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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
OIL CONSERVATION COMMISSION CONFERENCE ROOM  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO  
Wednesday, June 27, 1973  
EXAMINER HEARING

IN THE MATTER OF:

Application of Phillips Petroleum Company  
for a waterflood project, Lea County, New  
Mexico.

Case No. 5013

BEFORE: Elvis A. Utz,  
Examiner

TRANSCRIPT OF HEARING

1 MR. UTZ: Call Case 5013.

2 MR. CARR: Case 5013, application of Phillips  
3 Petroleum Company for a waterflood project, Lea County,  
4 New Mexico.

5 MR. KELLAHIN: If the Examiner please, Jason  
6 Kellahin, Kellahin & Fox, Santa Fe, appearing for the  
7 applicant in association with Mr. Joe V. Peacock, a  
8 member of the Texas Bar. We have one witness we'd like  
9 to have sworn.

10 DALE J. FISHER,

11 a witness, having been first duly sworn according to law, upon  
12 his oath, testified as follows:

13 DIRECT EXAMINATION

14 BY MR. KELLAHIN:

15 Q Would you state your name, please?

16 A Dale J. Fisher.

17 Q By whom are you employed and in what position?

18 A Phillips, Associate Reservoir Engineer.

19 Q Have you ever testified before the Oil Conservation  
20 Commission or one of its Examiners?

21 A No, sir.

22 Q For the benefit of the Examiner, would you briefly  
23 outline your education and experience as a geologist and  
24 engineer?

25 A Yes, sir, I have a BS Degree in geological engineering

1 from Texas A & M University. I worked 13 years for  
2 Phillips Petroleum Company, the last four of which have  
3 been as an Associate Reservoir Engineer.

4 Q Where have you worked for Phillips?

5 A In the Odessa area for the last four years, and prior to  
6 that Boswell, Oklahoma; Buck-eye, New Mexico; and Borden,  
7 Texas.

8 Q Did you say Buck-eye, New Mexico?

9 A Yes, sir.

10 Q In connection with your work with Phillips, does the  
11 area involved in the application before the Examiner at  
12 this time come under your jurisdiction?

13 A Yes, sir.

14 MR. KELLAHIN: Are the witness' qualifications  
15 acceptable?

16 MR. UTZ: Yes, they are.

17 Q (By Mr. Kellahin) Mr. Fisher, are you familiar with the  
18 application of Phillips Petroleum Company in Case 5013?

19 A Yes, sir.

20 Q Briefly, what does the applicant propose in this case?

21 A Phillips seeks permission to institute a waterflood  
22 project in the Vacuum Grayburg-San Andres Pool by the  
23 injection of water into the Grayburg-San Andres Formation.  
24 Phillips proposes to convert to water injection its Lea  
25 Wells Number 4 in Unit I and Number 6 in Unit O, both in

1 Section 29, Township 17 South, Range 24 East, N.M.P.M.,  
2 Lea County, New Mexico. And, also requests that  
3 administrative procedures be authorized whereby said  
4 project can be expanded to include lands and injection  
5 wells in the area of the said project as may be  
6 necessary in order to complete an efficient injection  
7 pattern; that said administrative procedure should  
8 provide for administrative approval for conversion to  
9 water injection in exception to the well response  
10 requirements of Rule 701 E-2 of the Commission Rules and  
11 Regulations.

12 Q Now, referring to what has been marked as the Applicant's  
13 Exhibit Number 1, which is a multiple page exhibit with  
14 some attachments, would you discuss the information that  
15 is shown on this exhibit?

16 A Yes, sir, on Page 2, shown is our intention to inject  
17 in the Grayburg and San Andres interval between  
18 approximately 4,400 to 4,800 feet. We would like to  
19 inject fresh water in volumes of approximately 400  
20 barrels of fresh water per day per well, and the source  
21 of the injected fluid is to be from Texaco Incorporated,  
22 and they obtained this water from the Ogallala Formation,  
23 and it is fresh water.

24 Q Do you know what pressures will be involved in injecting  
25 into this formation?

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- 1 A The pressures are not to exceed 2,500 pounds.
- 2 Q Now, turning to Pages 3 and 4 of the exhibit, would you
- 3 discuss the information shown on those?
- 4 A Yes, sir. These two pages are diagrammatic sketches of
- 5 the proposed downhole well equipment. It represents a
- 6 standard injection well completion. The injection
- 7 water flow would be down the tubing under a Baker "AD"
- 8 Tension Packer, which would be set at approximately
- 9 4,350 feet in the Phillips Lea Number 4. The sketches
- 10 also show the perforation interval to be injected into;
- 11 where the casing is set, which is 4 1/2-inch casing,
- 12 set at 4,769 in Number 4, and the same size casing set
- 13 at 4,797 in Number 6.
- 14 The two wells both have 8 5/8-inch casing set at
- 15 326 in Number 4 and 352 in Number 6, both being cemented
- 16 back to the surface. Also not shown on here is how the
- 17 annulus would be treated. In this case we would fill the
- 18 casing tubing annulus with an inert fluid and have a
- 19 pressure gauge set at the surface.
- 20 Q And you will use plastic-lined tubing, is that correct?
- 21 A Yes, sir.
- 22 Q The top of the cement on the production string on both
- 23 wells is also shown on the exhibit, is it not?
- 24 A Yes, sir.
- 25 Q Now, turning to the material in the package in the back of

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1 the exhibit, would you discuss that information?

