NCT-2)	3	660' FSL & 660' FEL Sec. 21, T-26-S, R-37-E

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 4935-4936  
Submitted by App  
Hearing Date 4-11-73

CURRENT PRODUCING RATES AND ALLOWABLES  
RHODES YATES POOL  
LEA COUNTY, NEW MEXICO  
(January, 1973)

<u>Lease</u>	<u>Well No.</u>	<u>Allowable</u>	<u>Oil</u>	<u>Water</u>	<u>GOR</u>
H. G. Moberly "C"	2	0	0	0	0
N.M. "AD" State	1	0	0	0	0
State "JD" Unit	1	31	31	0	3065
State "JD" Unit	2	93	93	0	1957
State "JD" Unit	3	155	169	0	5680
State "JD" Unit	4	155	174	0	4989
Morris	1	465	463	0	2918
Morris	2	0	0	0	0
Morris	3	0	0	0	0
State "A" 28	1	—	1	0	0

BUREAU OF MINES & UTZ  
 OIL & GAS DIVISION  
 PERMIT NO. 8  
 CASE NO. 4935-4936  
 Submitted by Agg.  
 Hearing Date 4-11-73



IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed as of the date first above written and have set opposite their respective names the date of execution.

TEXACO Inc.

Date: January 31, 1973

By: [Signature]  
Its Attorney-in-Fact

APPROVED AS TO  
FORMS  
Series 1A

STATE OF Texas X  
COUNTY OF Midland X

The foregoing instrument was acknowledged before me this 31st day of January, 1973, by V.F. DULLNIG, Attorney-in-Fact, for TEXACO Inc., a Delaware corporation, on behalf of said corporation.

[Signature]  
Notary Public in and for  
Midland County, Texas

My Commission Expires:

12-31-73

EXHIBIT "C" UNIT AGREEMENT  
RHODES-YATES UNIT AREA  
LEA COUNTY, NEW MEXICO

<u>TRACT NUMBER</u>	<u>DESCRIPTION</u>	<u>TRACT PARTICIPATION</u>
	<u>ALL IN TOWNSHIP 26 SOUTH, RANGE 37 EAST</u>	
1	Section 27; SW $\frac{1}{4}$	31.97082
2	Section 21; E $\frac{1}{2}$ SE $\frac{1}{4}$	2.40995
3	Section 27; E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$	41.36917
4	Section 28; SE $\frac{1}{4}$ NE $\frac{1}{4}$	8.08142
5	Section 27; NW $\frac{1}{4}$ NW $\frac{1}{4}$	13.78965
6	Section 28; N $\frac{1}{2}$ NE $\frac{1}{4}$	2.37899
	TOTAL	100.00000

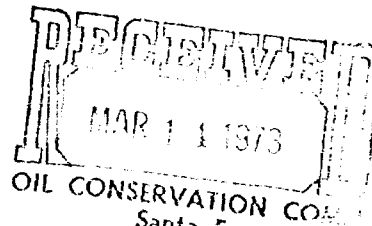


PRODUCING DEPARTMENT  
CENTRAL UNITED STATES  
MIDLAND DIVISION

PETROLEUM PRODUCTS

March 12, 1973

TEXACO INC.  
P. O. BOX 3109  
MIDLAND, TEXAS 79701



REQUEST FOR HEARING  
UNITIZATION AND WATERFLOOD  
RHODES YATES POOL  
LEA COUNTY, NEW MEXICO

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 88750

Attention: Mr. A. L. Porter  
Secretary Director

Gentlemen:

Texaco Inc. respectfully requests that evidence be considered at the Examiner Hearing in Santa Fe, New Mexico for an application to:

1. Dissolve the State "JD" Unit.
2. Unitize 520 acres in the Rhodes Yates Pool.
3. Initiate waterflood operations.
4. Drill one (1) injection well and one (1) producing well at orthodox locations.
5. Expand the proposed unit area and to drill and/or convert additional wells in the proposed unit area without notice and hearing subject to administrative approval by the Commission.

