BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 23, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Sunray Mid-Continent Oil Company for and oil-oil dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its' State"Y" Well No. 2, located in Unit A, Section 32, Township 08 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from the Culwin-Yates Pool and the production of oil from the North Shugart Queen-Grayburg Pool through parallel strings of 2 7/8-inch casing cemented in a common well bore. CASE 2194

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

(Marked Applicant's Exhibits No's. 1 & 2 for identification.)

MR. UTZ: Case 2194.

MR. PAYNE: Case 2194: Application of Sunray Mid-Continent Oil Company for an oil-oil dual completion utilizing two strings of casing.

MR. WHITE: L. C. White of Gilbert White & Gilbert, Santa Fe, New Mexico. We will have one witness and representing the Applicant will be Bill Loar of the New Mexico Bar Association.

MR. UTZ: Any other appearances in this case? If not, you may proceed.

(Witness sworn.)

D. E. BERRY, JR.,

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

DIRECT EXAMINATION

BY MR. LOAR:

Q Will you state your name and occupation?

A D. E. Berry, Jr., Staff Engineer employed by Sunray Mid-Continent Oil Company at the Hobbs District Office.

Q Are you a graduate of an accredited engineer's school?

A Yes sir.

Q What school is that?

A University of Tulsa, 1952.

Q Since that time, except for a tour of duty in the Navy, have you been performing engineering duties for the Sunray Mid-Continent Oil Company to the present time?

A That is correct.

Q During the last year and a half, have you been in the Hobbs office doing petroleum duties?

A Yes sir.

MR. LOAR: Are his qualifications acceptable?

MR. UTZ: Yes.

Q (By Mr. Loar) Are you familiar in this case of the tubingless dual oil in the North Shugart Queen-Grayburg Pool and the Culwin-Yates Pool, Eddy County, New Mexico?

A Yes sir.

Q Would you please refer to what has been made as Exhibit Number 1 and point out what that reflects?

A Exhibit Number 1 is a plat showing the location of our proposed well, and shows the surrounding wells and our New Mexico State "Y" No. 1 which is now being drilled. Also the Sunray Mid-Continent acerage as the cross-wedged area.

Q And a thick line is Sunray's where there is an arrow pointing to it?

A Yes.

Q Has Well No. 1 received approval from the Oil Conservation Commission in Order R-1875?

A Yes sir.

Q Dated sometime this month?

A Yes.

Q What is the location of Well No. 2?

A It is 330 feet from the North line and 990 feet from the East line of Section 32, Township 18 South, Range 31 East, Eddy County, New Mexico.

Q All right, sir, have you prepared a schematic of the proposed application of this well?

A Yes sir.

Q That has been made Exhibit 2; would you proceed through that?

A Exhibit Number 2 shows our New Mexico State "Y" No. 2

a proposed Tubingless Dual Completion. It is proposed to run two parallel strings of casings and cement the strings of the casing in common well bore. We will run set approximately 900 feet of eight and five-eights casing and cement this casing with a 180 sacks of cement; an eight-inch hole will be drilled to a depth of 3,000 feet at which point the hole size will be reduced to six inches of the six inch.

Q Now, this production will occur approximately 300 feet below the Culwin-Yates?

A Yes sir.

Q Would you go ahead

A The six inch hole will be carried on to a depth of 3,300 feet, and the reason for reducing the size of the hole is to reduce the amount of cement which must be penetrated during the procedure for aiding operations on the lower zone. The lower zone will be in the North Shugart Queen-Grayburg Pool of approximately 3,200 to 3,700 feet, and the upper completion after the Culwin-Yates proble at an approximate 2,600 to 2,700 feet. The casing which we plan to use is two and seven-eighths OD buttress thread casing. Each string of casing will be set to the respective pay zones of about 70 feet. The ID of this casing is 2.441 inches and the OD is 3.50 inches on the collars which will leave a toatl clearance of one inch. The casing equipment will consist of a Phillip baffle plate -- or collar, excuse me -- to install one joint about 30 feet -- the guide shoe. The guide shoe and Phillip

baffle plate will be installed at each string of casing.

We will install Centralizers on 30 foot spacing from the bottom of the long strings to approximately 100 feet above the top of the lower pay. We will install Turbulizers on each joint of each string of the casing from the level at the setting point of the short string of the casing up to a point approximately 100 feet above the top of the upper pay. The cementing procedure will be to pump cement down the long string of casing, first with sufficient cement to bring the cement up to the bottom of the short string of the casing.

Then we will immediately pump cement down the short string of the casing to bring the cement on the point approximately 600 feet above the top of the upper pay. We will use latched-in type cementing plugs for this operation, and we will use separate pumps to pump the plug down to insure that we have approximately 40 feet of clean casing below the lowest anticipated performation for each pay. We will perforate the lower zone using a conventional tubing perforator, and we will perforate the short string of the casing into the upper pay using the orientation tool to prevent perforation of the upper string of the casing.

We plan to treat both zones by fracturing, using refined oil from sand. If an artificial lift of either or both of these zones is needed, we plan on running a retrievable type shoe on the pump with conventional sucker rods. If we run into a gas interferance problem in the operation of the pump, we will use hollow sucker rods.

Q Will this type of completion save the operators a substantial sum of money?

A Yes sir.

Q Would the completion in these two zones be of doubtful examination if more familiar methods were used?

A Yes sir, they would be doubtful.

Q In your opinion, would the authorization of this type of completion prevent waste?

A Yes.

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

A Yes, they were.

MR. LOAR: I would like at this time to offer Exhibits 1 and 2.

MR. UTZ: Without objections, Exhibits 1 and 2 will be entered into the record.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Berry, your turbulizers are going to be on the short string?

A No sir, on the bottom strings.

Q Up to a point of a 100 feet above the Culwin-Yates perforation?

A Yes sir.

Q But you will have Centralizers on your long strings from

the bottom of your short strings through the pay zone of the North Shugart Queen-Grayburg?

A No sir, we plan on running the Centralizers from the bottom of the long string to 100 feet above the top of the lower pay.

Q I see, so there will be a space from 100 feet above the North Shugart on the bottom of the short string. Will that have any Centralizers or Turbulizers?

A Yes sir.

Q That will be around 400?

A Yes sir.

MR. UTZ: Any other questions?

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Berry, do you feel that this completion method will insure that there is no commingling between the two production horizons?

A Yes sir, I do.

Q Do you also feel that it will protect all fresh water and other gas- and oil-bearing strata?

A Yes sir, the casing depth -- the eight and five-eighths -- that casing that we propose is below all known fresh water zones, and the Yates formations, both, fall within a hydrocarbon producing zone.

Q ~~Does your completion method differ initially from Order~~

No. R-1875?

A No sir, it's essentially the same.

MR. UTZ: Any other questions?

RE-DIRECT EXAMINATION

BY MR. LOAR:

Q Would you say that this well would have more cement and more protection to all zonings than the standard completions that are usually made in this area.

A Yes sir, most of the completions use less casing and less cement under more conventional types of completion.

MR. UTZ: Any 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, LA VERNE E. JAMES, 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 13th day of March, 1961.

My Commission expires:
January 6, 1965.

La Verne E. James
Notary Public - Court Reporter