BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 20, 1959

EXAMINER HEARING

IN THE MATTER OF:

Case 1677

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IN THE MATTER OF:

Application of The Texas Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its V. M. Henderson Well No. 2 located in the NE/4 NE/4 of Section 30, Township 21 South, Range 37 East; Lea County, New Mexico, in such a manner as to permit the production of oil from the Paddock Pool and the production of gas from the Blinebry formation adjacent to the Blinebry Gas Pool. Case 1677

BEFORE:

Mr. E. J. Fischer, Examiner

TRANSCRIPT OF HEARING

MR. FISCHER: The meeting will come to order, please. The next case on the docket will be Case 1677.

MR. PAYNE: "Application of The Texas Company for an oil-gas dual completion."

MR. WHITE: Let the record show that Charles White of Gilbert, White and Gilbert, Santa Fe, New Mexico is appearing on behalf of the Applicant. Since the filing of the application, the name of the Applicant has been changed from The Texas Company

to Texas Company, Incorporated, and we should like to request that any order that's issued in this case refer to the Applicant as The Texas Company, Incorporated, formerly The Texas Company. We have one witness to be sworn, Mr. Ross.

(Witness sworn.)

JOHN B. ROSS

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Ross, will you state your full name and by whom you are employed and in what capacity?

A John B. Ross, Texas Company, Incorporated, as District Engineer in the Hobbs District, located in Midland.

Q Mr. Ross, have you previously testified before the Commission as an expert witness as a petroleum engineer?

A Yes.

Q Are you familiar with the subject application?

A Yes.

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

MR. FISCHER: They are acceptable.

Q Mr. Ross, are you familiar with The Texas Company, Incorporated well known as the Henderson Well No. 2 in Lea County?

A Yes, sir.

Q Is that in the Paddock-Blinebry Pool?

A It is now a producing well in the Paddock, and we propose to rework this well and dually completed it in the Paddock and in the Blinebry.

Q What will you get from these locations?

A Paddock will be oil and Blinebry will be gas.

Q Has the Commission previously approved any dual completions in this area involving these two reservoirs?

A No.

(Marked The Texas Company, Inc.'s Exhibit No. 1, for identification.)

Q Will you refer to what has been marked as Exhibit No. 1 and state what that is and explain it, please?

A Exhibit No. 1 is a plat showing The Texas Company, Incorporated, V. M. Henderson Lease and the surrounding leases with the location of the wells. The V. M. Henderson No. 2, the subject well, is circled in red. This plat shows that there is a Blinebry offset well immediately to the north on the J. W. Perry Hardy Federal Lease. There is another Blinebry well in the Northwest Quarter of the Southwest Quarter of Section 20, and a third Blinebry well in the Southeast Quarter of the Southwest Quarter of Section 29, all in Township 21 South, Range 37 East.

Q Is it by reason of this offset drainage that this

application has been filed?

A That is right.

Q Is this an ownership and does it also show the names of the offset operators?

A This map shows the names of the offset operators and the lease name.

Q Now, Mr. Ross, will you discuss the nature of the reservoir fluids involved?

A The Paddock has an oil gravity of 35.6 degrees, A.P.I., which was taken from the subject well, Henderson No. 2; the Blinebry has a gravity of 53.8 degrees gravity as established in J. W. Perry's Hardy Federal No. 2. The gas-oil ratio in the Paddock formation in The Texas Company Henderson No. 2 is 200 cubic feet per barrel and the gas-oil ratio in J. W. Perry's Hardy Federal No. 2 is 10,295 cubic feet per barrel.

The bottomhole pressure in the Paddock was measured in January in Texas Company Henderson No. 5-A, west offset to Henderson No. 2 as 1828 P.S.I. We have not been able to determine what the bottomhole pressure, if any, was measured in the Blinebry formation in the offset wells. However, according to the most recent scheduled bottomhole pressure survey, the pressures in the area to the east of this immediate area range from two thousand to twenty-one hundred P.S.I., indicating an approximate difference of approximately 200 pounds. The type of crude, the

Paddock formation is sour and the Blinebry is classified as intermediate sweet.

Q What precautions have you taken to prevent corrosion?

A We have taken no precautions at this time, or plan to take none. We have no evidence of corrosion to date in the Paddock, and the Blinebry wells that we operate in New Mexico have shown to date no corrosion.

(Marked The Texas Company Inc.'s Exhibit No. 2, for identification.)

Q Now, will you refer to Exhibit 2 and explain that to the Commission, please?

A Exhibit 2 is a diagramatic sketch of dual completion installation. This shows the proposed installation proposed for V. M. Henderson No. 2 and the zone colored in red is the Blinebry production. The zone colored in blue is the Paddock production. A Baker Model D production packer will be set between the Paddock and the Blinebry, another Model D production packer will be set above the Paddock formation. Two and a half tubing will be run to the top packer and two inch tubing will be run from the top packer to the bottom packer. Immediately through and above the upper packer we will install a Baker dual zone flow tube which will separate the two zones as shown on the diagram.

Above that we will install an Otis type H crossover landing nipple and an Otis type CX crossover choke to effectively

segregate the two zones and allow the Blinebry gas production to be produced through the casing tubing annulus and the Paddock production to be produced through the tubing.

Q Does this also show the perforation points?

A This shows the intervals that will be perforated.

Q Has the Commission previously approved similar installations including where you have oil over gas?

A Yes, sir, we have a similar installation in our H. H. Blinebry N.C.T. 1 Well No. 7 in Section 19, Township 22 South, Range 38 East. This well is completed as a Blinebry oil well and a Tubb gas well and utilizes similar mechanical equipment in the hole.