The proposed unit area is comprised of the W/2 of Section 27, the N/2 of the NE/4 and the SE/4 of the NE/4 of Section 28, and the E/2 of the SE/4 of Section 21, Township 26 South, Range 37 East, Lea County, New Mexico. This area includes the State "JD" Unit, NW/4 of Section 27, which consists of four (4) producing wells. It is requested that the State "JD" Unit be dissolved and this acreage be included in the Rhodes Yates Unit.

It is planned to develop an 80-acre five-spot flood pattern which will require drilling one (1) injection well and one (1) producer well at orthodox locations. Injection will be into the Yates and Seven Rivers formations at an average depth of 2900 to 3400 feet. Injection will be down plastic coated tubing with a packer set above the injection interval. Initial

DOCKET MAILED

Date 3/28/73

March 12, 1973

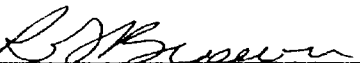
injection will be 500 barrels of water per day per well. Fresh water will be used from water supply wells located in the SW/4 of Section 9, Township 26 South, Range 37 East. Texaco has water rights of 450 acre-feet per annum which are held under State Engineer Permit Nos. CP-452 through CP-452-X-7. Also, 45 acre-feet per annum of Santa Rosa water rights are held under Declaration Nos. CP-453 and CP-453-X. This is a combined appropriation of 495 acre-feet (10,521 BWPD) per annum.

Attached is a plat of the proposed project area, a diagrammatic sketch of a typical injection well, and a list of offset operators. Detailed information supporting this application will be presented at the hearing.

A copy of this letter is being forwarded to the Commissioner of Public Lands in Santa Fe, New Mexico who has by letter dated August 23, 1972 approved the proposed Rhodes-Yates Unit Agreement as to form and content. A copy of this letter is being mailed to each offset operator.

