

CASE 58749 TEXACO INC. FOR SALT  
WATER DISPOSAL, LEA COUNTY, NEW  
MEXICO. X

Case Number

5874

Application

Transcripts

Small Exhibits

ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
March 9, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc. for salt water disposal, Lea County, New Mexico. CASE 5874

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.  
Legal Counsel for the Commission  
State Land Office Building  
Santa Fe, New Mexico

For the Applicant: William Booker Kelly, Esq.  
WHITE, KOCH, KELLY & McCARTHY  
Attorneys at Law  
220 Otero Street  
Santa Fe, New Mexico

sid morrish reporting service  
General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

I N D E X

1		
2		<u>Page</u>
3	<u>SAMUEL W. SMALL</u>	
4	Direct Examination by Mr. Kelly	3
5	Cross Examination by Mr. Nutter	12
6		
7		
8		

EXHIBIT INDEX

	<u>Offered</u>	<u>Admitted</u>
11 Texaco Exhibit One, Form C-108	4	12
12 Texaco Exhibit Two, Plat	6	12
13 Texaco Exhibit Three, Sketch	8	12
14 Texaco Exhibit Four, Log	11	12
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

**sid norrish reporting service**  
*General Court Reporting Service*  
 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
 Phone (505) 982-9212

1 MR. NUTTER: We will call Case Number 5874.

2 MS. TESCHENDORF: Case 5874, application of Texaco,  
3 Incorporated for salt water disposal, Lea County, New Mexico.

4 MR. KELLY: Booker Kelly of White, Koch, Kelly and  
5 McCarthy, Santa Fe, on behalf of the applicant. I have one  
6 witness, Mr. Examiner.

7 (THEREUPON, the witness was duly sworn.)

8  
9 SAMUEL W. SMALL

10 called as a witness, having been first duly sworn, was examined  
11 and testified as follows:

12  
13 DIRECT EXAMINATION

14 BY MR. KELLY:

15 Q Would you state your name, by whom employed and in  
16 what capacity?

17 A Samuel W. Small, employed by Texaco, Incorporated as  
18 District Production Engineer out of Hobbs.

19 MR. NUTTER: What was that last name?

20 A Small, S-m-a-l-l.

21 Q (Mr. Kelly continuing.) Have you previously  
22 qualified as an expert witness in the field of petroleum  
23 engineering before this Commission?

24 A No, sir.

25 Q Would you give the Examiner a summary of your

1 professional and educational background?

2 A. I graduated from the University of Illinois with a  
3 BS degree in General Engineering in June of 1969. I went to  
4 work for Texaco in Salem, Illinois in July of '69 as a  
5 Petroleum Engineer. I was transferred to Hobbs, New Mexico in  
6 April of '76 as a Reservoir Engineer and assumed my present  
7 position as District Production Engineer in November of 1976.

8 Q Now, as part of your duties do you have general  
9 supervision over the subject well in this application?

10 A. Yes, I do.

11 MR. KELLY: Are the witness' qualifications  
12 acceptable?

13 MR. NUTTER: Yes, they are.

14 Q (Mr. Kelly continuing.) Mr. Small, would you state  
15 briefly what Texaco seeks by this application?

16 A. Texaco seeks to get permission to convert New Mexico  
17 "R" State NCT-2 Well No. 5 to a salt water disposal well to  
18 dispose of waters that will be produced from New Mexico "M"  
19 State Well No. 6.

20 Q All right, now, I have marked your Form C-108 as  
21 Exhibit One. Have you changed your proposed injection  
22 intervals from the initial application?

23 A. Yes, sir, we have.

24 Q And what are those injection intervals now?

25 A. The injection intervals as they stand now would be

**sid morrison reporting service**

General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

1 from fifty-three, eighty to fifty-four, eighty, from five  
2 thousand, twenty to fifty-two, seventy and from fifty-nine,  
3 twenty-six to fifty-nine, forty-six.

4 MS. TESCHENDORF: Excuse me, Mr. Kelly, I think he  
5 said Well No. 6 before and he meant Well No. 5.

6 A Well, we will be disposing of water that will be  
7 produced from Well No. 6, the "M" State No. 6 and we will  
8 dispose of it in 5.

9 MR. NUTTER: Would you give me those perforated  
10 intervals again that you will be using?

11 A Okay, we will be using five thousand, twenty to  
12 fifty-two, seventy; fifty-three, eighty to fifty-four, eighty;  
13 fifty-nine, twenty-six to fifty-nine, forty-six.

