BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 23, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc., for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State of New Mexico "O" NCT-1 Well No. 12, located in Unit J of Section 36, Township 17 South, Range 34 East, as a dual completion (tubingless) to produce oil from the Glorieta and Blinebry formations, Lea County, New Mexico.

Case. No. 2731

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The next case on the docket is Case 2731.

MR. DURRETT: Application of Texaco, Inc., for a dual completion, Lea County, New Mexico.

MR. KELLY: Booker Kelly of Gilbert, White and Gilbert, Santa Fe, appearing on behalf of Texaco, I have one witness and ask that he be sworn.

(Witness sworn)

MR. UTZ: Are there other appearances in this case? You may proceed.

C. R. BLACK

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

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, your position and your employer, please?

A I am C. R. Black. I am employed by Texaco, Incorporated as the Division Proration Engineer out of Midland, Texas.

Q You have previously testified before this Commission, haven't you, Mr. Black?

A Yes, I have.

Q Could you tell the Examiner what Texaco seeks by this application?

A This is the application of Texaco, Inc. for a dual tubeless completion for our State of New Mexico "O" NCT-1 Well Number 12. This well will be completed in the Glorieta and Blinebry formations with production from each zone being produced through individual strings of 2 7/8 inch tubing cemented in the well bore as casing.

Q Are either zones completed now?

A At the present time there are Blinebry completions in the area, however this is the first completion in the Glorieta formation in this immediate area.

Q Is that the only reason that you are having to have this by hearing rather than administrative approval?

A Yes, this application does not qualify administratively because there are no similar duals in this area.

(Applicant's Exhibit No. 1 marked for identification.)

Q Referring to what has been marked Exhibit 1, could you explain that to the Commission, please?

A Exhibit Number 1 is a plat showing the Texaco State of New Mexico "O" NCT-1 Lease bordered in yellow. The subject well is circled in red; the immediate area surrounding this plat is also shown, and most of the offsetting wells are San Andres completions in the shallower interval.

Q Is this well an orthodox location?

A Yes, sir, at the present time this well is under the existing rules, an orthodox location, and it is located 1,800 feet from the south and east lines of Section 36, Township 17 South, Range 34 East.

Q I don't recall, did you give the Examiner the locations of the nearest Glorieta and/or Blinebry production on this?

A The nearest Blinebry production is the Socony-Mobil State Bridges Well Number 13, shown up in Section 25 on this Exhibit 1, and it's approximately a mile and a half to the northwest. The nearest Glorieta or Paddock production is in the Lovington Paddock Pool, approximately twelve miles to the east;

and other production in the Maljamar Paddock Pool is approximately 14 miles to the west.

(Marked Applicant's Exhibit No. 2, for identification.)

Q Going to what has been marked Exhibit Number 2, would you explain that, Please?

A Exhibit Number 2 is a diagrammatic sketch of the dual completion installation. It should be noted that this sketch was prepared actually prior to the physical completion and the reaching of total depth for this well, so therefore some of the information was estimated, and as I proceed through this exhibit I will correct this information to reflect the actual conditions as they are, and exist in this well bore.

An eleven inch hole was drilled to 1,602 feet and at 1,599 feet we set 8 and 5/8 inch casing and circulated cement to the surface with 580 sacks. We proceeded on with a 7 and 7/8 inch hole to a total depth of 6,920 feet. We then ran two strings of 2 and 7/8 inch casing, setting one string, the string shown as the green or glorieta string at 6,918 feet and setting the yellow string shown as the Blinebry producing string at 6,919 feet. We cemented down both strings of tubing with 500 sacks of Encore and Poslyn mix cement, and followed it with 400 sacks of Encore and Poslyn mix cement with two percent jell. A temperature survey run after these indicated the top of the cement at 1,850 feet.

Q Do you have any estimate of crude characteristics?

A Yes, sir, we have perforated the Glorieta formation. The actual perforations were from 5945 to 5941. We had four feet of perforations at one shot per foot and on potential test after acidizing with a thousand gallons, this zone flowed 82 barrels of oil in eight hours, for a 24-hour rate of 246 barrels of oil per day, with a 1964 inches choke, a tubing pressure of 300 pounds, and a gravity, a reported gravity of 35.8 degrees.

I would like to clarify one point now, since we will bring something up on our next exhibit. This gravity was taken and this test was completed on a morning that the outside temperature was a minus five degrees, and the reported gravity we have found was in error, and we have found that since that time, under more favorable conditions, the actual gravity of this crude is 39.3 degrees.

The Blinebry formation is in the process of being completed and we will shoot one hole at the following intervals: at 6388, 6407, 6420, 6434, 6457, 6468 and 6488. We estimate an intermediate sweet crude with a gravity of approximately 36 degrees; a gas-oil ratio of approximately 1,500 cubic feet per barrel and a bottom hole pressure of approximately 2,420 pounds. We expect both zones, or we have found that the Glorieta flowed at completion, and we anticipate that the Blinebry will flow, and they should flow for several years.

Q If need be can both zones be lifted artificially?

A Yes, sir, when and if it becomes necessary we can arti-

ficially lift both of these zones simultaneously.

Q Do you expect to experience any corrosion or paraffin problems?

A Based upon our experience we do not anticipate any corrosion problems, however we will maintain a periodic coupon survey and if we find excessive corrosion we will protect this by the squeeze type inhibitor treatment. We anticipate mild paraffin in both zones and, therefore, we have plastic coated the upper two thousand foot of each string in order to prevent the accumulation of paraffin in these tubing strings.

(Marked Applicant's Exhibit No. 3 for identification.)

Q Now, Exhibit Number 3 reflects your completion data on the Glorieta and Blinebry. The Glorieta is from the subject well, isn't it, the information from the subject well?

A That is correct. Exhibit Number 3 is a tabulation of the completion data for these two zones involved in this well. The Glorieta information is based upon actual production and data gathered from our Glorieta completion. The Blinebry information is based upon the information received from Socony Mobil on their State Bridges Wells Number 13 and Number 27 which are north of the subject well. As the Examiner I am sure is aware, this is a relatively new area of development as far as these zones are concerned, and there is not a great deal of data available at this time.

The gravity in the Glorieta was found to be 39.3, as I pointed out previously. The gravity in the Blinebry is 36.2. The gas-oil ratio from the Glorieta is 300 cubic feet per barrel, and the average gas-oil ratio from the two Mobil wells is 1,428 cubic feet per barrel.

I would like to point out one thing at this point. The top of the uppermost perforations in the Glorieta is at a minus 1,942 subsea, and the top of the uppermost perforations in the Blinebry is at a minus 2,371, so therefore the Glorieta perforations are some 400 feet higher than the Blinebry and the gas-oil ratio is only approximately one fifth of what the Blinebry zone is. So we certainly believe this is further evidence that we are dealing with two separate reservoirs and they have their own distinct characteristic.

The top of the crude in the Glorieta, at the present time we have not had a crude oil analysis, but we anticipate that it will be an intermediate sweet crude. The Blinebry is an intermediate sweet crude. The bottom hole pressure in the Glorieta, we have actually taken a bottom hole pressure and find that the pressure at a minus 1,950 feet subsea is 2,209 PSI, and the pressure in the Blinebry formation at a minus 2,453 is 2,420 PSI. With regard to stimulation it was necessary only to acidize the Glorieta formation with a thousand gallons, run a swab in the well one time and it kicked off and flowed, as I said, with a tubing pressure of three hundred pounds. The Blinebry formation, Mobil

has found that it is necessary to acidize with a thousand gallons and follow this with a fracture treatment, ranging from fifteen to twenty thousand gallons, and two pounds of sand per gallon, so again we believe this indicates a definite distinct characteristic for each reservoir. Both zones flow, the initial producing method is flowing for both zones.

(Marked Applicant's Exhibit No. 4 for identification.)

Q Go on to Exhibit 4 and explain that to the Commission.

A Exhibit Number 4 is a cross section in this area and for the purpose of explanation I put this exhibit on the wall here behind the Examiner. The trend of this cross section is shown by the insert map. It begins up with Mobil's State Bridges Well Number 36, goes into their Bridges Number 27, down through their State Bridges Number 95, which is the deep well in this area, and a discovery well in some deeper pays. It crosses the location and the drilling location of our State "O" Well Number 11, which is shown by this thick diagram. This well is drilling to the definite formation, however we did do some testing in this area. It goes on down and ends in the subject well, the State of New Mexico 'O' Number 12.

Starting with the State Bridges Number 36, we are showing two correlation points. One point is the top of the Glorieta formation; the other point is the Blinebry marker, which is recognized by the Commission, and is used in the establishment

one other zone on down lower, and the tool was open one hour and they recovered 210 foot of drilling mud, which would indicate that there is possibly and probably a [redacted] formation which would separate these two reservoirs. Although this cross section is, the logs in this cross section are small scale logs, and there is actually about a hundred and twenty foot of structural difference between the Mobil well and the Texaco, the subject well of this application. So they could possibly be down in the water in the Glorieta formation.

Coming on to the Mobil Number 95, which is the deep well, Mobil had one drillstem test in the lower portion of what we call the Glorieta formation and the tool was open one hour. They recovered 3,950 foot of gas, 180 foot of oil and 1,940 feet of salt water; so we believe that there is an indication of not [redacted] streak, but indication of water in the lower portion of this Glorieta formation.

Moving on to the Texaco Number 11 State of New Mexico"O", the cross section is, the information on the cross section is in error at this point, Mr. Examiner. The information with regard to this drillstem test is correct. However, this test interval was mislocated, it has been corrected on your copies of the exhibit and the interval shown by the red drillstem test sign is the actual tested interval. We had our first drillstem test in the Paddock pay, or the Glorieta pay. The tool was opened and we had gas to the surface in 47 minutes. It flowed

that the Glorieta be called the Vacuum Glorieta Pool. At the present time there has not been a nomenclature hearing for these zones and they are not designated by the Commission; however, Mobil has received a permit to dually complete their State Bridges Well Number 27 as a Blinebry and San Andres dual.

(Marked Applicant's Exhibit No. 5 for identification.)

Q You have a copy of a log on the subject well, don't you?

A Yes, sir. Exhibit Number 5 is a copy of the radioactivity log from the subject well. The Blinebry marker and the top of the Glorieta formation is shown and the perforated intervals in these two reservoirs are shown.

Q Do you feel the granting of this application would be in the best interest of efficient production and the protection of correlative rights?

A Yes, sir, I do.

Q Were Exhibits 1 through 4 prepared by you or under your direction?

A Yes, they were.

MR. KELLY: We move the introduction of Exhibits 1 through 5 and as modified by him by Exhibit Number 2, it is the only one that was modified by him.

MR. UTZ: Without objections, Exhibits 1 through 5, as amended will be entered into the record in this case.