BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JUNE 28, 1961

EXAMINER HEARING

IN THE MATTER OF

CASE 2309: Application of Texaco Inc. for an oil-oil-oil triple completion, Lea County, New Mexico.

TRANSCRIPT OF HEARING

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CASE 2309: Application of Texaco Inc. for an oil-oil-oil triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its C. P. Falby (a) Well No. 4, located in Unit E, Section 8, Township 22 South, Range 37 East, Lea County, New Mexico, as a triple completion (conventional) in the Eumont Gas Pool, the Penrose-Skelly Pool, and the Drinkard Pool, the production of oil from each pool to be through parallel strings of 2 3/8-inch tubing.

BEFORE:

Mr. Elvis A. Utz, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Case 2309.

MR. MORRIS: Application of Texaco Inc. for an oil-oil-oil triple completion, Lea County, New Mexico.

MR. WHITE: Charles White of Gilbert, White & Gilbert, appearing on behalf of the applicant. We have one witness to be sworn at this time.

MR. UTZ: Are there other appearances to be made in this

case? If not, you may proceed.

(Witness sworn)

J. E. ROBINSON, JR.,

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Robinson, will you state your full name, for the record, please?

A J. E. Robinson, Jr.

Q By whom are you employed, and in what capacity?

A I am employed by Texaco, Inc. as Division Proration Engineer.

Q Are you familiar with the subject application?

A Yes, sir, I am.

Q Have you previously testified as an expert witness, as a petroleum engineer, before the Commission?

A Yes, I have.

Q Have your qualifications been accepted?

A Yes, sir, they have.

Q Will you briefly state what Texaco seeks by the subject application?

A Texaco proposed to triply complete its C. P. Falby (a) Well No. 4 as an oil-oil-oil completion in the Penrose-Skelly in the Eumont and the Drinkard Oil Pools.

(Whereupon, Texaco's Exhibits Nos. 1 and 2 were marked for identification).

Q Will you refer to Exhibit No. 1, and state the location of the subject well?

A Texaco's C. P. Falby (a) Well No. 4 has been drilled at a location 1980 feet from the North line, and 660 feet from the West line of Section 8, Township 22 South, Range 37 East, Lea County, New Mexico. On this plat we have outlined Texaco's acreage in yellow. The Falby (a) lease consists of the northwest quarter of Section 8. On the plat we list all wells completed in the area with the legend showing the pools that the wells are completed in. We also show all offsetting operators with their names and addresses.

Q Are all the zones,in which you intend to complete,productive within this area?

A Yes, sir, they are. On the Falby (a) least, at the present time, we have two Drinkard wells, and one Penrose-Skelly well, and then to the immediate south of this lease, we have our C. P. Falby (b) lease where we have Penrose-Skelly and Eumont oil and a Drinkard well on this lease. So, all of the zones that we propose to complete in are productive in the immediate area.

Q Does Texaco have a similar completion in this area in which you now propose?

A Yes, sir, we have a completion that is almost identical. The well to the immediate south, the south offset from the subject

well is a triple completion in the same reservoirs that we propose to triply complete the subject well.

Q Is that the C. P. Falby (b) No. 4?

A Yes.

Q When was that triple completion approved by the Commission?

A It was approved by the Commission's Order R-1753, dated August 23, 1960.

Q What is the present status of the subject well?

A The well has been drilled to T.D. The casing has been set, and we are presently completing in the Drinkard formation.

Q Will you now refer to what's been marked Exhibit 2, and explain it to the Examiner, please?

A Exhibit No. 2 is a schematic diagram of the proposed triple completion installation. The well has been drilled to T.D. and the casing has been set. We drilled a 15-inch hole to 340 feet, and set 10 3/4-inch casing at 339 feet with 300 sacks. The hole size was reduced. We drilled a 9 7/8-inch hole to 3944, and we set 7 5/8-inch casing at 3943, with 1200 sacks. I would like to point out that the Exhibit shows that we were going to set the 7 5/8 at 3925 feet. Of course, this plat was prepared before the well was drilled, and there is a small discrepancy in the casing point of the 7 5/8, but after we set the 7 5/8-inch casing, we reduced the hole size again, and drilled a 6 3/4-inch hole to 6555, and we set a 4½-inch liner at 6554, and it was hung at 3883. We cemented around the bottom of the 4½-inch liner with 200 sacks,

and then we squeezed the top of the liner with 200 sacks of cement.