14 Q (Mr. Kelly continuing.) And the corrected injection  
15 intervals are shown on your Exhibit One?

16 A Yes, sir.

17 MR. KELLY: But we are not on the original applica-  
18 tion, Mr. Examiner.

19 MR. NUTTER: Well, now, let's see, the advertisement  
20 was into the perforated interval from fifty-nine, twenty-six  
21 to fifty-nine, forty-six, so you are coming up some nine  
22 hundred feet into the pay then, is that correct?

23 A Yes, sir.

24 MR. NUTTER: Your highest disposal interval will be  
25 fifty, twenty?

sid morrish reporting service  
General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

**sid morrison reporting service**  
*General Court Reporting Service*  
 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
 Phone (505) 982-9212

1 A. Yes, sir.

2 MR. NUTTER: Now, you are coming up into the pay,  
 3 I think that this notice precludes us from entering an order  
 4 at this time in this case. We can go ahead and hear the  
 5 case and readvertise the thing because we are coming back up  
 6 into the pay, we are much higher than we were previously. If  
 7 we were going lower I don't think it would be any problem but  
 8 since we are coming higher we may be affecting somebody's  
 9 oil production.

10 MR. KELLY: We will have testimony concerning that  
 11 point but I just didn't know what the Commission might want to  
 12 do but we would like to go ahead and put on our testimony.

13 MR. NUTTER: Go ahead and present your case and we  
 14 will see then, Booker.

15 MR. KELLY: All right.

16 Q. (Mr. Kelly continuing.) Referring to our plat,  
 17 Exhibit Number Two, would you give the Examiner the background  
 18 behind this application?

19 A. The salt section in the vicinity of the New Mexico  
 20 "M" State Well No. 6 was found to be charged at the present  
 21 time, it's got about six hundred and seventy-five pounds of  
 22 pressure on the salt section and we are proposing to bleed  
 23 the pressure off that salt section by just laying a line  
 24 directly from Well No. 6 to the subject well, "R" No. 5, and  
 25 disposing of the water through gravity into Well No. 5.



1 MR. NUTTER: Now, Mr. Small, Well No. 6 is this  
2 dry hole over here in the northeast of the northwest of  
3 Section 1, is that correct?

4 A. Yes, sir.

5 MR. NUTTER: Okay and the salt section is charged  
6 there so you are going to be producing water out of the  
7 salt section?

8 A. Yes, sir. In the vicinity of this Well No. 6 we  
9 found the salt section to be charged and it was recommended  
10 by the Vacuum Water Flow Committee, we are going to go ahead  
11 and connect that well No. 5 and dispose of the water out of  
12 there and bleed the pressure down.

13 Q (Mr. Kelly continuing.) Is this part of the  
14 Committee's study to determine what the source of the water  
15 in the salt section is?

16 A. Yes, it is.

17 Q And what is the status of the proposed injection  
18 well?

19 A. The proposed injection well is now as represented  
20 in Exhibit Number One.

21 Q All right, can you give the Examiner a brief  
22 history of that well?

23 A. This well No. 6?

24 Q No, your proposed injection well.

25 A. Okay. Well No. 6 was completed on April 4th, 1965 at

sid morrison reporting service  
General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

**sid morish reporting service**

General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

1 a total depth of sixty-two, fifty and an attempt was made to  
2 complete the well in the Glorieta which proved nonproductive  
3 at that time.

4 The bridge plug was set at six thousand feet and  
5 capped with four gallons of hydromite cement and the well was  
6 perforated from fifty-nine, twenty-six to fifty-nine, forty-  
7 six and it also proved nonproductive and the well was then  
8 shut in and classified ASD at this time.

9 Q All right, now, you refer to Well No. 6, you mean  
10 Well No. 5, the injection well?

11 A Yes, sir.

12 Q Now, are there any producing wells, producing from  
13 the proposed intervals as now amended anywhere surrounding  
14 that well?

15 A No, sir, there are no wells producing from the  
16 interval that we have opened in this well.

17 Q How current is that information?

18 A It's up-to-date.

19 Q All right, now, Exhibit Number Three is your  
20 sketch, does this show the well as presently completed?

21 A Yes, it does.

22 Q Would you explain the proposed installation?

23 A Okay, the proposed installation, we would like to  
24 run a two and sixteenth inch tubing in the well and we will  
25 monitor the Bradenhead pressure with a pressure gauge and

1 we will also meter the fluid production from Well No. 6 as it  
2 flows into this well and we will gravity inject it into the  
3 perforations from five thousand, twenty to fifty-two, seventy  
4 and from fifty-three, eighty to fifty-four, eighty and fifty-  
5 nine, twenty-six to fifty-nine, forty-six.