Q For this installation do you think there will be any possibility of communication between the zones?

A No, these devices will effectively segregate the production from each zone.

(Marked The Texas Company Inc's. Exhibit No. 3, for identification.)

Q Will you refer to Exhibit 3 and explain that, please?

A Exhibit 3 is a copy of the Lane Well's radioactivity log run on V. M. Henderson No. 2 on which the Paddock perforations and the proposed Blinebry perforations have been indicated.

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

A Yes.

MR. WHITE: At this time we move the admission of the Exhibits 1 through 3 inclusive.

MR. FISCHER: Without objection they will be accepted.

MR. WHITE: That concludes our testimony.

MR. FISCHER: Any questions of Mr. Ross? Mr. Utz.

CROSS EXAMINATION

MR. UTZ:

Q Mr. Ross, what did you say the gas-oil ratio would be on the Blinebry zone?

A Blinebry zone, was measured in J. W. Perry's Hardy Federal No. 2 North offset as 10,295 cubic feet per barrel on April 30. Let me retract that, that is taken from a packer leakage test submitted by them April 30, 1959, and the gravity, 53.8 degrees is somewhat in excess of the gravity which is taken as the borderline between gas and oil in the Blinebry Pool.

Q Has Texas Company had any experience producing 10,000 gas-oil ratio Blinebry zone through five and a half through two and seven inch annulus space?

A I can't bring a specific instance to your attention here. We will run two and a half tubing in this well which will be relatively close clearance within the five and a half casing, and we believe that the Blinebry formation will flow satisfactorily through that interval.

Q Will there be enough velocity to keep the well clean?

A We anticipate that the velocity will be sufficient to keep the well clean.

MR. UTZ: That's all I have.

MR. FISCHER: Any other questions of Mr. Ross?

BY MR. FISCHER:

Q Mr. Ross, why did you set a bridge plug in the base of your five and a half inch pipe there?

A That bridge plug has been set to seal off the Drinkard. This well was originally drilled to the Drinkard and the Drinkard was tested. However, it tested water and this bridge plug is being set here and capped with hydromite to seal off the Drinkard zone.

Q Is thisa cast iron bridge plug?

A We would set a cast iron bridge plug in this instance.

Q Is this now a Paddock well? A Yes, sir.

Q And it produces water? A Yes, sir.

Q Have you noticed any corrosion in the water? I assume you have a heater treater on your lease, have you noticed any corrosion in your heater treater in this water?

A We have talked to our field engineer in Jal and he reports no excessive corrosion due to this zone. However, any zone that produces large amounts of salt water is ordinarily corrosive to some degree.

Q I believe that Paddock water scales a lot, and I was just trying to determine if it might do it here.

A Actually during the course of the proposed workover we are going to attempt to shut off the water in the Paddock formation, which we hope will be successful.

Q What do you think you'll kill this well with when you try to complete your Blinebry?

A Kill the Paddock, let me see if we have the setup on our workover procedure here, I don't recall. Actually, first of all we are going to try to squeeze the water off in the Paddock, probably salt water in this case, we have experienced no trouble killing the Paddock zone with salt water. When we complete the Blinebry and kill it to install in dual completion equipment, we will probably inject a jell material into the Blinebry to prevent it from taking too much salt water. We have had trouble in some cases with the Blinebry taking too much salt water and becoming over-balanced and kick, and using the jell kerosene, it will hold the Blinebry long enough for us to install the dual equipment.

Q When you set your Model D retainer packer, how do you propose to set that packer for a packoff?

A Actually we'll probably set both of these packers at the same time because we have found that using the same wire line assures us of getting them spaced out a little more accurately.

As a test all we will have will be a packer leakage test which will indicate separation of the two zones.

Q On your bottom packer too?

A Actually if the bottom packer leaks it will influence the production of the Paddock. Actually the Paddock is pumping, it probably will pump down to some extent, and I would imagine that if the Blinebry leaked into the Paddock zone, it would start to flow, or at least show considerable change in the characteristics.

Q Are you going to pressure test your pipe before your Paddock zone?

A Test the bridge plug, normally we do not test these bridge plugs when we cap them with hydromite.

Q I mean your pipe, the five and a half inch casing.

A Oh, the pipe below the Paddock and above the Blinebry, we hadn't anticipated testing that right now.

Q Do you have any idea as to the age of this well?

A This well was completed in March of 1948. We actually have a bridge plug set at 5218 approximately now, which is just below the Paddock oil section, which should have been protecting the casing below from any influence of the Paddock production.

Q Is there anything in the interval between those two bridge plugs?

A Between the bridge plug that I just mentioned and the

one that shows at the bottom of this?

Q Yes.

A No, sir, there are no perforations or other obstructions.

Q Now, this tail pipe from your upper Baker packer above the Paddock zone, what will be the O. D. of it?

A It will be approximately two inch tubing. It will be two and three-eighths O. D. It will actually be two inch tubing when the upset is cut off and rethreaded for collars.

Q Will it be treated in any way, plasticoated or anything?

A No, we had not planned to coat this in any way.

MR. FISCHER: Any other questions of Mr. Ross? You may be excused, Mr. Ross.

(Witness excused.)

Any statements to be made? The case will be taken under advisement.

BEFORE EXAMINER FISCHER
OIL CONSERVATION COMMISSION
Exhibit No. 1677
Case No. 1677

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 2nd day of June, 1957.

Ada Dearnley
Notary Public - Court Reporter

My Commission Expires:

June 19, 1959.