MR. WHITE: At this time we would like to amend the Exhibit to show that the 7 5/8 was set at 3943 instead of 3945.

MR. UTZ: Is that 3943?

MR. WHITE: Yes, 3943.

MR. UTZ: So amended.

Q (By Mr. White) What are the actual perforation points of the Drinkard zone?

A Presently we have perforated the Drinkard, and we are attempting our completion in the Drinkard at this time. Our actual perforations in the Drinkard are from 6455 to 6459 feet; from 6473 to 6482 feet; from 6491 to 6500 feet; and from 6514 to 6518 feet.

Q What does the Exhibit show the perforations as being?

A The Exhibit shows the proposed perforations to be from 6480 to 6530.

MR. WHITE: Would you like the Exhibit to be corrected in that respect?

MR. UTZ: Would you state those figures again?

A 6455 to 6459; 6473 to 6482; 6491 to 6500; 6514 to 6518.

Q What do you anticipate the reservoir characteristics to be in this zone?

A We anticipate the crude to be an intermediate sweet type crude, having a gravity of 37 degrees at 60 degrees. The anticipated bottom hole pressure of this zone will be approximately 2300

pounds. Our C. P. Falby (b) No. 4, the immediate south offset, when it was completed, it had a pressure of 2298 PSI. The gas-oil ratio will be within the range of 2000 to 2500 cubic feet per barrel, and we anticipate the Drinkard to flow, and we would estimate that it would flow for approximately ten years.

Q Will you state what the perforation points will be in the Penrose-Skelly?

A We propose to perforate the Penrose-Skelly from 3680 to 3730.

Q What characteristics do you expect the crude to be?

A The Penrose-Skelly producing from the Grayburg will have a sour type crude. It will have a gravity of approximately 35 degrees. The bottom hole pressure is estimated to be at 955 PSI. The gas-oil ratio, the initial ratio will be approximately 5700 cubic feet per barrel, and will increase as the zone is produced, and we will initially anticipate to pump this horizon.

Q What are the perforation points of the Eumont?

A We anticipate that the Eumont will be perforated from 3450 to 3550.

Q What are the crude characteristics anticipated to be?

A The crude is anticipated to be a sour type crude, having a gravity of 34 degrees. It will have a bottom hole pressure, approximately 730 pounds per square inch. The gas-oil ratio will be high, at approximately 44,000 to 1, and this zone will flow until depletion.

Q Is there a log available at this time?

A No, sir, there is not. We have field prints, but our finished logs have not been received in our office. However, they will be submitted when we submit the packer leakage tests, and the other required data for this triple.

Q Will you describe the down-hole equipment which you propose to install in this well?

A Our down-hole equipment will consist of two permanent type packers. We will set a Baker Model "F" packer at 3775 feet, and then we will set a Baker Model "F.A." packer at 3650 feet, with the Baker Model "F" packer being located between the Drinkard and Penrose-Skelly, and the Baker Model "F.A." being located between the Penrose-Skelly and the Eumont Pool. We will then make up on our long string a dual zone flow tube. It will be run in on the long string, and the flow tube will be latched into the Baker Model "F.A." packer at 3650. Then, we will have proper spacing nipples and seals where we will seal off between the Drinkard and the Penrose-Skelly across the Baker Model "F" packer. After we latch the dual zone flow tube into the Baker Model "F.A." packer, we will then run our intermediate string of tubing, which will consist of 2 3/8-inch OD tubing, and it will be latched into the Baker Model "F.A." packer at 3650. Then, after we run our intermediate string of tubing, we will run our short string of tubing, and it will be hung freely within the well bore from which we can produce the Eumont.