6 Q Now, I notice you do not have a packer, what is the  
7 reason for leaving out a packer in this installation?

8 A We would like to inject without a packer for two  
9 main reasons, one, without the packer we will load the  
10 annulus with crude oil and thus protect the tubing from  
11 external corrosion in the two and seven-eighths inch casing  
12 and also we will eliminate a restriction at the end of that  
13 tubing. The packer we would have to use would have a  
14 three-quarter inch bore on it as opposed to the full bore of  
15 the two and sixteenth inch tubing.

16 Q Now, you have a pressure gauge, what system will  
17 Texaco use in checking to see that the pressure gauge is  
18 accurately read and in operation?

19 A This well pressure will be monitored daily at this  
20 well as will the injection and we will test the pressure gauge  
21 periodically, although I couldn't tell you at what intervals.

22 Q It will be monitored daily?

23 A Yes, it will.

24 Q And then you also have a meter from your producing  
25 well, is that correct?

**sid morrison reporting service**  
*General Court Reporting Service*  
 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
 Phone (505) 982-9212

1 A. Yes, sir.

2 Q Now, you have different injection intervals than on  
 3 your original application, have you tested this well for its  
 4 ability to take water?

5 A. Yes, we have. When we went to test the initial  
 6 injection interval it couldn't be pumped into it at two  
 7 thousand pounds even after acidizing so we came up and opened  
 8 the other two intervals and acidized those intervals and  
 9 there we found it would take at the rate of three point five  
 10 barrels per minute at gravity.

11 Q Now, with your new injection intervals are you  
 12 still far away from any other production that would be at  
 13 that level?

14 A. Yes, sir.

15 Q How about fresh water in the area?

16 A. The fresh water will be cased off.

17 Q How deep are the fresh water wells?

18 A. The fresh water wells run around three hundred feet  
 19 to five hundred feet.

20 Q What do you anticipate your injection rate will be?

21 A. The injection rate will be two hundred and ninety  
 22 barrels per day.

23 Q And what is that information based on?

24 A. Well, that information is just based on this is what  
 25 we feel we will need to bleed the pressure off of this salt

1 section.

2 Q All right, and your test convinces you that that  
3 well can take that amount of water?

4 A Yes, sir, it can take that amount of water.

5 Q In your opinion will the proposed installation on  
6 Exhibit Three prevent migration of injection fluids and  
7 protect the fresh water zones?

8 A Yes, it will.

9 Q Now, you have a log that you have shown the injection  
10 intervals on?

11 A Yes, sir.

12 Q That's Exhibit Number Four?

13 A Yes, sir.

14 Q How long do you anticipate having to use this  
15 proposed well as an injection well?

16 A No longer than six months.

17 Q And I take it that the findings will be reported to  
18 the Commission?

19 A Yes, sir.

20 Q In your opinion will this application have any  
21 adverse effect on correlative rights of other operators in  
22 the area?

23 A No, it will have no adverse effect.

24 Q And will the granting of this application allow you  
25 to recover information that will help in the efficient produc-

**sid morrison reporting service**

General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

1 tion of this reservoir?

2 A. Yes, it will.

3 Q Were Exhibits One through Four prepared by you or  
4 under your supervision?

5 A. Under my supervision.

6 MR. KELLY: Mr. Examiner, I move the introduction of  
7 Texaco's Exhibits One through Four.

8 MR. NUTTER: Texaco Exhibits One through Four will  
9 be admitted into evidence.

10 (THEREUPON, Texaco's Exhibits One through Four  
11 were admitted into evidence.)

12 MR. KELLY: That concludes our direct examination.

13

14

CROSS EXAMINATION

15 BY MR. NUTTER:

16 Q Now, Mr. Small, you stated that the No. 6 Well at  
17 the present time will produce how much?

18 A Well, I would say that if we produce it at two  
19 hundred and ninety barrel a day we will be able to bleed the  
20 pressure off within forty-five days. We really don't have a  
21 test on it, what it will produce.

22 Q But it will produce at least two hundred and ninety  
23 barrels a day?

24 A. Yes, sir, it will.

25 Q And what pressure do you think you will need to put

**sid morrish reporting service**  
General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

1 on this disposal well to put two hundred and ninety barrels  
2 a day away?

