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ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 21, 1963

EXAMINER HEARING

IN THE MATTER OF:)

Application of Humble Oil & Refining Company)
for a triple completion, Lea County, New)
Mexico. Applicant, in the above-styled)
cause, seeks approval of its State "S" Well)
No. 24, located in Unit J, Section 2,)
Township 22 South, Range 37 East, Lea)
County, New Mexico, as a triple completion)
(tubingless), to produce oil from the)
Blinebry and Drinkard Pools and from a)
third zone, either lower Drinkard or Abo,)
through parallel strings of 2 7/8-inch)
casing cemented in a common well bore.)

Case 2756

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 2756.

MR. DURRETT: Application of Humble Oil & Refining
Company for a triple completion, Lea County, New Mexico.

MR. BRATTON: Howard Bratton, appearing on behalf of
the applicant. I have one witness.

(Witness sworn.)

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

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, appear-
ing for Continental Oil Company and Amerada Petroleum Corporation.



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

MR. BRATTON: If the Examiner please, I would like to state at the beginning, the application states that this is a triple completion from the Blinebry, Drinkard and from a third zone, either the lower Drinkard or Abo. Actually the application for the third zone is for the Abo. It is not for the lower Drinkard. This is not an application to have a dual completion in one pool or one formation. This is an application for a triple completion in three different formations.

MR. UTZ: Parts of your application that I have read call your lower completion the Wichita.

MR. BRATTON: I believe, as I understand it, Mr. Examiner, that's a terminology that's used over in West Texas. But we can get into that further. If it could be construed as being a further completion within the Drinkard, it certainly is not our intention.

MR. NUTTER: For the purpose of clarification of the record, I would like to state when the application was received we were in somewhat of a dilemma to define it as lower Drinkard or Abo due to the nomenclature that had been used on the application. We, therefore, left the zone's actual identification up in the air purposely on the advertisement.

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MR. BRATTON: We appreciate that and I wanted to clarify what our intention was, if it was not clear on the application.

MR. UTZ: All right, you may proceed.

JAMES WHITTON

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q State your name, by whom you are employed and what capacity.

A James Whitton. I am employed by Humble Oil and Refining as a geologist.

Q Have you previously testified before this Commission?

A No, sir, I have not.

Q State briefly your professional and educational background.

A I graduated with a B.S. degree in geology from the University of Texas in 1956. Immediately thereafter I was employed by Humble Oil and Refining Company, located in Midland, Texas. I have worked for the company, Humble Company since 1956, the last three and a half years in Hobbs, New Mexico as production geologist.



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Q Are you familiar with the area and the subject well in question?

A Yes.

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

MR. UTZ: Yes, sir, they are.

Q Will you turn, please to Exhibit No. 1, which is the application for multiple completion?

A Yes.

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

Q Is that the application under consideration in this case?

A Yes.

Q Your intended triple completion, as reflected there in 3-B, are what zones and what footage?

A The Blinebry zone, Blinebry oil zone, from 5700 to 5800. These are all approximate depths, of course. The Drinkard zone from 6400 to 6450, and the Abo zone from 6900 to 6950.

Q Those are all anticipated to be oil?

A Yes.

Q And the location of the well is shown on that application, is that correct?



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A It is correct.

Q Turn to your Exhibit No. 2, does that show the location of the subject well and the outlines of the Drinkard and Wantz Abo Pools?

A Yes.

(Whereupon, Applicant's Exhibit No. 2 was marked for identification.)

Q As reflected on Exhibit No. 2, the subject well in question is in the Drinkard Pool?

A Yes.

Q And is Southeast of the present delineation of the Wantz Abo Pool, is that correct?

A Yes.

Q And the Wantz Abo Pool and the Drinkard Pool are co-extensive in certain areas?

A Yes.

Q You anticipate or hope to obtain Drinkard production and Abo production in this well, is that correct?

A Yes.

(Whereupon, Applicant's Exhibit No. 3 was marked for identification.)