2 A Yes, sir. if you would look at the well location further,

3 Lea Number 4, it's a Nuclear Log, and the 2-inch scale,

4 you will note that the formation tops have been marked

5 for the entire interval; and then on the 5-inch scale,

6 the bottom of the log, the Grayburg top has been marked

7 at 4,246, as well as the San Andres top at 4,642; and

8 the perforated intervals are marked on the log. The

9 same is true for the log of the Lea Number 6. It also

10 is a Gamma ray Neutron Log and it, too, has the formation

11 tops marked on the small scale, on the 2-inch scale,

12 and on the 5-inch scale the Grayburg top is marked at

13 4,190, and the San Andres top at 4,575, with the perforated

14 intervals being shown on the log.

15 Q Now, turning to the plat that is also included in the

16 exhibit, would you discuss the information shown on it?

17 A The Phillips Lea area takes in the wells in Section 29,

18 30, and one well that is shown as the Phillips Lea Number

19 3 in Section 31. The arrows mark the wells Number 4 and

20 Number 6 that we propose to convert to injection. I

21 might mention that of the wells in Number 29, all of them

22 are producing at the present time with the exception of

23 Number 21, which is shut down. In Section 30, Number 12,

24 19, 20, and 18 are all shut down, with the Phillips Lea

25 Number 3 in Section 31 producing. Each one of these wells

- 1 that are producing are producing at a rate by well test  
2 of less than 4 barrels or less per day of oil.
- 3 Q Would you consider this at an advanced stage of  
4 depletion, then?
- 5 A Yes, sir.
- 6 Q Now, is this a cooperating flood, Mr. Fisher?
- 7 A Yes, sir, we have entered into an agreement with the  
8 West Vacuum Units which Texaco operates in return for  
9 purchasing water from them to use for injection, to  
10 convert this Well Number 4; and they have agreed to  
11 convert the well shown on the plat in Section 28 in the  
12 southwest corner; that is, BTA Number 1. They have  
13 agreed to convert this well to injection, and they have  
14 also agreed to the provision for supplying us water for  
15 one additional well which we have chosen to be the  
16 Number 6.
- 17 Q Now, Texaco also operates the area to the south, does it  
18 not?
- 19 A Yes, sir, to the south.
- 20 Q Immediately south of your injection well?
- 21 A Of this Well Number 5 and 6.
- 22 Q And they voiced no objection to injection of water into  
23 that well, have they?
- 24 A No, sir.
- 25 Q Do you have any cumulative production figures on the

1 wells in this unit?

2 A Yes, sir, starting with Well Number 3, its cumulative  
3 production as of 11/73 is 51,665 barrels; Well Number 4  
4 has a cumulative figure of 33,349 barrels; Number 5,  
5 34,755; Number 6, 22,303; Number 11, 16,949; Number 13,  
6 12,694; Number 14 has 12,850; Number 21 has 36,661;  
7 Number 12 has 3,228; Number 18 has 56,856; Number 19,  
8 27,844; and Number 20, 41,583.

9 Q All of these wells are past the period of primary  
10 production, are they not?

11 A Of course, they are still in primary production at a  
12 very marginal rate.

13 Q Do you anticipate that by injecting water into the  
14 formation, you will recover oil that would otherwise not  
15 be recovered?

16 A Yes, sir.

17 Q Is this application, in your opinion, in the interest of  
18 conservation and prevention of waste?

19 A Yes, sir.

20 Q Will the correlative rights of any offset operator be  
21 interfered with?

22 A No, sir.

23 Q Was the material contained in Exhibit Number 1 prepared  
24 by you or under your supervision?

25 A Yes, sir.



1 MR. KELLAHIN: At this time, I'd like to offer in  
2 evidence Exhibit Number 1 and its attachments.

3 MR. UTZ: Without objection, Exhibit Number 1 will  
4 be entered into the record of this case.

5 MR. KELLAHIN: That concludes the testimony, Mr.  
6 Utz.

7 MR. UTZ: Are there questions of the witness?

8 (No response.)

9 CROSS-EXAMINATION

10 BY MR. UTZ:

11 Q On the first page of Exhibit Number 1 is stated in  
12 detail all of the provisions that you would like to have  
13 in the order?

14 A Yes, sir.

15 MR. UTZ: The witness may be excused. Are there  
16 statements in the case?

17 (No response.)

18 MR. UTZ: The case will be taken under advisement.  
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R E P O R T E R ' S C E R T I F I C A T E

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

*John De La Rosa*  
COURT REPORTER

*Handwritten notes and signatures*

I N D E X

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E X H I B I T S

	<u>OFFERED</u>	<u>ADMITTED</u>
Exhibit Number 1	10	10