3 A. The disposal well will take it on gravity, sir.

4 Q. I see. And these new zones that you have proposed  
5 have been tested?

6 A. Yes, sir.

7 Q. This lower zone wouldn't take the water though?

8 A. No, it wouldn't take it at two thousand pounds after  
9 acidizing.

10 Q. It wouldn't take what, two hundred and ninety barrels  
11 a day or any water?

12 A. It wouldn't take any water.

13 Q. Any water?

14 A. Right, at two thousand pounds.

15 Q. And you feel that two hundred and ninety barrels  
16 a day would take the pressure off the salt section within  
17 forty-five days and you anticipate that you will have this  
18 thing bled down within six months and be able to discontinue  
19 the use of the well?

20 A. Yes, sir.

21 Q. Now, you mentioned that the fresh water in the area  
22 was from three hundred to five hundred feet. What is the  
23 setting depth for the surface casing on this No. 5 Well?

24 A. The surface pipe, ten and three quarter inch casing  
25 set at fifteen hundred and fifty feet.

1 Q This is well below any fresh water?

2 A Yes, that is just about right at the top of the salt  
3 zone.

4 MR. NUTTER: I see. Are there any further questions  
5 of Mr. Small? He may be excused.

6 (THEREUPON, the witness was excused.)

7 MR. NUTTER: Do you have anything further, Mr. Kelly?

8 MR. KELLY: What is the Examiner's position as far  
9 as the requirement for readvertising?

10 MR. NUTTER: We will take the case under advisement  
11 with reservations. We may call it back in a month, I don't  
12 know. We will determine that, Mr. Kelly, we will let you  
13 know.

14 MR. KELLY: Okay.

15 MR. NUTTER: If there is nothing further in Case  
16 Number 5874 we will take the case under advisement with the  
17 possibility that it may have to be readvertised for the next  
18 hearing.

19

20

21

22

23

24

25



REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,  
do hereby certify that the foregoing and attached Transcript  
of Hearing before the New Mexico Oil Conservation Commission  
was reported by me, and the same is a true and correct record  
of the said proceedings to the best of my knowledge, skill and  
ability.

*Sidney F. Morrish*  
Sidney F. Morrish, C.S.R.

**sid morrish reporting service**  
General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 5874,  
heard by me on 3/9, 1977.  
*[Signature]*, Examiner  
New Mexico Oil Conservation Commission



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501



DIRECTOR  
JOE D. RAMEY

LAND COMMISSIONER  
PHIL R. LUCERO  
March 16, 1977

STATE GEOLOGIST  
EMERY C. ARNOLD

Mr. Booker Kelly  
White, Koch, Kelly & McCarthy  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico 87501

Re: CASE NO. 5874  
ORDER NO. R-5391

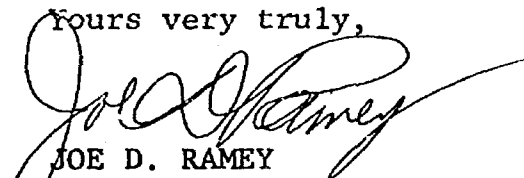
Applicant:

Texaco Inc.

Dear Sir:

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

Yours very truly,

  
JOE D. RAMEY  
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X  
Artesia OCC X  
Aztec OCC       

Other

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. 5874  
Order No. R-5391

APPLICATION OF TEXACO INC. FOR  
SALT WATER DISPOSAL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 9, 1977,  
at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 15th day of March, 1977, the Commission,  
a quorum being present, having considered the testimony, the  
record, and the recommendations of the Examiner, and being  
fully advised in the premises,

FINDS:

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

(2) That the applicant, Texaco Inc., is the owner and opera-  
tor of the New Mexico "R" State (NCT-2) Well No. 5, located  
in Unit B of Section 2, Township 18 South, Range 34 East,  
NMPM, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Lower San Andres  
formation, with injection into perforated intervals from  
approximately 5,020 feet to 5,946 feet.

(4) That the injection should be accomplished through  
2 1/16-inch plastic lined tubing set at approximately 4090 feet;  
that the casing-tubing annulus should be loaded with a  
hydraulically balanced column of inert fluid; and that a  
pressure gauge or approved leak detection device should be  
attached to the annulus in order to determine leakage in the  
casing, tubing, or packer.

-2-

Case No. 5874  
Order No. R-5391

(5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 800 psi.

(6) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights, provided that such injection does not occur for more than six months.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to utilize its New Mexico "R" State (NCT-2) Well No. 5, located in Unit B of Section 2, Township 18 South, Range 34 East, NMPM, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, to dispose of produced salt water into the Lower San Andres formation, injection to be accomplished through 2 1/16-inch tubing set at approximately 4,090 feet, with injection into perforated intervals from approximately 5,020 feet to 5,946 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be loaded with a hydraulically balanced column of inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 800 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

-3-

Case No. 5874

Order No. R-5391

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(6) That injection into the subject well for disposal purposes shall be discontinued within six months after commencement thereof, unless approval for continued injection has been obtained from the offset operator and the Secretary-Director of the Commission.

