

JOHN HENDRIX

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A John Hendrix.

Q By whom are you employed and in what position?

A I am with Continental in Eunice, New Mexico as a production engineer.

Q Have you ever testified before the Oil Conservation Commission of New Mexico, Mr. Hendrix?

A No, sir, I have not.

Q For the benefit of the Examiner, would you outline your education and experience as a petroleum engineer?

A Well, my education is that I have a B.S. and M.S. in Mechanical Engineering from Oklahoma State University. I have been employed by Continental since 1960 as a production engineer in Artesia and Eunice.

Q And all of your work in the oil business has been in the Eunice District, is that correct?

A Eunice and Artesia.

Q The Eunice District is the area involved in this application, is that correct?

A That's correct.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. UTZ: Where do you reside now, in Roswell or Eunice?

A Eunice.

MR. UTZ: The witness' qualifications are acceptable.

Q (By Mr. Kellahin) Are you familiar with the application of Continental Oil Company in Case 2828?

A Yes, I am.

Q Would you state briefly what's proposed by Continental in this application?

A This is our application for a triple conventional completion on our Warren Unit 26 for Tubb gas, Blinebry gas, and Drinkard oil.

(Whereupon, Applicant's Exhibits Nos. 1, 2, and 3 marked for identification.)

Q Referring to what has been marked as Exhibit No. 1, would you identify that exhibit and discuss the information shown on it?

A Well, Exhibit No. 1 is the location ownership plat of portions of our Warren Unit, which includes all or portions of Sections 20 through 22, 25 through 29, and Sections 33 through 34 in 20 South, 38 East, Lea County.

Q Is all of the royalty and overriding royalty ownership common throughout the Warren Unit?

A That is correct.



DEARNLEY-MEIER REPORTING SERVICE, Inc.FARMINGTON, N. M.
PHONE 325-1182SANTA FE, N. M.
PHONE 983-3971ALBUQUERQUE, N. M.
PHONE 243-6691

Q As to all depths?

A That's true.

Q Is all the working interest common in the area involved in this application?

A Yes, sir.

Q Now referring to what has been marked as Exhibit No. 2, would you discuss the information shown on that exhibit?

A Exhibit No. 2 is a schematic of our proposed method of triple completion, and this exhibit shows the casing depths of the intermediate, surface, and present production depth. We have 13-3/8 inch set at 257 feet and cemented with 300 sacks, with cement circulated to surface. On the intermediate string we have 9-5/8ths set at 3132, cemented with 2,000 sacks with the cement top coming to 900 feet. For production casing we have 7-inch set at 6679 and cemented with 240 sacks with the cement top at 4200 feet.

Q Would you discuss how you propose to make this triple completion, Mr. Hendrix?

A Yes, I will. Presently this well is a Blinebry-Tubb gas-gas dual with the T.D. of 6680 feet. We propose to deepen this well to 6800 feet and complete open hole in the Drinkard for oil. To do this we will utilize three strings of tubing with the Blinebry and Tubb gas strings being 2-1/16 inch O.D. tubing. The Blinebry tubing depth will be 5780, and the Tubb will be at 6550. On the Drinkard string we propose to use 2-3/8 inch tubing



set at 6700 feet.

Q What pressures do you have in the Blinebry formation?

A On the Blinebry we have approximately 1860 psi presently.

Q Does the well make any fluids?

A Yes, it makes approximately 34 barrels a day of 58 degree gravity distillate.

Q What are the pressures in the Tubb zone?

A That is approximately 2100 pounds.

Q Does it make any fluids in that zone?

A Right, we're making around 26 barrels a day of 60 degree distillate.

Q Would you repeat that, please?

A Around 26 barrels a day of 60 degree gravity distillate.

Q What do you anticipate will be the pressures in the Drinkard zone when you complete that?

A Well, based on our Warren Unit No. 9, which is two locations north of the subject well, we are anticipating somewhere in the neighborhood of 2400 pounds.

Q Will the completion as proposed by Continental Oil Company in this well fully protect all of the producing horizons?

A Yes, it is my opinion that it will. To do this we're going to use Baker Model "D" Production Packer located at approximately 6600 feet, which will be set on the long string and separate the Drinkard and the Tubb; and we will use a Baker Model "J" Snap Set Dual Packer at approximately 6260 feet, which will



DEARNLEY-MEIER REPORTING SERVICE, Inc.FARMINGTON, N. M.
PHONE 325-1182SANTA FE, N. M.
PHONE 983-3971ALBUQUERQUE, N. M.
PHONE 243-6691

also be sitting on the long string to separate the Blinebry and the Tubb.