Q Turn to Exhibit No. 3, if you will, please.

A Yes.



Q Will you explain what that exhibit reflects?

A Since this is a triple, I have noted in the color code green the Blinebry oil wells. You will note also a code for Drinkard wells and Wantz Abo wells, and particularly note that in several cases on this map there are completions on the same 40-acre tract in the Drinkard and Wantz Abo. The area outlined in red is an area of investigation which I made to determine if there were any completions in the Abo formation, and I have found none.

I might say this, too, in the course of this study I have only found four Drinkard wells which actually went into the Abo deep enough to complete in the Abo. Now, many of the Drinkard wells went into the Abo approximately 10, 15 feet, but they all stopped with the exception of these four.

Q In Section 33, I believe there are reflected four or five locations where they have obtained both Drinkard and Wantz Abo production, and they have dual production or dual completions in those areas, is that correct?

A That is correct.

Q Then your code green are your Blinebry wells?

A Blinebry oil wells, yes, sir.

Q You hope to obtain Blinebry, Drinkard and Abo production in this well, is that correct?

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A That is correct.

Q And if you do you would like to triple complete, and that's the purpose of this application?

A That's correct.

(Whereupon, Applicant's Exhibit No. 4 was marked for identification.)

Q Turn to Exhibit No. 4, if you would, please.

A Yes.

Q Refer first to your map down at the bottom. Does that indicate in yellow the location, the section of the subject well?

A It does the same as it is on the other maps.

Q Would you explain what your two logs, the purpose of them and their relative locations with respect to this well?

A The purpose of the cross section, this is a very basic cross section, I don't intend to show any structural conformance other than the structural relationship between these two wells. I do want to show the fact, though, that we wish to complete in the Abo section, possibly the same interval, or maybe even a little higher in the Abo section than this Amerada No. 6 on the left, Amerada No. 6 Hare. As I say, this is a very basic cross section and I just want to show the fact that the Abo is present there and if we are fortunate to obtain production in this



formation we will try to complete it.

Q Your two logs, your Amerada No. 6, that shows the Abo formation, oh, two and a half miles to the West, Northwest of the subject well?

A Yes, sir.

Q And the log on the Mid-Continent No. 4, I guess, it is?

A No. 4 Lynch.

Q That is located approximately half a mile to the East?

A That is correct. It is the closest, deepest well we have to the Abo.

Q And it reflects the Abo formation as being formation in that well, is that correct?

A Yes, sir.

Q And you hope to obtain the Abo in the subsequent well, and if so, to complete in it?

A Yes.

(Whereupon, Applicant's Exhibit No. 5 was marked for identification.)

Q Turn to your Exhibit No. 5. Is this a schematic drawing of your proposed completion?

A Yes.

Q Would you explain what it reflects?

A This reflects the bore hole that we will cement three

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strings, separate strings of 2-7/8 tubing. This will serve as casing in the hole and complete from each zone.

Q It reflects your cementing program and your anticipated depths and hoped for completions, is that correct?

A Hoped for completions. The designated intervals, estimated intervals since we have no log on the well as yet.

Q Is there anything unusual about this proposed method of completion? Has this method been approved by this Commission in previous cases?

A Yes, sir.

Q Anything unusual or anticipated difficulty about these formations which would make this proposed method of completion unpractical?

A None that I know of.

Q Is there anything further you care to state with respect to any of these exhibits?

A No, sir.

Q Were Exhibits 1 through 5 prepared by you or under your supervision?

A Exhibits 2, 3 and 4 were prepared by me, Exhibits 1 and 5 were prepared by the engineering section represented by our engineer.

MR. BRATTON: We offer in evidence Humble's Exhibits 1



through 5.

MR. UTZ: Without objection Humble's Exhibits 1 through 5 will be entered into the record.

(Whereupon, Applicant's Exhibits 1 through 5 were admitted into the record.)