(7) 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

PHIL R. LUCERO, Chairman

  
EMERY C. ARNOLD, Member

  
JOE D. RAMEY, Member & Secretary

S E A L

dr/

Dockets Nos. 9-77 and 10-77 are tentatively set for hearing on March 23 and April 6, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 9, 1977

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stanets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for April, 1977, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
- (2) Consideration of the allowable production of gas for April, 1977, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5863: (Continued & Readvertised)

Application of Amerada Hess Corporation for an unorthodox oil well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jicarilla Apache "B" Well No. 16, completed as an oil well in the Dakota formation at a point 1850 feet from the South line and 1500 feet from the West line of Section 29, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, said well having been projected as a Basin-Dakota gas well at a standard gas well location for said pool.

CASE 5857: (Continued & Readvertised)

Application of Union Oil Company of California for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter its Pipeline Deep Unit Federal Well No. 3, the surface location of which is 1980 feet from the North and East lines of Section 7, Township 19 South, Range 34 East, Lea County, New Mexico, and to directionally drill said well in a southerly or easterly direction and complete it in the Morrow formation at a point no closer than 330 feet to the outer boundary of the proration unit, the E/2 of said Section 7.

CASE 5873: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the amendment of Rule 1115 of the Commission Rules and Regulations to provide for the filing of information required on Form O-115, Operator's Monthly Report, in the manner and sequence prescribed by the Commission:

CASE 5874: 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 Lower San Andres formation through the perforated interval from 5926 to 5946 feet of its New Mexico "R" State Well No. 5, located in Unit B of Section 2, Township 18 South, Range 34 East, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico.

CASE 5866: (Continued from February 16, 1977, Examiner Hearing)

Application of Union Texas Petroleum for an exception to casing and cementing requirements of Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing and cementing requirements of Order No. R-111-A to eliminate the salt protection string in a well it proposes to drill in Unit D of Section 33, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.

CASE 5048: (Reopened) (Continued from January 19, 1977, Examiner Hearing)

In the matter of Case 5048 being reopened pursuant to the provisions of Order No. R-4637-A, which order extended the temporary special pool rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said temporary special pool rules should not be rescinded.

CASE 5117: (Reopened) (Continued from February 2, 1977, Examiner Hearing)

In the matter of Case 5117 being reopened pursuant to the provisions of Order No. R-4691-A, which order extended the temporary special pool rules for the North Dagger Draw-Upper Pennsylvanian Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said North Dagger Draw-Upper Pennsylvanian Pool should not be developed on less than 160-acre proration units and why the special depth bracket allowable should be retained.

CASE 5875: Application of Atlantic Richfield Company for an unorthodox location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to simultaneously dedicate a previously approved 320-acre non-standard Jarama gas proration unit comprising the W/2 of Section 29, Township 24 South, Range 37 East, Lea County, New Mexico, to its William H. Harrison "A" WN Well No. 2 located in Unit D and William H. Harrison "D" Wells Nos. 1 and 6 in Units J and N, respectively, of said Section 29. Applicant further seeks approval of an unorthodox location for its William H. Harrison "D" WN Well No. 6 at a location 660 feet from the South line and 1930 feet from the West line of said Section.

CASE 5876: Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Gavilan-Pictured Cliffs and Blanco-Mesaverde production in the wellbore of his June Well No. 1 located in Unit B of Section 28, Township 28 North, Range 3 West, Rio Arriba County, New Mexico.

CASE 5820: (Continued from February 16, 1977, Examiner Hearing)

Application of Texas Oil & Gas Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the W/2 of Section 4, Township 22 South, Range 26 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5867: (Continued from February 16, 1977, Examiner Hearing)

Application of Texas Oil & Gas Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 19, Township 21 South, Range 27 East, Burton Flat Field, Eddy County, New Mexico, to be dedicated to its Forrest Well No. 1 to be located in Unit N of said Section 19. Also to be considered will be the cost of completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in completion of said well.

CASE 5877: Application of Great Lakes Chemical Corporation for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 160-acre non-standard Blanco Mesaverde gas proration units comprising the SE/4 of Section 3, and the NW/4 of Section 35, respectively, Township 27 North, Range 8 West, San Juan County, New Mexico.