Q Do you anticipate that the Drinkard will flow?

A That's correct.

Q In the event it is required to pump this zone, would you be able to in this type of completion?

A Well, we have pumped under situations similar to this. It might be somewhat inefficient.

Q But it could be done?

A Right.

Q Are there any fresh water zones in this area, or do you know?

A Yes, sir, there is.

Q Are they fully protected by this?

A Right, they are protected; the shallow sand above the surface pipe and it's protected, and also there's a zone around 900 feet and 9-5/8ths has it fully protected.

Q I don't believe you gave the exact location of this well. Would you give that into the record, please?

A It's 660 from the South line and 660 from the West line of Section 27, Township 20 South, Range 38 East, Lea County.

Q In your opinion, will approval of this application result in the prevention of waste?

A Yes, sir, I believe it will.

Q Referring to what has been marked as Exhibit No. 3,



would you identify that exhibit, please?

A Exhibit No. 3 is a log section, a portion of a log of the hole showing the present perforations of the Tubb and Blinebry gas production, and also the formation tops of the various horizons.

Q If this application is approved, will you file a new log showing the complete section?

A Right. We will have a gamma ray neutron log to be filed.

Q Were Exhibits 1, 2, and 3 prepared by you or under your supervision?

A Yes, they were.

MR. KELLAHIN: I would like to offer in evidence at this time Exhibits 1, 2, and 3.

MR. UTZ: Without objection, Exhibits 1, 2, and 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Nos. 1, 2, and 3 received in evidence.)

MR. KELLAHIN: That completes the examination of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Are the Warren-Blinebry and Warren-Tubb both gas pools?

A That's correct.

Q What kind of a GOR do you have in these two zones?



DEARNLEY-MEIER REPORTING SERVICE, Inc.FARMINGTON, N. M.
PHONE 325-1182SANTA FE, N. M.
PHONE 983-3971ALBUQUERQUE, N. M.
PHONE 243-6691

A Well, we have approximately around 100,000, I think.
The Tubb is somewhat lower, it might be around 90.

Q Is that based on producing GOR's?

A That's correct.

Q Or tests?

A Producing GOR's.

Q What kind of a GOR do you estimate in the Drinkard?

A I think about 1250. It should be about a 38 gravity crude.

Q It is my understanding that the two upper zones, the Blinebry and Tubb, have been completed for some time and this is merely a deepening operation?

A That's correct.

Q And the cementing program for your 13-3/8 and 9-5/8ths has been previously approved by the Hobbs District?

A Yes.

Q Between the bottom of your 13-3/8 and the 900-foot top on your 9-5/8ths, it's your contention that there are no producing zones or any water zones in that area?

A No, I do feel there is a water zone, but it is protected by the 13-3/8ths and the 9-5/8ths.

Q There's an area between 257 and 900 that has no cement, is that correct?

A That's correct.

Q That's the area I'm speaking of.



A Well, to answer your question, I don't feel that there would be any water migration between those intervals, 257 to 900.

Q But you do agree that there is fresh water in that zone from 257 to 900?

A Well, it could be defined as fresh, not per se. It's slightly brackish, I think.

Q It's your contention, then, that that water is confined in its original aquifer between the bottom of 257 and the top of the 900 cement?

A That's correct.

Q Is this the usual practice in this area, rather than cementing through the water?

A No, no, it isn't. This was completed quite some time ago and that's not a usual practice.

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

MR. DURRETT: Yes, sir, I have a question or two.

BY MR. DURRETT:

Q Mr. Hendrix, did you give any testimony on direct examination concerning the economics of this completion?

A No, I did not.

Q Would you state as to whether or not you feel it would be more economical to your company to complete this well in this manner than it would be to drill a separate Drinkard well?

A Well, based on the reserves that we are anticipating, it's prohibitive to drill a Drinkard well; and for that reason we



are going to deepen this one.

Q So it will be a considerable economic saving to you?

A Yes.

Q Would you also state whether or not that would result in recovery of oil that otherwise might be left in the ground due to the economic limits of reserves?

A That's very true. We have a reserve number around 45,000 barrels for a 40-acre tract. We feel that we couldn't drill a well at all to this depth for those reserves, and it will allow us to get a very economical well this way.

Q And you will recover oil that would otherwise be left in the ground?

A That is correct.

MR. DURRETT: Thank you.

BY MR. UTZ:

Q Do you happen to have at hand the dates at which the Blinebry and the Tubb were completed?

A Blinebry was completed on 7-10-58, and the Tubb on 7-25-58.

MR. UTZ: Are there other questions? If not, the witness will be excused.

(Witness excused.)

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

* * * *



