BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 25, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc. for a unit agreement, Lea County, New Mexico. — Case No. 4268

Application of Texaco, Inc. for a waterflood project, Lea County, New Mexico. — Case No. 4269

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Do you intend to consolidate Cases 4268 and 4269?

MR. WHITE: Yes, sir, if we may, please, sir.

MR. UTZ: Cases 4268 and 4269.

MR. HATCH: Case 4268. Application of Texaco, Inc., for a unit agreement, Lea County, New Mexico.

Case 4269. Application of Texaco, Inc., for a waterflood project, Lea County, New Mexico.

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

You may proceed.

MR. WHITE: If the Examiner please, L. C. White, of Santa Fe, New Mexico, appearing on behalf of the Applicant. And, we have Mr. Henson to be sworn.

(Witness sworn).

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification.)

BILLY R. HENSON

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Henson, by whom are you employed and in what

capacity?

A I am employed with Texaco, Incorporated as a production engineer.

Q Are you familiar with the unit agreement pertaining to Case 4268?

A Yes, I am.

Q And are you familiar with the application of Case 4269?

A Yes, sir.

Q Have you previously testified before the Oil Conservation Commission and had your qualifications as a petroleum engineer been accepted as a matter of record?

A Yes, sir.

Q Referring to Case 4268, what is the purpose of the unit agreement?

A It's for secondary recovery.

Q Would you refer to Exhibit marked No. 1 and explain that insofar as it pertains to this case?

A This is a map of the area. You will notice that we have outlined in dotted blue lines the area of the "JD" Unit there in the northwest quarter of Section 27, Township 26 South, Range 36 East.

It shows the proposed injection wells and all of the offset operators and the lease names.

Q Who are the parties to this unit agreement?

A Amerada and Texaco.

Q Will you refer to Exhibit No. 2 and that is the unit agreement; is it not?

A Yes, it is the unit agreement.

Q And on what page is the description of the unit agreement referred to and described?

A Page -- Exhibit A, page seventeen is the outline of the unit.

Q What zones are to be unitized?

A It would be the Yates and the Seven Rivers.

Q And are they tied into the perforation points?

A Yes, sir, they are -- on the Amerada JA State, Well No. 2.

Q What is the depth zone?

A Unitized from twenty-nine twelve to thirty-four hundred feet on that particular well.

Q Do you have a log; is that your Exhibit 3?

A Yes, sir. That's Exhibit 3.

Q And are those points pointed out on the log?

A Yes, sir -- you will notice a black line -- a

dashed black line -- there at twenty-nine twelve, and at the bottom of the log, bottom of the unitized zone, at thirty-four hundred, which is the deeper than the TD of this well.

Q And did you give the name of that well?

A That's Amerada JA State Well No. 2.

Q What type of acreage is this federal state or field?

A State acreage.

Q And have you submitted this agreement to the State Land Office and have they given their preliminary approval?

A Yes, sir, they have.

Q What percent of the working interests are signed up?

A One hundred percent.

Q And all of the royalty is state?

A That's true.

Q And what are your unitized supplements?

A It would be all of the hydrocarbons, as set forth in Section 1.5 of the unit agreement, on page two.

Q And who are the operator --

A It would be Texaco, Incorporated.

Q Are you otherwise familiar with the terms of this unit agreement, and if so, is it the standard form in which the Oil Conservation Commission has previously approved?

A Yes, sir, it is the standard form that has been approved.

Q In your opinion, would the creation of this unit prevent waste by allowing you to produce hydrocarbons more efficiently?

A Yes, it would.

Q And does it protect the correlative rights?

A Yes, it does.

Q Is there any provision for the enlargement of the unit agreement, and if so, on what page does it appear?

A Yes, sir -- there is a provision on page eleven, article twelve.

Q And do you further request of the Commission to approve administratively and the enlargement of the unit without any response --

A Yes, we would.

Q Does that conclude your testimony as to Case 4268?

A Yes, sir, it does.

Q Now, will you refer to Case 4269 and state what Texaco seeks by this application?

A We seek approval to conduct a waterflood on the proposed State "JD" Unit.

Q Will you refer back to Exhibit No. 1 and point out what significant points there are on that exhibit in regard to this case?

A Exhibit 1 shows the proposed -- as I said earlier, the proposed "JD" Unit -- the triangles on the map indicate the proposed injection wells, and it's also color coated to show all of the producing zones, within at least a two-mile radius of the subject unit.

It shows the offset operators and the lease names.

Q Refer to Exhibit 4 and explain that, please.

A Exhibit 4 is a structure map of the Rhodes Yates Pool, contoured on top of the Yates. You notice that it's an anticline, trending northwest to the southeast, and it defines the productive limits of the pool.

Q Now, will you refer to Exhibit 5 and explain your diagrammatic sketch --

A Exhibit 5 is a diagrammatic sketch of the typical injection well in the unit, as we propose to equip it.

