

ALLAN R. SMITH, JUNIOR

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

DIRECT EXAMINATION

BY MR. FEDERICI:

Q Would you state your name, please?

A Allan R. Smith, Junior.

Q Will you tell the Examiner by whom you are employed, the location and your present position?

A I'm employed by Tidewater Oil Company in Hobbs, New Mexico, as Area Engineer.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A No, I have not.

Q Would you discuss briefly your formal education and past experience?

A Graduated from Texas College of Arts and Industries with a B.S. Degree in Natural Gas and Petroleum Engineering in May, 1955. Since graduation I have worked for Tidewater Oil Company as Petroleum Engineer in Kilgore and Conwell, Texas. I have served as Area Engineer since 1957 and served in the capacity of Area Engineer in Hobbs since September, 1961. I designed and completed Tidewater's first triple completion, and I believe this was the second or third triple completion in the State of Texas. Since that time I have had experience in running initially or on workovers

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at least twelve triple completions.

MR. FEDERICI: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir.

Q (By Mr. Federici) In your present position, are you familiar with the property which is the subject of this application?

A Yes, sir.

Q Are you familiar with the application filed in this case?

A Yes.

Q And this area which is the subject of this application, is it under your supervision?

A Yes, sir.

MR. FEDERICI: Mr. Examiner, we have some exhibits here.

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

Q (By Mr. Federici) Do you have what is marked as Exhibit No. 1?

A Yes, sir.

Q Will you explain what that exhibit shows?

A Exhibit 1 was prepared to show the location and completion zones of wells in the immediate area of A. B. Coates "C" No. 18. The A. B. Coates "C" No. 18 is located in Unit I, Section 24, Township 25 South, Range 37 East, Lea County, New Mexico. The 40-acre proration unit shown on the map in red is offset by completions in the Justis Tubb-Drinkard Field on adjacent proration



units to the northeast, the east, southeast, the south, the southwest, the west, and the northwest. The proration unit due north belongs to Tidewater and does not have a Justis Tubb-Drinkard completion at this time.

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

Q I hand you what has been marked as Exhibit No. 2 and ask if you will explain that to the Examiner.

A Exhibit No. 2 was prepared to show the triple completions in the immediate area of Well No. 18. Four triples in the Justis and North Justis Field have been shown on the map in red. The property under consideration was painted green. Four triples that are shown on this map are completed in various zones. As can be seen from the exhibit, one well has been completed in the three zones requested in this cause. Altogether there has been a combination of two of these requested zones in several wells, or combination; therefore, there has not been all three of them in any one.

MR. UTZ: There are what, seven or eight zones in this area?

A Yes, sir.

Q (By Mr. Federici) Do you have anything further with reference to Exhibit No. 2?

A No, sir.

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

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Q I hand you what is marked as Exhibit No. 3 and ask you to explain that to the Examiner, if you will, please.

A Exhibit No. 3 is an induction electric log on A. B. Coates "C" No. 18. On this well log, we've submitted it to show the tops of the producing zones and the present and proposed completion intervals in this well. The present completion in the Justis-Blinbry Field, the top of the sand is at 5,040 feet; the well is skip perforated from 5274 to 5354. Initial potential on 12-23-58, the well flowed 100 barrels of oil in 22 hours through a 15/64-inch well choke with a gas-oil ratio of 1,615 to 1. The 1961 bottom hole pressure on this zone was 1527 pounds. The API oil gravity is 37.7. The well is presently flowing its allowable of 31 barrels of oil per day. The zone is penalized due to high gas-oil ratio.

The proposed completion in the Justis Tubb-Drinkard Field, the top of the pay section is at 5,658 feet. The proposed perforations will be skip perforated from 5,668 feet to 5,890 feet. The average bottom hole pressure of wells in that locality for 1961 was 1782 pounds; average oil gravity of 36 degrees API.

The lower completion, the present completion in the Justus Ellenburger Field, the top of the sand is at 7,678 feet. The well is producing from 42 foot of open hole from 7758 to 7800 feet, which is total depth. 1961 bottom hole pressure was 2583.

MR. UTZ: Just a minute until I find the Ellenburger. What did you say the depth was?

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A It is the very bottom zone. The top of that sand was at 7,678 feet.

MR. UTZ: Okay. You may proceed.

A 1961 bottom hole pressure on this well was 2563 pounds. Average oil gravity, 44.3. This well is flowing at top allowable of 108 barrels of oil per day, zero barrels of water per day, and a gas-oil ratio of 1,045 to 1.

Q (By Mr. Federici) Do you have anything further to state with reference to this particular exhibit?

A No, sir.

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

Q I hand you what has been marked Exhibit No. 4 and ask you to explain that exhibit to the Examiner, if you will, please.