CASE 5878: Application of Michael T. Gottlieb for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 160-acre non-standard Blanco Mesaverde gas proration units comprising the NE/4 of Section 3, and the SW/4 of Section 35, respectively, Township 27 North, Range 8 West, San Juan County, New Mexico.

CASE 5879: Application of Morris R. Antweil for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 12, Township 22 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5880: Application of Morris R. Antweil for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the S/2 of Section 20, Township 18 South, Range 25 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

Examiner Hearing - Wednesday - March 9, 1977  
-3-

CASE 5881: Application of Western Oil Producers, Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Amoco State Well No. 1, completed in the Atoka formation at a point 660 feet from the South and West lines of Section 28, Township 16 South, Range 33 East, Lea County, New Mexico, the W/2 of said Section 28 to be dedicated to the well.

CASE 5859: (Continued & Readvertised)

Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Blanco Mesaverde and Basin-Dakota production in the wellbore of its Breech D Well No. 307, located in Unit M of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico, and to dually complete the commingled formations and the Chacra formation in said well.





**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79761  
PHILLIPS BUILDING

NATURAL RESOURCES GROUP  
Exploration and Production

January 27, 1977

Case 5874

Texaco Inc.'s Application for Temporary  
Brine Water Disposal--New Mexico "R"  
State NCT-2, Well No. 5 (B-2-18S-34E),  
Vacuum Field, Lea County, New Mexico

File: W4-Ta-37-77

New Mexico Oil Conservation Commission (3)  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

Phillips Petroleum Company, as the offset operator to the subject well, hereby waives objection to the Texaco application for temporary brine water disposal into the lower San Andres interval below 5,000 feet in this tubingless completed well. It is Phillips Petroleum Company's understanding that this brine water will be produced while attempting to depressurize the salt section overlying Texaco's Vacuum Grayburg-San Andres Unit in Sections 1 and 2, T-18-S, R-34-E, Lea County, New Mexico.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

F. F. Lovering, Manager  
Southwestern Region

WJM:dva

cc: New Mexico Oil Conservation Commission  
Attention: Mr. Jerry Sexton  
P. O. Box 1980  
Hobbs, New Mexico 88240

Texaco Inc.  
P. O. Box 728  
Hobbs, New Mexico 88240

January 27, 1977

Texaco Inc.'s Application for Temporary  
Brine Water Disposal--New Mexico "R"  
State NCT-2, Well No. 5 (8-2-18S-34E),  
Vacuum Field, Lea County, New Mexico

File: W4-Ta-37-77

New Mexico Oil Conservation Commission (3)

P. O. Box 2088

Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

Phillips Petroleum Company, as the offset operator to the subject well, hereby waives objection to the Texaco application for temporary brine water disposal into the lower San Andres interval below 5,000 feet in this tubingless completed well. It is Phillips Petroleum Company's understanding that this brine water will be produced while attempting to depressurize the salt section overlying Texaco's Vacuum Grayburg-San Andres Unit in Sections 1 and 2, T-18-S, R-34-E, Lea County, New Mexico.

Very truly yours,

PHILLIPS PETROLEUM COMPANY



F. F. Lovering, Manager  
Southwestern Region

WJH:eva

cc: New Mexico Oil Conservation Commission

Attention: Mr. Jerry Sexton

P. O. Box 1980

Hobbs, New Mexico 88240

Texaco Inc.

P. O. Box 728

Hobbs, New Mexico 88240

January 27, 1977

Texaco Inc.'s Application for Temporary  
Brine Water Disposal--New Mexico "R"  
State NCT-2, Well No. 5 (B-2-188-34E),  
Vacuum Field, Lea County, New Mexico

File: W4-Ta-37-77

New Mexico Oil Conservation Commission (3)

P. O. Box 2088

Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Raney

Gentlemen:

Phillips Petroleum Company, as the offset operator to the subject well, hereby waives objection to the Texaco application for temporary brine water disposal into the lower San Andres interval below 5,000 feet in this tubingless completed well. It is Phillips Petroleum Company's understanding that this brine water will be produced while attempting to depressurize the salt section overlying Texaco's Vacuum Grayburg-San Andres Unit in Sections 1 and 2, T-18-S, R-34-E, Lea County, New Mexico.