MR. BRATTON: I would like to state further, Mr. Examiner, in clarifying our position, this, of course, is not a pool delineation hearing or an application to extend the Wantz Abo Pool at this time. If we do encounter the Abo production we would like to use this method of completion, and at that time I assume we would apply for either a new pool or an extension of the Wantz Abo. I believe we have nothing further at this time.

MR. UTZ: Are there questions of the witness?

MR. PORTER: Mr. Bratton, do you know how far this well is, the boundaries of the Wantz Abo Pool?

MR. BRATTON: Yes, sir, it's reflected on Exhibit No. 2. I believe it's a mile and a half from the closest part of the Wantz Abo.

MR. PORTER: Thank you.

MR. UTZ: Any other questions?

MR. KELLAHIN: May I ask a couple, please, Mr. Utz?

MR. UTZ: Yes, sir.

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CROSS EXAMINATION

BY MR. KELLAHIN:

Q The Amerada No. 6 Hare is within the defined limits of the Wantz Abo Pool, is it not?

A That is correct.

Q The Sun Continent 4 Lynch, is that producing from the Abo formation as you have it here?

A No.

Q It's not completed in the Abo?

A No, sir.

Q Are the vertical limits of the Abo defined by the Commission?

A No, sir.

Q Do the operators use some common marker in picking the Abo?

A Yes, sir, it's a base, or at least on the old electric log run in this area it's easily seen on the SP curve. It's a shale. As you go through the Drinkard you penetrate the Drinkard and go immediately into shale, the Abo green shale, and this generally shows up in gamma ray curves and the SP curve.

Q That is a marker that is commonly agreed upon, is it?

A Yes, sir. I have checked this with the geologist in the Hobbs area.

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Q As I understand, you propose to complete your well in essentially the same zone as the Amerada No. 6 Hare well?

A I'll say this, the Wantz Abo Pool has no particular zone. In other words, a completion can be made anywhere in the Abo formation. I dare say that I hope we find production low in the Abo, but if perhaps we don't we will complete higher than the Amerada No. 6 in the Abo formation.

MR. KELLAHIN: Thank you.

MR. UTZ: Are there other questions? Mr. Nutter.

BY MR. NUTTER:

Q I didn't get your name, please.

A James Whitton.

Q Mr. Whitton, on your cross section here, the Amerada Hare No. 6 is the well on the left, is it not?

A Yes, sir.

Q Would you define what is commonly known as the Vivian zone of the Drinkard on that log?

A On this log it would be approximately from 6475 to the top of the Abo section.

Q In other words, on this log it would be approximately the lower half of the Drinkard interval as depicted there?

A That is correct.

Q Where would the Andrews pay, which is completed in many



parts of the Drinkard Pool be as far as this log is concerned?

A The Andrews pay is actually down in the Abo formation and it is from, I'd say approximately 6750 to 6900, somewhere in that locality. It's a nebulous thing. My only reference to the location of the Andrews pay is from the symposium made by the Roswell Geological Society in 1956. As I understand it in conversation with your geologist in Hobbs' Oil Conservation Commission office, they consider that the Andrews pay.

However, the Wantz Abo pay, as I say, there's no definite zone for the Wantz Abo. It can be completed in any of the Abo section, but the Andrews pay is so designated up in the very upper part of the Abo formation.

Q And it has been a tradition among the operators in the Drinkard Pool to classify the Andrews pay as part of the Drinkard completion if they had production in the Andrews as well as the Vivian, and perforations of this type have been accepted by the Commission over a period of many years?

A In the southern part of the Drinkard field is the only area in which there are any completions in the Andrews pay.

Q But numerous wells have been completed in the Andrews and the Vivian without the necessity of dual completion between the two pays?

A How numerous, I don't know. I haven't made that study.

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I only have one exhibit. I cut this map out of the 1956 symposium, if you would like to refer to this. I only have one copy, though. In that I have outlined in red the wells they designated as being completed in the Andrews section.

Q But the two pays, at any rate, have been in communication with each other by virtue of being perforated and classified in the Drinkard Pool, the Vivian and the Andrews have been perforated in single wells without separation by packers?

