BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 10, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc. for permission to commingle the production from two separate pools and for an amendment of Order No. R-1608. Applicant, in the above-styled cause, seeks permission to commingle the production from the Crossroads-Devonian Pool and from an undesignated Mississippian Pool from all wells on its U. D. Sawyer lease comprising the E/2 of Section 34, Township 9 South, Range 36 East, Lea County, New Mexico. Applicant further seeks an amendment of Order No. R-1608 to provide that the automatic custody transfer system therein authorized can be utilized to handle said commingled production.

Case 2042

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 2042.

MR. PAYNE: Application of Texaco Inc. for permission to commingle the production from two separate pools and for an amendment of Order No. R-1608.

MR. WHITE: Charles White of Gilbert, White & Gilbert, Santa Fe, New Mexico, appearing on behalf of the applicant. We have one witness to be sworn at this time, Mr. J. E. Robinson, Jr.

(Witness sworn.)

MR. UTZ: Are there other appearances in this case? Would you mark your exhibits at this time, please?

(Texaco Inc.'s Exhibits 1 through 4 were marked for identification.)

J. E. ROBINSON, JR.

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Robinson, by whom are you employed and in what capacity?

A Texaco, Inc., as a proration engineer for Midland Division.

Q Have you previously testified before the Commission?

A Yes, sir, I have.

Q Are you acquainted with the subject application?

A Yes, I am.

MR. WHITE: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q Are you also acquainted with Oil Conservation Commission Case 1881 and Order R-1608 issued?

A Yes, I am.

Q What authority did Texaco obtain under Order R-1608 and what was the date of its issuance?

A Case No. 1881 was heard on January the 27th, 1960 and

in that application we asked for authority to install an automatic custody transfer system on our U. D. Sawyer for the Crossroads-Devonian production, and Order No. R-1608 was granted on February the 8th, 1960, which gave us the authority to run the Devonian production through the LACT.

Q At that time how many wells did you have producing on the lease?

A At that time we had three wells on our U. D. Sawyer lease all producing from the Devonian horizon.

Q When did you spud in on your Well No. 4, which is part of the subject of this application?

A Well No. 4 was spudded in on April 4, 1960 and it was drilled as a Devonian well. We drilled it to a total depth of 12,400 feet and were unable to obtain Devonian production. The well was plugged back and completed in the Mississippian.

Q What's the present status of this well?

A The well is shut in at the present time waiting on installation of Cobe pumping equipment.

Q What do you seek by the present application?

A We are seeking in this application the authority to commingle the Mississippian and Devonian production and run this commingled production through the existing LACT.

Q In other words, you seek permission to extend the Order R-1608 to cover this well?

A That is correct. We would like to have the authority granted under R-1608 to be expanded to include both Devonian and Mississippian production.

Q Will you refer to Exhibit No. 1, being an ownership plat, and explain that, please?

A Exhibit No. 1 is an ownership plat where Texaco's U. D. Sawyer lease is outlined with a yellow border located in the East Half of Section 34, Township 9 South, Range 36 East. Wells 1, 2 and 3 are located in the Crossroads-Devonian Field and Well No. 4 is an undesignated Mississippian well. It also lists other wells in the immediate vicinity, all of these wells are located in the Crossroads-Devonian. It also lists offset operators with their addresses.

Q Is this the only well producing in the Mississippian Pool?

A Yes, sir, it is.

Q Will you refer to Exhibit No. 2 and state the production characteristics?

A Exhibit No. 2 is the production characteristics of both the Devonian and Mississippian production on the U. D. Sawyer lease. The Devonian is an intermediate sweet type crude and the Mississippian is also intermediate sweet. The Devonian has a gas-oil ratio of too small to measure. At this time we do not have a gas-oil ratio test available on our Mississippian since we've only run swabbing tests on the well.

Q Will that be supplied at a later date?