Very truly yours,

PHILLIPS PETROLEUM COMPANY



F. F. Lovering, Manager  
Southwestern Region

WJM:dva

cc: New Mexico Oil Conservation Commission

Attention: Mr. Jerry Saxton

P. O. Box 1980

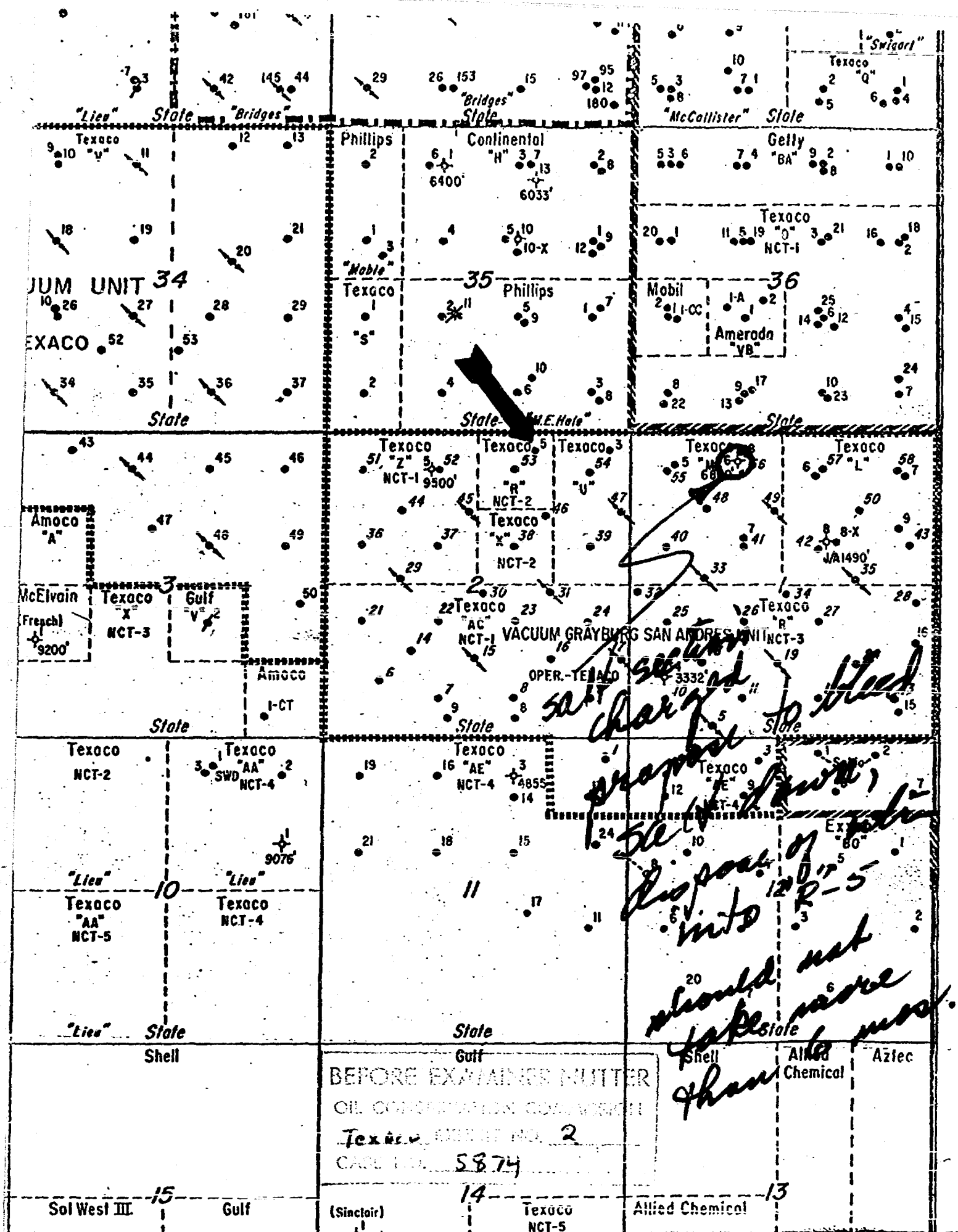
Hobbs, New Mexico 88240

Texaco Inc.

P. O. Box 728

Hobbs, New Mexico 88240

*NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests, SEE RULE 701.*



←-METER  
PRESSURE GAUGE  
on  
annulus

# 6 at present  
time produces  
290 bbls/day

Tubing Casing annulus loaded  
with inhibited fluid.

fresh wt  
300-500'

10-3/4" csg. in 15" hole set at 1550'.  
Cemented with 800 sacks. Cement circ.

2-7/8" csg. set at 6248'. Cemented  
with 1000 sacks. Calculated cement  
top at 2456'.

no pkr will use  
hydraulically  
fractured  
oil blanket  
in annulus

← 9-7/8" hole to 3400'.

6-3/4" hole to 6250'.

pk would have  
to be smaller  
would have 3/4" orifice

2-1/16" Plastic Coated Tubing  
at 4090'.