Yours very truly,

Darrell Smith  
Division Manager

By   
R. G. Brown  
Assistant to Division Manager

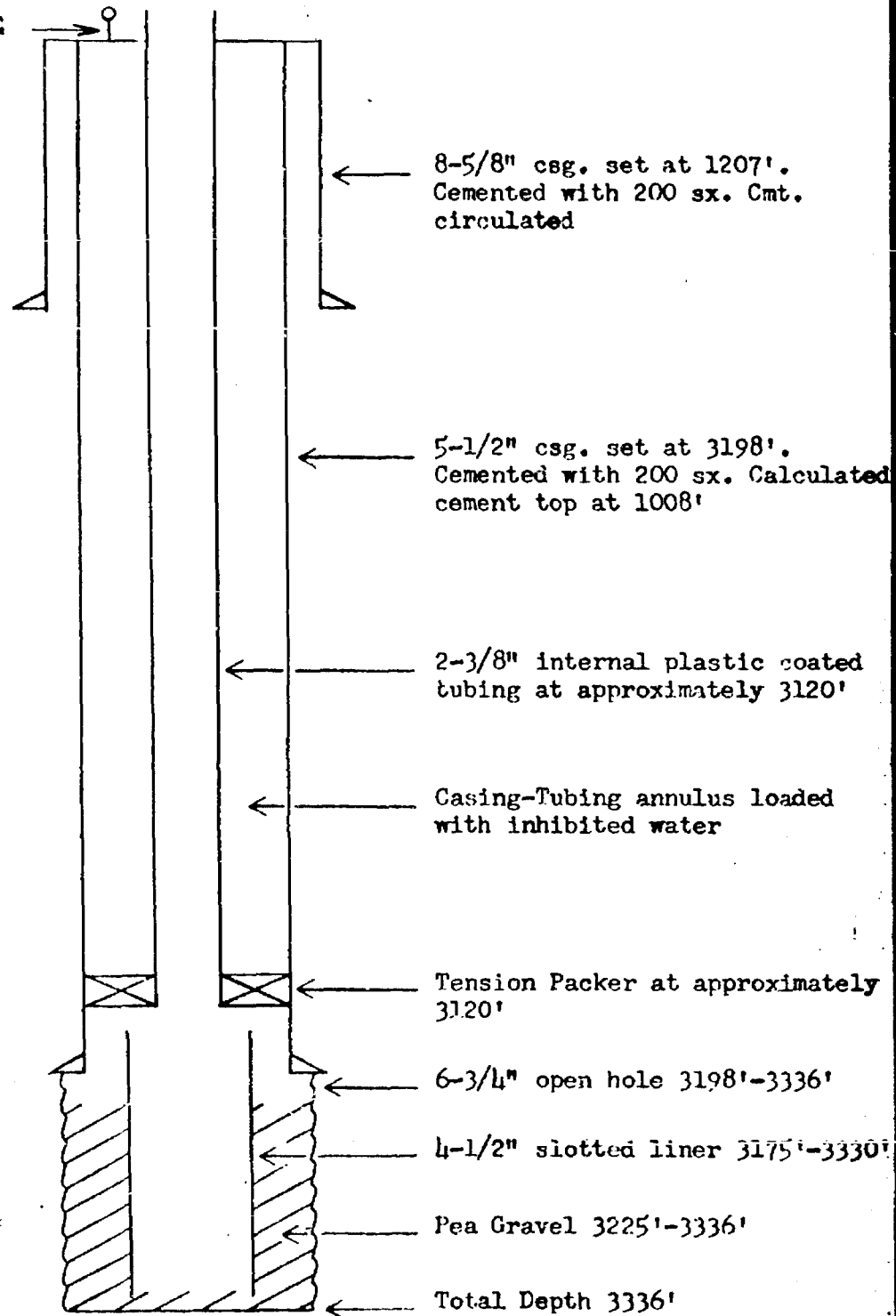
GRW/sl

Attachments

cc: Commissioner of Public Lands

All Offset Operators (List Attached)

PRESSURE GAUGE



TEXACO INC.  
STATE "JD" UNIT WELL NO. 3  
RHODES POOL  
LEA COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH OF TYPICAL INJECTION WELL

*See 4926*

OFFSET OPERATORS  
PROPOSED RHODES YATES UNIT  
LEA COUNTY, NEW MEXICO

Campbell & Hendrick  
220 Mid-America Building  
Midland, Texas 79701

El Paso Natural Gas Company  
600 Building of the Southwest  
Midland, Texas 79701

Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79701

Shell Oil Company  
Box 1509  
Midland, Texas 79701

Texas Pacific Oil Company, Inc.  
Box 4067  
Midland, Texas 79701

*Case 4926*

DRAFT

dr/

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 day of April, 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 North, Range 37 West, 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 formation<sup>s</sup>  
through the following-described/<sup>seven</sup> wells in Township 26  
~~North~~ South, Range 37 ~~West~~ East, NMPM, Lea  
County, New Mexico:

<u>LEASE</u>	<u>WELL No.</u>	<u>LOCATION</u>
STATE "JD" UNIT	2	660' FNL + 660' FWL, SEC. 27, <del>T. 26 N., R. 37 E.</del>
STATE "JD" UNIT	4	650' FNL + 2310' FWL, SEC. 27, <del>T. 26 N., R. 37 E.</del>
N.M. "AD" STATE	1	660' FNL + 1980' FWL, SEC. 28, <del>T. 26 N., R. 37 E.</del>
MORRIS	2	1980' FNL + 660' <sup>FNL</sup> FWL, SEC. 27, <del>T. 26 N., R. 37 E.</del>
MORRIS	3	990' FSL + 2970' FEL, SEC. 27, <del>T. 26 N., R. 37 E.</del>
STATE "A" DB	1	1980' FNL 660' FEL, SEC. 28, <del>T. 26 N., R. 37 E.</del>
H.G. MOBERLY "C" (NET-2)	3	660' FSL + 660' FEL, SEC. 21, <del>T. 26 N., R. 37 E.</del>

(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 accor-  
dance with Rules 704 and 1120 of the Commission Rules and Regula-  
tions.

(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.

(2) That injection, shall be through internally ~~coated~~  
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 well  
into each of said wells

injection well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface