BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 10, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Socony Mobil Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its State Bridges No. 97 well located in Unit O of Section 26, Township 17 South, Range 34 East, Lea County, New Mexico, to produce oil from the Blinebry and Glorieta formations, Vacuum Field, through parallel strings of 1.61 inch I.D. tubing. CASE 2856

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2856.

MR. DURRETT: Application of Socony Mobil Oil Company for a dual completion, Lea County, New Mexico.

MR. SPERLING: Jim Sperling appearing for the Applicant, Socony Mobil Oil Company. We have one witness.

(Witness sworn.)

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

(Whereupon, Socony's Exhibits Nos. 1 through 3 marked for identification.)

J. E. BOHANNON, JR.

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

DIRECT EXAMINATION

BY MR. SPERLING:

Q State your name, please.

A J. E. Bohannon, Jr.

Q Where do you live, Mr. Bohannon?

A I live in Hobbs, New Mexico.

Q Have you testified on previous occasions before this Commission?

A No, sir, I have not.

Q That being the case, would you give us a resume of your educational background and experience background in the field of petroleum engineering?

A I graduated from Texas Technological College in August, 1956, with a Bachelor of Science degree in Petroleum Engineering. I have worked as a field petroleum engineer for Magnolia Petroleum Company in Eunice, New Mexico, for a period of one year. Following two years in the United States Army, I returned to Mobil as an engineer trainee for a short time. In July of 1960 I was employed by Wood, McShane, and Porter, a petroleum engineering consultant firm, as a field and evaluation engineer for a period of one year. Since July of 1961 I have worked for Mobil Oil Company as a junior production engineer concerned primarily with automation

and proration work. I am a registered professional engineer in the State of New Mexico, and my number is 3802.

MR. SPERLING: Are the witness' qualifications acceptable, Mr. Examiner?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Sperling) Mr. Bohannon, will you refer to what has been marked for identification as Mobil's Exhibit No. 1 in this matter and tell us what it represents?

A It's a location plat showing the Vacuum-Blinebry and the Vacuum-Glorieta completions in the Vacuum Field area in Lea County, New Mexico. The other wells shown are other completions in this area and they are not designated.

Q I assume that the yellow coloring appearing on the plat indicates the acreage owned and operated by Mobil?

A By Socony Mobil, yes, sir.

Q I believe the application in this case describes the location of the well which is the subject of this hearing as being located in Unit O, is that correct or incorrect?

A It is incorrect. The correct unit location should have been in Unit P, and the same section as shown.

MR. SPERLING: We request the Examiner's permission to amend the application to that extent.

MR. UTZ: The location of the said well will be corrected in the record as recommended.

Q (By Mr. Sperling) This application pertains to Mobil's

well designated as State Bridges No. 97, which is shown as corrected in Unit P of Section 26. Further, this application as it appears on the docket refers to parallel strings of 1.61 inch I.D. tubing. Is that what is proposed insofar as this well is concerned?

A No, sir, that is a mistake. We are going to recommend less than what was proposed as the call of the hearing. It will have one string of 1.610 I.D. tubing and one string of 1.750 I.D. tubing.

Q In other words, rather than parallel strings of 1.61 I.D. tubing, you will have tubing strings as you've just testified concerning?

A Yes, sir.

Q Would you please refer to what has been marked for identification as Exhibit No. 2 in this hearing, Mr. Bohannon, which appears to be a schematic diagram of procedures which are proposed in connection with the completion of this well. Would you explain that, please?

A Yes, sir. The equipment is installed in the well as shown. We have a Baker Model "D" Packer set at 6345 feet above the Vacuum-Blinebry perforation at 6371 to 6528 feet. We have a 2-1/16 inch O.D. integral joint N-80 tubing string set in this packer. Run on this string was a Brown DSL-9-2H Dual Packer, which was set above the Vacuum-Glorietta perforations. Packer setting depth was 5931 feet.

The inch and a half O.D. integral joint tubing is seated in this Brown packer to produce the Vacuum-Glorieta zone.

Q Would you continue with your explanation of the casing and cementing program which you followed?

A Okay. The surface string was 8-5/8ths inch diameter set at 1567 feet with 750 sacks of Incor four percent Gel plus 100 sacks of Incor-Neat cement. The cement was circulated. The long string was a string of 5-inch, 11.4 pound per foot, J-55, set at 6750 feet, the total depth of the well.

The first stage of cement on the long string we cemented with 1500 sacks of Trinity Light-Weight, plus 75 sacks of Trinity Inferno Neat, and the cement top was 2640. Since the cement did not circulate, we perforated the pipe at 2625 and the second stage was cemented through these holes. We cemented with 1500 sacks of Trinity Light-Weight and 1100 sacks of Regular Neat. Cement top was at 1925 feet, leaving the uncemented portion of the hole to be between 1567 feet and 1925 feet.

Q Do you know whether or not there are any productive zones in that area?

A In the 400 feet that I've mentioned?

Q Yes.

A No, sir, there is not.

Q Have there been other dual completions authorized in this area?

A Yes, sir. Texaco has a dual completion order, Order

No. R-2413, permitting Vacuum-Blinebry and Vacuum-Glorieta completions in this area.

Q Do you have that order number?

A Yes, sir, it's Order R-2413.

Q What other Blinebry and Glorieta completions are in this area?

A Texaco has, looking at the attached plat, which was Exhibit 1; the Tidewater has a Glorieta completion in Section 36, and it would be Unit D, it's their Well No. 5. Also Texaco has two wells completed in the same section, their Well No. 12, State O, and their State O No. 13 in the same section are colored in blue. That is the only completions in the Glorieta at this time, and according to our plat, Marathon's -- there's a dual well being completed there, and then Continental State H No. 35 is testing the Glorieta, and as of now, well, they weren't completed.

Q Have you taken potential tests on these two formations in your State Bridges No. 97?

A Yes, sir, this well has been potentialed. Our Glorieta zone potentialed for 155 barrels of new oil and 47 barrels of salt water in 24 hours on a 24/64ths choke; gas-oil ratio was too small to measure. The gravity was 36.8 degrees API at 60 degrees Fahrenheit. Tubing pressure was 80 psi and the allowable will be 67 barrels of oil per day, and potential date was 6-26-63.

The Blinebry has been potentialed and its potential test is 165 barrels of new oil plus 34 barrels of load water in

24 hours on a 21/64ths choke; gas-oil ratio of 843 to 1; gravity 36.9 degrees and 60 degrees Fahrenheit; tubing pressure, 425 psi. The allowable is 67 barrels of oil per day, and potential date was 6/27. Packer leakage test has been conducted on this well and they were completed after we left yesterday morning to come to Santa Fe, and the test up until the time we left indicated that there was no trouble and no packer leaks.

Q You have substantial variation in gas-oil ratios as between these two formations, as well as a substantial pressure differential, isn't that correct?

A Yes, sir.

Q Considering the installation that you have here, or proposed as shown on Exhibit 2, what method of lift of fluids do you propose?

A Well, of course, both zones presently are flowing. We anticipate gas lifting the Glorieta zone, the one that will have the small I.D. tubing. Our gas supply is available from the Vacuum-Penn Field and we intend to use this zone and come off the high pressure separator and use this high pressure gas to gas lift this zone. The other zone, the I.D. of the tubing will permit sucker rod pumping unit installation.

Q Do you anticipate any mechanical problems so far as this type of installation is concerned?

A No, we do not. The only thing is that we won't be able to run rods in the small I.D. tubing, and that is the only thing.

Q But you do feel that you have adequate gas lift facilities for the purpose of producing that zone?

A Yes, sir, we certainly do.

Q Have you made any comparison by way of economics as between the Glorieta single completion and the Blinebry single completion?

A Yes, sir, I have. The cost to drill a Glorieta single completion in this area would be approximately $88,000, whereas the cost to dually complete State Bridges 97 was $15,300.

Q In other words, the dual completion represents a substantial saving over singles?

A Yes, sir, it does.

Q Please refer to what has been marked as Exhibit No. 3, Mr. Bohannon. Tell us what that is, if it isn't self-explanatory.

A That is a cross section showing the clearances of the strings run in the hole. I've marked off the diameters of the pipe, and the 2-1/16 inch nominal integral joint tubing as shown has an O.D. of 2.230 inches, and an I.D. of 1.750 inches. The inch and a half nominal integral joint tubing has an O.D. of 2.113 inches and I.D. of 1.610 inches. These will run inside the 5-inch 11.4 pound J-55 casing which has an I.D. of 4.560 inches, with a total clearance of .127 inches.

MR. UTZ: That's a bunch, isn't it?

A Yes, it certainly is.

Q (By Mr.Sperling)Do you feel that with the casing and

cementing program that you've outlined, that there's a possibility of communication as between these zones?

A No, sir, I do not.

MR.SPERLING:I believe that's all the direct at this time. We would like to offer Exhibits 1 through 3.

MR. UTZ: Exhibits 1 through 3 will be entered into the record, without objection.

(Whereupon, Socony's Exhibits Nos. 1 through 3 received in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Exhibit 3 shows the tubing that you actually intend to run in this well?

A Yes, sir.

Q Two strings. Well, then Exhibit 2 also shows the correct size tubing?

A Right.

Q Would you give me the Glorieta pressure again?

A The Glorieta pressure, this is not bottom hole, it is surface, 80 psi.

Q You have no idea what the bottom hole is?

A No, sir, I do not.

Q What type of crudes?

A Both crudes are intermediate base.

Q Did you have the gravity of the Glorieta?

A Yes, sir, it was 36.8 at 60 degrees Fahrenheit.

MR. UTZ: Are there other questions? 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, Notary Public 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.

WITNESS my Hand and Seal this 30th day of July, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2856, heard by me on July 10, 1963.

..... Examiner
New Mexico Oil Conservation Commission