A Exhibit 4 is a diagrammatic sketch of the proposed triple completion. All completion equipment and packers will be purchased from Baker Oil Tool. The bottom packer will be the existing Model D Retainer Production Packer, which is set at 7,510 feet. Ten Model E tubing seals will be used to insure correct spacing of the tubing. The middle packer will be a Model FA Retainer Production Packer set at approximately 5600 feet. A Model F Flow Tube will be run on the tubing to seal off in this packer. The top packer will be a Model N Triple Packer, which will be retrievable, set at approximately 5200 feet.

The Number 1 string of tubing in this completion will



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be 2 3/8ths EUE-8 round tubing with 2.91 collars. The Number 2 and Number 3 strings will be 2-3/8ths inch, buttress tubing with 2.7 inch collars.

Q Is the above equipment in your opinion satisfactory for completely isolating and segregating these zones?

A To the best of my knowledge and experience, the down hole equipment recommended for this completion is the best available on the market today. The packers should withstand differential pressures to above the maximum internal burst as the pressures of the tubing strings. In this installation, the differentials across the Model D Packer will be approximately 800 pounds under actual conditions, and the differential across the Model FA Packer will be approximately 250 pounds.

Q How will this triple completion be checked for segregation?

A We will check this for segregation by any means prescribed by the Commission. We would like to suggest conducting a conventional packer leakage test with a 3-point pressure recorder.

Q What action has been considered to protect correlative rights?

A Tidewater has an estimated 55,000 barrels of net oil that can be recovered from the proposed completion in the Justis Tubb-Drinkard Field. A new well, to recover these reserves, would cost approximately \$81,000.00. This would amount to a development cost of \$1.47 per barrel. The proposed remedial work to triple



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complete would cost 62 cents per barrel. It would be unattractive to drill a new well to recover the Justis Tubb-Drinkard reserves. Therefore, without permission to triple complete, Tidewater could not protect its correlative rights and natural resources would be wasted.

Q Then in your opinion, you believe that waste would occur if this application were not approved?

A Yes, sir.

Q Have all offset operators been notified and furnished a copy of this application?

A Yes, sir. They were mailed copies of the application on April 27, 1962.

Q Do you know of any objections that have been filed?

A No, sir.

Q Now, Mr. Smith, is the production on a Federal lease?

A Yes, sir, it's a Federal lease.

Q Have you obtained approval from the U.S.G.S.?

A Yes, sir, we have obtained approval from the U.S.G.S. the first part of May, 1960.

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

Q I hand you what has been marked Exhibit No. 5 and ask you to state if that shows the approval of the U.S.G.S.?

A Yes, sir. It shows their stamped approval and signature on it.



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Q In your opinion, will this type of completion give complete separation of the producing formations?

A Yes, sir, it will.

Q Is this type of installation adequate to protect different zones where only one zone is being produced at a time?

A Yes, sir, it will.

Q In your opinion, is this type of completion more feasible and economical than drilling new wells?

A Yes, sir, for this amount of reserves.

Q Would this type of completion be in the interest of conservation?

A Yes, sir. Additional reserves can be recovered that wouldn't be economically attractive otherwise.

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

A Yes, sir, they were.

MR. FEDERICI: If the Examiner please, we offer Exhibits 1 through 5.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record of this case.

MR. FEDERICI: I believe that's all.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Smith, did you have a GOR for the Tubb zone?

A The Tubb-Drinkard zone is the proposed zone we would



like to complete in.

Q But you have no idea about the GOR's?

A Offsetting wells are approximately at 2,000 to 1 ratio.

Q Your 9-5/8 cement is circulated, right?

A Yes, sir.

Q And the 7-inch comes back to 3680?

A Yes, sir.

Q Which would leave 353 feet of open hole behind the casing between the bottom of the 9-5/8 and the top of the cement on the 7?

A Yes, sir.

Q How about the zones in that area; are there any fresh water zones or any oil producing zones?

A No, sir, not to my knowledge.

Q I believe you gave the pressure differential for the two lower packers and the pressure differential on your NC packer or upper packer would be what, about 1500 pounds?

A Yes, sir. That would be, actually the casing annulus will be loaded with a fluid and therefore you will probably not have any differential problems.

Q It will decrease the pressure?

A Yes, sir.

Q On the NC packer, what type of locking mechanism is used there? Is it tension pressure or self-setting?

A On this particular packer, it is identical to the Model

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L Packer, which is hook and ball style packer with hydraulic hoe-down slips. The difference between the N and the L packer which is being used is that the alteration of the tubing strings can be released in the top of the packer.

Q And the FA is the same nature?

A The FA is a retainer production packer which will be wireline set and an F type flow tube will be used to seal off in this packer.

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

MR. MORRIS: No questions.

MR. UTZ: The witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in this case? The case will be taken under advisement.

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision, and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 9th day of June, 1962, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:
June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2564, heard by me on May 27, 1962.
[Signature], Examiner
New Mexico Oil Conservation Commission