It shows the surface casing and the cemented

program and the cement circulated on the surface string. It also shows the production string, set at thirty-one hundred and ninety-eight feet, cemented with two hundred sacks, with calculated cement top at one thousand and eight feet.

Further, it shows the injection interval, and the proposed slaughted liner, across the open hole interval. We are putting these liners in to prevent cavings and to insure that we get a good distribution of water.

Q Will your tubing be plastic coated?

A Yes, it will.

Q And will the anulus be filled with any corrosive inhibited fluid?

A Yes, it will.

Q And do you intend to have a pressure gauge on top of the surface to check against any leakage?

A Yes. We will equip the well with a pressure gauge on the surface.

Q Now, refer to Exhibit 6 and explain what that is, please.

A Exhibit 6 is an injection well data sheet on the two proposed injection wells in the unit. It shows the depth and size of the surface casing for each well --

a cementing program, the production size and depth for each well and the submitting program for it, plus the tops of the cement for both wells.

It also shows the total depths and the injection interval for each well.

Q Is there any fresh water in this area?

A Not to my knowledge.

Q Are there any other producing zones up structure from the perforated zones?

A No.

Q In your opinion, will this casing program effectively prevent migration?

A Yes, it will.

Q What will the source of your water be?

A We have a water source approximately two miles northwest of the proposed unit -- it's located in the southwest quarter of Section 9, Township 26, Range 37 East.

We have approved permits for four hundred and fifty acre feet per annum.

Q What amount of volume of water do you intend to inject into the well?

A Five hundred barrels per day per well.

Q What is the pressure?

A Initially, we estimate at six hundred feet PSI.

Q And what do you anticipate the leveling out volume and pressures to be?

A We aim to maintain a five hundred barrel per day injection rate, at an estimated pressure of fourteen hundred to fifteen hundred PSI.

Q Do you anticipate any problem of the zone not being able to absorb or accommodate this water?

A No, we don't.

Q Now, refer to Exhibit 7 and explain what that is, please.

A Exhibit 7 is a production performance curve of the proposed unit. This is production for four wells in the unit, showing the barrels of oil per month, the gas-oil ratio and the barrels of water produced per month.

You will notice that the water production is almost nil in the unit. Our current average production is approximately six barrels per day per well of oil and two to three barrels of water per day.

Q In your opinion, has this pool reached advance stage of depletion?

A Yes, it has.

Q How long would it take to get response from these injection wells; in your opinion?

A We estimate at twelve months.

Q And how much increased production do you anticipate?

A We think we will recover as much on secondary as we have on primary.

Q Is it your opinion in this case as well as the former, that you ask for administrative approval to expand the project, even though there is no response?

A Yes, sir. We would request that.

Q Would the granting of this application allow the recovery of hydrocarbons that would otherwise remain in place?

A Yes, sir, it sure would.

Q Were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes, they were.

MR. WHITE: At this time Mr. Examiner, we offer Exhibits 1 through 7, and that completes our direct examination.

MR. UTZ: Without objection, Applicant's Exhibits 1 through 7 will be entered into the record of these cases,

4268 and 4269.

CROSS EXAMINATION

BY MR. UTZ:

Q Referring to Exhibit No. 7, did I interpret this graph to show that your GOR is around seven thousand?

A Yes, sir, that's right.

Q And you are still producing substantial quantities of gas in addition to the six or seven barrels of oil?

A Right.

Q Which would be around forty-two hundred a day per well: wouldn't it?

A I believe that's what it would figure.

Q Now, referring to Exhibit No. 5, does this show the manner in which you intend to complete both injection wells?

A Yes, sir. That's the program we will use in both wells.

Q Including the slaughter liner?

A Yes, sir. It will probably be Fiberglas in both wells.

Q Now, you don't show on your Exhibit No. 6 what the packer and tubing set will be: do you have that?

A It will be fifty to one hundred feet above the

top of the liner, which will be up into the casing there just a few feet.

Q Well, the casing shoe on the five and half, thirty-one fifteen: would you say the liner would go up into the casing, say, five feet?

A Probably fifteen or twenty feet up into the casing.

Q Well, that would be thirty-one hundred then, or less fifty to a hundred feet, would be where the packer would be?

A Yes, sir.

Q So, if we say approximately three thousand fifty feet, that would be pretty close --

A That is what I was going to say -- three thousand fifty feet, yes, sir.

Q Now, are these injection wells located in the performance of the offsetting conformity of the waterflood --

A Yes. That would be compatible with the other flood in the area that we are proposing.

Q Let me get clear in what you asked for administrative approval. Is that to put more injection wells on without benefit of response?

MR. UTZ: Any further questions of the witness? You may be excused.

(Witness excused).

MR. UTZ: Statements in this case? The case will be taken under advisement.

I N D E X

E X H I B I T S

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, CA FENLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, 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.

Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4268 heard by me on Apr. 25, 1969.

Examiner
New Mexico Oil Conservation Commission