A Yes, sir, it will. The gravity of the Devonian is 44 degrees, the Mississippian is 41.5 degrees, corrected as 60 degrees; the commingling statistics, the Devonian, we have three wells all being top allowable wells at the present rate of 223 barrels per day. That would give a productivity of 669 barrels of oil per day. It has a gravity of 44. The price per barrels is $3.01, between 40 and 44 degrees gravity. The Mississippian, we estimate that this well will make 80 barrels of oil per day. It has a gravity of 41.5 with the same price per barrel of $3.01. After commingling, then we will have a composite total of 749 barrels of oil per day with a weighted composite gravity of 43.7 degrees, and since this gravity is still within the range of 40 to 44, it will still have a $3.01 price per barrel and, therefore, there will be no gain or loss in the revenue per day.

Q Refer to Exhibit 3 and explain that diagrammatic sketch.

A Exhibit No. 3 is a diagrammatic sketch of the commingling installation. I would like to point out that our Devonian well, our Well No. 3 is being pumped by a Cobe pump, Wells 1 and 2 are flowing Devonian wells, they flow with a pressure from 25 to 40 pounds, and then our Mississippian well will also have to be pumped with a Cobe pump.

I might start out on this exhibit with the location of the power oil reservoir. Actually, we have three 500-barrel tanks

that serve as a power oil reservoir. The purpose of this haveing the three 500 barrels, this oil carries a gritty material Gilsonite and we like to provide ample settling time that the oil will have plenty of time to settle out any material to keep from plugging up the screenings on our Cobe pump.

The oil will leave the power reservoir tank. It will go to a triplex pump. Then as the oil comes out of the triplex pump we will meter through a P.D. meter the power oil going to the Mississippian well. The power oil will go down the tubing of the Mississippian well where we will pump the Mississippian by a Cobe pump, then the power oil and the production will leave the Mississippian well, go into a separator where the free gas will be taken off and then it will go on downstream where we will read through a P.D. meter the amount of oil that is passing through this separator. Actually, this oil will be production plus the power oil. We will take the P.D. meter reading and subtract the amount of oil, or the amount of power oil that was measured going into the well, and after we extract the power oil from the P.D. meter reading downstream from the separator, we will get the amount of production that we have actually produced.

Then the oil will go into the power oil reservoir; from there it will distill out and go on downstream to three 500-barrel stock tanks that is connected with our LACT operations. The Devonian production will be measured in the identical manner as the

Mississippian in that we will measure the power oil that is being used to pump the Devonian production and the Devonian production will go through a separator and then its production will be measured and then we will extract the power oil from the metered volume going through the separator, and that will give us our production there.

We have also installed a test separator with also a P.D. meter in that we can test any of these wells at any time that we so desire.

Q Mr. Robinson, has the Commission approved similar installations of this type?

A Yes, sir, they have. When using Cobe installations, a similar type installation has been approved.

Q Have you found such installation successful and satisfactory?

A Yes, sir, we believe so.

Q Will you now refer to Exhibit 4 and explain that?

A Exhibit No. 4 is a copy of an exhibit that was introduced at the January 27th hearing where we asked for authority to install LACT. This has now been amended to show the installation as we now propose to install it. At the previous hearing I testified that we had two 500-barrel storage tanks connected with the LACT operations and that we plan to drill an additional well, and at such time that we drill the well we would install an additional

500-barrel tank. Well, that is what we propose to do now, actually we will have tanks A, B and C, by adding an additional 500-barrel storage to the amount of reservoir space that we will have available at the high level control switch on tank A, if some malfunction should occur, we will, then we will have 177 barrels in tank A plus 500 barrels in tank B and 500 barrels in tank C, for a total of 1177 barrels of reservoir storage space.

At the present rate of 223 barrels per day for Devonian, well, that will give, plus the 80 barrels for the Mississippian production, we will have approximately 749 barrels of production a day. That will give us 1.57 days or 37.6 hours storage time in case of an emergency.

Our operations of this lease will not change in any way as it previously was. We will continue pumping this with a 7 day pumper and the maximum time the lease will go unattended will be 18 hours.

Q In your opinion, is this ample storage in case of a malfunction?

A Yes, sir, I certainly think that it is.

Q Mr. Robinson, is the remaining part of the LACT system the same as we presented in Case 1881?

A Yes. There is actually no change in the LACT system that we requested, with the exception that we are installing an additional 500-barrel tank to provide ample storage.