A That I do not know. I haven't made the study of the entire pool, and as I stated there, these wells completed in the Andrews pay are down south here. Now, to the north, as you can see on Exhibit 2, these wells, there are wells in the Wantz Abo and the Drinkard Vivian completed side by side on the same 40-acre tract. Now they have been separated. Now I don't know about those wells down south.

Q Are those wells Vivian, Drinkard wells and lower Abo wells or Vivian, Drinkard wells and Andrews pay wells?

A I haven't investigated any of those outside of the closed area.

Q You stated that your proposed area for perforation would be similar to the lower Abo formation and be the similar formation to which Amerada has completed this No. 6 well in the Amerada in this formation, is that correct?

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A Historically the Wantz Abo Pool is not a very productive pool. In other words, the wells are not what you would say real good. There are a few, only a handful, the remainder are not very good. It's more or less a salvage type thing, plug back from a deeper depth, deeper completion. Now, we intend to core all of the Abo. We hope to find the best zones and generally we complete the lowermost zone first if it is good enough to complete it. The lowermost, best zone, I should say, if in this well it is down low, we will complete it low.

Q You said if the pay was higher you would come up the hole and try to complete higher up in the Abo?

A Yes.

Q How high up would you come in the Abo? Would it be your intent to come up into the Andrews pay and perforate there in the Abo formation?

A I dare say eventually we would. If we complete lower and this zone depletes and there is pay above we will at a later date.

Q This well is within the horizontal limits of the Drinkard Pool at the present time as presently defined?

A Yes, sir.

MR. NUTTER: I believe that's all. Thank you.

BY MR. UTZ:



Q Did you state your cement program or did you just use Exhibit 5?

A As I said, I didn't prepare Exhibits 1 or 5. If you have any questions concerning the mechanical aspects, I would appreciate it if we let Mr. Bevill, our engineer who is present, answer any questions you have.

Q Well, I would like to know what your cement program is.

MR. BRATTON: I believe it's reflected on Exhibit No. 5.

MR. UTZ: Can you state as to whether that cement is staged or circulated from the bottom?

MR. BRATTON: Let's get Mr. Bevill.

(Witness sworn.)

B. K. BEVILL

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q State your name and by whom employed?

A B. K. Bevill, Humble Oil and Gas Company.

Q You are an engineer with the company?

A District Production Engineer.

Q And have previously testified before this Commission?



A Yes, sir.

CROSS EXAMINATION

BY MR. UTZ:

Q Referring to Exhibit 5, would you state for the record how you intend to accomplish this cement program as outlined on that exhibit? You need not go into the surface string.

A Actually, as you note on the diagram, we have our string staggered. We intend to cement down through the long string and attempt to bring it back, all the way back into the 9-5/8ths.

Q From the bottom?

A Yes, sir.

Q How will you accomplish that on your Drinkard completion? That's where you are going to cement from.

A We will cement from the bottom through the long string and bring it all the way back.

Q It doesn't show on the long string to be the Abo, that would be around 1750?

A That's correct.

Q Is what you are saying the long string and you will cement from the Abo?

A We will cement all strings through the long string.

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In other words, the other two strings will be very likely bull plugged.

Q I see.

A During cementing operations they will be equipped with turbulizers or centralizers throughout all pay zones, and during cementing operations we will attempt to work either one or two or possibly all three strings until the plug hits bottom.

Q Have you had good success in causing separations between two or three zones by this method of cementing?

A Yes, sir. I will admit we've had some troubles over in other areas. Now here in New Mexico we have been limited, I believe, to four dual completions where we have had nonconcentric strings and on all four we had no indications of bad cement job.

Q So it hasn't been necessary to go on a squeeze?

A Not any of our New Mexico completions.

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

The witness may be excused.

(Witness excused.)

MR. UTZ: Any further statements in this case? If no further statements, the case will be taken under advisement.

Did you have something, Mr. Bratton?

MR. BRATTON: No, sir, I was just going to assure Mr.

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