

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

In the Matter of:

CASE 2065 Application of Texaco, Inc., for an oil-gas dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its H. J. Loe Federal B Well No. 3, located in Unit M, Section 23, Township 29 North, Range 12 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and the production of gas from the Dakota Producing Interval through parallel strings of 2 3/8-inch casing and 4 1/2 inch casing respectively, cemented in a common well bore. Applicant proposes to also install tubing for the Dakota production.

Mabry Hall
September 7, 1960

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Case 2065.

MR. PAYNE: Case 2065, "Application of Texaco, Inc., for an oil-gas dual completion utilizing two strings of casing."

MR. KELLY: Booker Kelly with Gilbert, White and Gilbert, Santa Fe, for the Applicant, Texaco, Inc. I have one witness that has to be sworn.

(Witness sworn in.)

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MR. UTZ: No other appearances in this case? You may proceed.

(Thereupon, the documents were marked as Applicant's Exhibits One and Two for identification.)

J. E. ROBINSON, JR.

a witness, called by and on behalf of the Applicant, having first been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name and position, please?

A I am J. E. Robinson, Junior, I am employed by Texaco, Inc. as proration engineer in our Midland, Texas, Division.

Q Have you testified before this Commission as an expert before?

A Yes sir, I have.

Q Would you please tell the Commission briefly what Texaco plans to do by this application?

A This is the application of Texaco, Inc., to dually complete their H. J. Loe Federal "B" Well Number Three by running parallel strings, consisting of 4 1/2 and 2 3/8 inch casing cemented in a common well bore, and by producing the Dakota gas through the 4 1/2-inch casing through 2 3/8-inch tubing, and producing the Gallup Formation through the 2 3/8-inch casing as a tubingless completion.

Q Referring to what has been marked Exhibit One, would you

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explain that to the Commission?

A Exhibit Number One is a plat of the area, showing Texaco's H. J. Loe Federal B Lease outlined in yellow, which consists of all of Section 23, Township 29 North, Range 12 West; it also shows all offsetting leases, with the offset operators' address, and the wells, in what formation they are completed. To the immediate north of Texaco's lease, there are four wells, they are completed in the Fulchur-Kutz Pictured Cliffs Field, and there is also a well to the east located in the same field. Texaco's Loe Federal B Well Number 1 is completed in the Fulchur-Kutz Pictured Cliffs; our Well Number 2 is a Dakota well, it is in an undesignated field at the present time, and we are proposing to drill our Well Number 3 to be dually completed in the Wildcat Gallup Field and in the undesignated Dakota Field. Of course, we have Dakota production on this lease; the nearest Gallup production is Pan American's Number 33 Gallegos Canyon Unit located in Section 26, Township 28 North, Range 12 West, which is approximately seven miles south of this location.

Q Now, referring to what has been marked Exhibit Two, would you explain that to the Commission?

A Exhibit Number Two is a diagramatic sketch of the proposed dual completion installation. We will drill a 12 1/4-inch hole to 200 feet where we will set 9 5/8-inch casing at 200 feet and cement with a sufficient amount of cement to circulate back to the surface of the ground. After we go out under the 9 5/8-inch casing, the

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hole will be reduced to an 8 5/4-inch hole, we will drill this 8 5/4-inch hole to a TD of 5550, which is approximately 90 feet below the bottom of the Gallup Formation. We will then reduce the hole size to a 6 5/4-inch hole and drill to a TD of 6629, which is estimated to be the base of the Dakota. After drilling the well to TD, we will then run as the first string the long string of 4 1/2-inch casing; on the bottom of the casing through the Dakota interval, we have run centralizers centralizing the 4 1/2 entirely through the Dakota Formation; also, on the long string, we will have a stage collar at 1700 feet. After we run the 4 1/2, we will then run our short string of 2 5/8-inch casing to be set through the Wildcat Gallup Field. On the 2 5/8-inch casing, we will have Baker turbolizers on each joint through the Gallup and also through the Pictured Cliffs.

Q Would you explain to the Commission the function of the Baker turbolizers?

A Well, I think this has been brought up before. Actually, the Baker turbolizer is about a foot long and it is a spiral rubber that acts as both a centralizer, and also it breaks up any channeling that might be occurring as the cement is moving up the hole. We are proposing to install turbolizers both through the Gallup and through the Pictured Cliffs also so that we can get an effective cement job. Now, the Pictured Cliffs is productive on this lease; however, it is not a good well. We do not expect the Pictured Cliffs to be productive in this well. However, we are