MR. WHITE: We offer Exhibits 1 through 4.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record.

MR. WHITE: That concludes our direct examination.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Robinson, refer to Exhibit No. 3. You say you have three 500 power oil tanks?

A Yes, sir.

Q Does all the oil go through these tanks before it goes on to the stock tanks?

A Yes, sir. We have these three 500-barrel tanks setting up in parallel, the oil will go into the first 500-barrel tank and from there it will flow, overflow into the second one and into the third one and actually we will take our power oil off of the third tank and also the remaining overflow will then go to the three 500-barrel tanks located in the LACT battery.

Q So you actually have six tanks on the lease?

A On the lease we have six 500-barrel tanks.

Q How will you charge back the gas production to each formation, on each well actually?

A By gas-oil ratio test.

Q You'll just have one meter for all four wells?

A Yes, sir.

Q Will you take the same type of tests on your power oil meters as you do on the production meters?

A Yes, sir. We will. We have installed facilities where we can put the power oil through the meter and then reroute it back and test it in a tank.

Q In an installation such as this, the accuracy of your power oil meter is just as important as your production meter, isn't that correct?

A Yes, it is.

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

MR. PAYNE: Yes, sir.

BY MR. PAYNE:

Q Mr. Robinson, do you use this power oil only on the well you are producing with the Cobe pump?

A Yes, sir, that is correct, only on the well that we're producing the Cobe pump from.

Q Which one is that?

A Well No. 3, which is a Devonian well, and Well No. 4 is a Mississippian well.

Q Do you anticipate dually completing any of these four wells in both the Mississippian and Devonian?

A Not at the present time we do not. We'll have to wait, and see just what type of Mississippian production we are going to get from this well. Of course, we did not get a top allowable well

and we'll have to wait and see just what type of well it is, but it can be done with pumping dual completion with Cobe pumps, but actually, it's an expensive operation in dualling the wells.

Q Assuming you did, it wouldn't change the figures on the value of the oil?

A No, sir, we would continue metering all power oil for these zones.

Q But the price per barrel would remain the same?

A That's right, the price per barrel would remain the same.

Q Is the ownership under this lease common at both of these depths?

A Yes, sir. Texaco owns 100% of the working interest in this. There are approximately five or six royalty owners, but they have a common ownership to all depths.

Q Do you anticipate any paraffin problems?

A No, sir, we are not troubled at all with paraffin there.

Q So you don't propose to plastic coat your meters?

A No, sir.

MR. PAYNE: Thank you.

BY MR. PORTER:

Q Is this the only Mississippian well in the area?

A Yes, sir. In the area it is the only Mississippian well.

Q Do you recall whether any others have been previously completed in the Mississippian?

A None of Texaco's wells, Mr. Porter. I couldn't say about any of the other operators, I really don't know, but it is the only Mississippian well in this general vicinity.

BY MR. PAYNE:

Q One further question, Mr. Robinson. Any of these wells flowing wells?

A Yes, sir, Wells 1 and 2 are flowing wells. The Devonian wells are flowing wells. They have a tubing pressure varying between 25 and 40 pounds and later on during the life of this pool we will have to pump these wells with Cobe pump installations.

Q Do you have any fail-safe features which would shut in the wells at the well head or at the header in the event of a malfunction?

A We will have Murphy switches on the triplex pump, in case of either high or low pressures that we would encounter, that would shut down the triplex pump.

MR. PAYNE: I see. Thank you.

BY MR. PORTER:

Q That's a switch controlled by floats?

A In the LACT system, yes, Mr. Porter, it is a float actuated switch that the LACT system goes on stream when the float, the level reaches the upper float in the boot connected with tank A and the LACT system will stay on stream until it reaches a low level switch, at which time it will shut off and will remain

shut off until such time as the level builds back up to the top switch.

MR. PORTER: Thank you. That's all the questions I have.

MR. UTZ: The witness may be excused.

(Witness excused.)

MR. UTZ: The case will be taken under advisement.

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 13th day of August, 1960.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2042, heard by me on July 20, 1960.

Examiner
New Mexico Oil Conservation Commission