5020'-5270' INJECTION INTERVAL

5380'-5480' INJECTION INTERVAL

5926'-5946' INJECTION INTERVAL

← Bridge Plug at 6000' capped with 4 gal  
Hydromite.  
GLORIETA

Perf: 6052'-  
6182'

TD 6250'

BEFORE EXAMINED MATTER  
OIL CONSERVATION COMMISSION  
Texaco EXHIBIT NO. 3  
CASE NO. 5874

copy  
4-4-66

Salt Water Disposal Well  
TEXACO INC.  
NEW MEXICO "R" STATE (NCT-2) NO. 5  
VACUUM (LOWER SAN ANDRES)  
LEA COUNTY, NEW MEXICO

JBS 3-2-77.



PETROLEUM PRODUCTS

January 27, 1977

Case 5874

TEXACO INC.  
DRAWER 728  
HOBBS, NEW MEXICO 88240

Phillips Petroleum Company  
820 Phillips Building  
Odessa, Texas 79761

RE: CONVERSION TO SALT WATER DISPOSAL  
New Mexico "R" State (NCT-2) #5  
Lea County, New Mexico

ATTENTION: W. J. MUELLER

Gentlemen:

As offset operator of the Texaco-operated New Mexico "R" State (NCT-2) Lease, please be advised that TEXACO INC. is submitting to the New Mexico Oil Conservation Commission application to convert the subject well to a temporary salt water disposal well.

Please find enclosed a copy of the exhibits submitted to the Commission.

Yours very truly,

J. V. GANNON

J. V. Gannon  
District Superintendent

JBS:las

Enclosures

NMOCC

OIL CONSERVATION COMMISSION  
Hobbs DISTRICT

Case 5874

OIL CONSERVATION COMMISSION  
BOX 2088  
SANTA FE, NEW MEXICO

DATE February 11, 1977

RE: Proposed MC \_\_\_\_\_  
Proposed DHC \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed SWD X \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

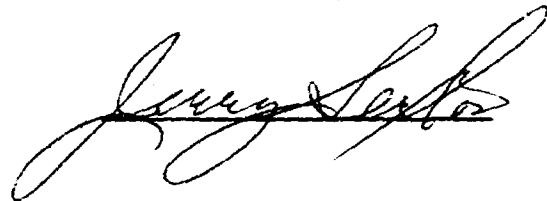
Gentlemen:

I have examined the application dated \_\_\_\_\_  
for the Texaco Inc. New Mexico "R" State (NCT-2) #5-B 2-18-34  
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.---J.S.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,





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. 5874

Order No. R- 5391

APPLICATION OF TEXACO INC. FOR  
SALT WATER DISPOSAL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 9, 1977,  
at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this            day of March, 1977, the Commission,  
a quorum being present, having considered the testimony, the  
record, and the recommendations of the Examiner, and being fully  
advised in the premises,

FINDS:

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

(2) That the applicant, Texaco Inc.,  
is the owner and operator of the New Mexico "R" State Well No. 5,  
located in Unit B of Section 2, Township 18 South,  
Range 34 East, NMPM, Vacuum Grayburg-San Andres Pool,  
Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Lower San Andres  
formation, with injection into the perforated intervals  
from approximately 5,020 feet to 5,946 feet.

(4) That the injection should be accomplished through             
2 1/2-inch plastic lined tubing ~~installed in a packer~~  
set at approximately 4090 feet; that the casing-tubing annulus  
should be ~~filled with an inert fluid~~ loaded with a hydraulically balanced column of inert fluid;  
and that a pressure gauge  
or approved leak detection device should be attached to the

annulus in order to determine leakage in the casing, tubing, or packer.

(4) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 800 psi.

(5) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(6) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(7) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights, *provided that such injection does not occur for more than six months.*

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc. *(NET-2)*, is hereby authorized to utilize its New Mexico "R" State Well No. 5, located in Unit B of Section 2, Township 18 South, Range 34 East, NMPM, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, to dispose of produced salt water into the Lower San Andres formation, injection to be accomplished through 2 1/6-inch tubing ~~installed in a packer~~ set at approximately 4090 feet, with injection into ~~the~~ perforated intervals from approximately 5020 ~~5,926~~ feet to 5,946 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be ~~filled with an inert~~ *loaded a hydraulically balanced column of inert* fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 800 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(6) 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.

(6) That injection into the subject well for disposal purposes shall be discontinued ~~after~~ within six months after commencement thereof, unless approval for continued injection has been obtained from the offset operator and the Secretary-Director of the Commission.