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using all precautions in insuring that the Pictured Cliffs is adequately cemented. The anticipated pressure of the Pictured Cliffs if it is productive is only 2360 pounds; the Gallup has a pressure anticipated as being 1500 PSI, and the Dakota will be somewhere slightly above 2,000 pounds. Now, after we set both strings, we will then cement by pumping plug down the 4 1/2-inch casing. We will cement with a sufficient volume to bring the top of the cement up 600 feet above the top of the Gallup. After we have cemented the first stage, we will then open our stage collar and stage cement the Pictured Cliffs Formation with a sufficient amount of cement to come to approximately 200 feet above the Pictured Cliffs, or roughly 1500 feet. After we cement the strings in the hole, we will then run a temperature survey where we will be able to pick the top of the cement above the Gallup and also above the Pictured Cliffs. The Gallup will be completed by use of line wells directional perforating, and I am sure the Commission is familiar with this method of perforating. The Gallup, after being perforated, will be fractured with a sand-oil treatment. We anticipate that this completion will be an oil completion. The gravity will run roughly between 37 and 41 Degrees API with a gas-oil ratio of somewhere in the neighborhood of 700 to 800 to 1. The crude is a reasonably sweet or an intermediate sweet type crude in this area. The Dakota will be perforated in a conventional manner. We will water-frac the Dakota interval, and then we will run 2 5/8-inch tubing inside the 4 1/2-inch casing, where we will



produce the Dakota gas up through the tubing.

Q Has this well been started at all?

A No sir, we are waiting approval of the Commission for permission to complete the well in the prescribed manner before we spud the well.

Q Now, have Exhibits One and Two been prepared by you or under your direction?

A Yes sir, they were.

MR. KELLY: I move for the introduction of the exhibits in evidence.

MR. UTZ: Without objection, Exhibits One and Two will be entered into the record.

MR. KELLY: That's all.

EXAMINATION BY MR. UTZ:

Q Mr. Robinson, how far are you going to run centralizers above the Dakota?

A Normally, we run from two to three joints above the formation; roughly, it would run, oh, seventy to ninety feet.

Q And the same for your turbolizers?

A Yes, sir.

Q And you were going to have 600 feet of cement above the Dakota?

A 600 feet above the top of the Gallup.

Q I see; your first stage then will be from TD to 600 feet above the Gallup?



A Yes sir, that is correct.

Q And from 1700 to 200 feet above the Pictured Cliffs?

A Yes, sir.

Q And from 300 feet above the Pictured Cliffs to 200 feet, or the bottom of the 8 5/4 will be on that?

A Yes sir, that is correct.

Q Do you know whether or not there's any producing zone, such as Farmington, Fruitland, in this area?

A No sir, there is none that I know of; of course, this interval does produce in certain parts, but not in this immediate area.

Q And you feel that two hundred feet of surface casing will adequately shut off all the surface water?

A Yes sir, we will protect any fresh water in this area. I believe the--we have made, on our Number 1, we set, I believe, 207 feet of surface, and in our Number 2, we set 239 feet, and that adequately protected our fresh water.

Q And will your turbolizers on your 2 7/8 or 2 5/8 give you approximately a one-inch sheath between your 4 1/2 and your 2 5/8?

A Mr. Examiner, personally I don't know. We have the OD on a collar of 4 1/2-inch casing as five inches; in the OD of the collar on a 2 5/8-inch upset casing, it's 3.06, so we are drilling an 8 5/4-inch hole, so we have at least eight inches, slightly over eight inches of steel, so we wouldn't have a one-inch sheath between the two. Roughly, it would vary I would say between



the collars; if collars were laying next to each other, of course we wouldn't set the casing so it would, but if it did, then the maximum that we could have would be $3/4$ of an inch.

Q You think that's enough cement to adequately protect?

A Yes sir, I believe so.

MR. UTZ: Are there other questions?

EXAMINATION BY MR. PAYNE:

Q Mr. Robinson, actually you should have more than $3/4$ of an inch since you are not going to set your collars opposite each other?

A That is correct, they would not be set opposite each other, so it's possible that you'd have a cement sheath, roughly, you could have one to two inches of cement sheath between the two; it's just according to where your pipe would be laying.

Q Will you be able to artificially lift the Gallup in this particular completion?

A Yes sir, it would be more or less a conventional tubingless completion where we could set a pump and pump the Gallup by using the casing string as the tubing.

MR. PAYNE: Thank you.

MR. UTZ: You would be willing to run any communication tests required by the Commission.

A Yes sir, we will run the standard packer leakage tests to see that we do not have communication between these two intervals.

MR. UTZ: Are there other questions? The witness



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(Witness excused.)

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

* * *

STATE OF NEW MEXICO)
 : ss
COUNTY OF BERNALILLO)

I, JERRY MARTINEZ, Notary Public in and for the County of Santa Fe, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings was reported by me in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record of said proceedings to the best of my knowledge, skill and ability.

Dated at Albuquerque, New Mexico, this 10th day of September,
1960.

Jenny M. [Signature]
Notary Public

My Commission Expires:
January 24, 1962

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 2065,
heard by me on Sept. 7, 1960.

Examiner
New Mexico Oil Conservation Commission