Q Mr. Robinson, should it become necessary to pump the Drinkard, will it be possible to do so?

A Yes, sir. The dual zone flow tube is a full opening tube, and this permits a pump to be run through the flow tube. The pump can be seated into a nipple at the bottom of the long string, and we can produce the Drinkard by pumping, when it becomes necessary.

Q You have indicated that the Eumont and the Penrose-Skelly may be sour crude. What precautions, if any, does Texaco intend to take to meet with this situation?

A We plan no special protective equipment for this. Our experience has been that while these crudes are sour, they are not corrosive to the extent that it would require special equipment for these two crudes.

Q Will you take coupon tests?

A Yes. From time to time we will take coupon tests to see if corrosion is occurring. If any pitting is occurring, and if we should encounter any corrosion, well, then, we will start an inhibitor squeeze type protective program for these zones. The only special coating that we did plan to do, we will internally plastic coat the upper 1500 feet of the Eumont tubing string to eliminate some of the problems that we have encountered in the Eumont due to paraffin.

Q Were these Exhibits prepared by you or under your direction?

A Yes, sir, they were.

MR. WHITE: At this time we offer Exhibits 1 and 2.

MR. UTZ: Without objection, the Exhibits 1 and 2 will be entered into the record.

(Whereupon, Texaco's Exhibits Nos. 1 and 2 were received in evidence.)

MR. WHITE: Do you have any further testimony to offer at this time?

A No, sir, I have nothing.

MR. WHITE: That concludes our direct.

CROSS-EXAMINATION

BY MR. UTZ:

Q Mr. Robinson, would you give me the bottom hole pressure of the Drinkard again?

A The Drinkard will have a bottom hole pressure, roughly, from 2290 to 2300. Our C. P. Falby (b) No. 4 has a bottom hole pressure of 2298; upon completion, it will be in that range.

Q And did you give the gravity?

A Yes, sir. 37 degrees.

Q This was an intermediate crude?

A This is an intermediate sweet crude.

Q Did you give the gravity on the Eumont crude?

A The Eumont is a sour crude, having a gravity of 34 degrees.

Q Your overlap between your 7 5/8 liner is about 68 feet,

is that correct?

A The actual 4½ was set at 3883, and the bottom of the 7 5/8 was at 3943.

Q 50 feet?

A 50 feet overlap.

Q That was squeezed?

A Yes, sir, it was squeezed with 200 sacks.

MR. UTZ: That is all. Any further questions of the witness?

MR. MORRIS: Yes.

BY MR. MORRIS:

Q Mr. Robinson, I believe you stated that the Falby (b) Well No. 4 was completed in the same zone as your proposed well here today.

A Yes, sir.

Q And you stated that it was completed in substantially the same manner as the proposed installation here.

A Yes, sir, that is correct.

Q In what ways does it deviate?

A The only ways that it deviates, we set a Baker Model "D" packer inside the liner on our C. P. Falby (b) No. 4, whereas we are setting a Baker Model "F" packer up in the 7 5/8-inch casing here. We're doing this for two reasons: A Baker Model "D" packer, the minimum ID on the setting 4½ is 1.97 inches, and with a Model "F" packer you can get a bore hole much larger than the 2-inch,

that would accommodate running 2 3/8-inch tubing through the Model "F" packer, and then also we did have a little bit of trouble getting our Baker Model "D" packer down into our liner. We got it set all right, but we were just sitting this Model Baker "F" packer in the 7 5/8 rather than trying to get, you know, inside the liner with the Baker Model "D" packer.

Q You experienced no packer difficulty once you got it installed on the other well?

A No, sir. Well, once we got it down, everything was all right then.

MR. MORRIS: Thank you.

MR. UTZ: Any other questions? If not, the witness may be excused.

(Witness excused)

MR. UTZ: Any other statements in this case? The case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in machine shorthand and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record, to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 2nd day of July, 1961, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

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. 2309, heard by me on June 28, 1961.

....., Examiner
New Mexico Oil Conservation Commission