BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JULY 24, 1958

IN THE MATTER OF:

CASE NO. 1488

TRANSCRIPT OF HEARING

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BEFORE THE
OIL CONSERVATION COMMISSION
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IN THE MATTER OF:

CASE NO. 1488 Application of Western Natural Gas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Wimberly No. 5 Well, 990 feet from the North line and 2310 feet from the West line of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Justis-Ellenburger Pool and oil from an undesignated Montoya pool through parallel strings of tubing.

BEFORE:

Elvis A. Utz, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. UTZ: Next case will be Case 1488.

MR. PAYNE: Application of Western Natural Gas Company for an oil-oil dual completion.

MR. SAPP: My name is Charles Sapp. I am a lawyer from Houston representing Western Natural. Our witness is Mr. Cook, and he is ready to be sworn.

(Witness sworn)

WENDELL COOK,

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

DIRECT EXAMINATION

BY MR. SAPP:

Q Will you state your name, please, sir, the city of your residence and the position you hold with Western Natural Gas Company?

A Wendell Cook, division petroleum engineer, Midland, Texas.

Q Mr. Cook, in connection with this application which concerns the dual completion of Western Natural Gas Company Wimberly No. 5 Well, did you prepare either directly or under your supervision a plat showing the well location?

A Yes, sir, I did.

Q And that is a plat that is marked as Exhibit No. 1?

A Yes, it is.

Q Will you state the location of that well, please, sir?

A Western Natural Gas Company's Wimberly No. 5 Well is located 990 feet from the North line and 2310 feet from the West line of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico.

Q Is that lease owned solely by Western Natural Gas Company?

A Yes, it is.

Q The offset owners to that lease, have they been notified of this application and hearing?

A Yes, sir. They were notified by letter of the application that we sent to the Commission, copies of it.

Q Where has the No. 5 Well been completed, shown on that plat,

sir? In what reservoir?

A It has been completed in the Montoya reservoir and the Ellenburger reservoir.

Q I show you a sheet marked Applicant's Exhibit No. 2. Will you state whether that plat or diagram was prepared either directly by you or under your supervision?

A Yes, it was.

Q What does that show?

A That shows the dual completion --

Q Shows the mechanics of the --

A Yes, of the Wimberly No. 5.

Q Will you proceed to explain the mechanics of that completion?

A The seven-inch casing was set at 8,085, that's eight thousand, eighty-five feet. The Ellenburger zone we drilled open holes through the casing to 8,210.with ten-pound mud in the casing. The Montoya zone was perforated from 7,002 to 7,015 feet. A Baker oil tool retainer production packer was set off a wire line at 8,000 feet in the seven-inch casing. I might add that this Baker packer has a very good reputation for this particular type duals, and over a period of time it has proven itself as such in the oil industry. The long string, or Ellenburger string of tubing was run and set in the Baker Model "D" retainer, and this two and three-eights EUE tubing at 8,189. The short string, or Montoya string of two and three-eights EUE tubing was suspended at 7,029 feet. We have a

Baker parallel string anchor in the long string at 7,053 feet. That will allow us, at a later date,to put the short string in tension if and when it becomes necessary to pump the Montoya reservoir. I believe that is the mechanics of the completion.

Q Approximately what is the distance between the perforations in the Ellenburger formation or reservoir and the perforations in the Montoya reservoir?

A A thousand and seventy feet.

Q Now, the packer, of course, is in the casing between those two perforations?

A That is right.

Q Now, have any tests been conducted to establish that the packer is tight?

A Yes, sir. We conducted a packer leakage test.

Q I show you now Applicant's Exhibit No. 3, which consists of five sheets marked 1 through 5. Will you state the nature of those five sheets, what they show?

A This was run by a disinterested third party, Coleman Petroleum Engineering Company, of Hobbs. It simply shows that the two producing zones are separated properly.

Q Is any opinion expressed by the concern that ran that test?

A Yes, they stated such.

Q They advised you that you do have a tight packer between those two --

A It is sealed. The two formations -- there is no interference between the two formations.

Q Were any bottom hole surveys run on the well?

A Yes, there was.

Q I show you now two sheets, one marked Applicant's Exhibit No. 4, and the other marked Applicant's Exhibit No. 5. And will you state what those Exhibits are, please?

A These are bottom hole pressure surveys run on the Montoya and the Ellenburger formations in the separate strings of tubing.

Q In this well?

A In this Wimberly No. 5.

Q What were the results of your surveys?

A The Montoya, the subsea datum of minus 3,940 bottom hole pressure was 2,859 pounds. The Ellenburger, the deeper formation, at a minus 5,100 subsea datum bottom hole pressure of 3,245 pounds.

MR. UTZ: Excuse me just a moment. Which one of these did you want marked Exhibit No. 4 and which Exhibit No. 5?

A Exhibit No. 4 is Montoya.

Q Will you give us the gravity of the oil in the lower Ellenburger reservoir?

A The Ellenburger oil will average forty-five degrees API corrected to sixty degress Fahrenheit.

Q And what is the gravity of the oil in the upper Montoya reservoir?

A Thirty-six point six degrees API correct to sixty degrees Fahrenheit.

Q And what is the gas-oil ratio in the Ellenburger?

A One hundred and fifty to one.

Q And the Montoya?

A Seven hundred and eighty-eight to one.

Q Has the well been produced as yet from the Ellenburger reservoir?

A Yes, sir, we have an allowable established on the Ellenburger.

Q Has a well yet been produced from the Montoya reservoir?

A No, sir, it is shut in. We have not produced the Montoya.

Q Do you have, or will there be installed facilities sufficient to permit production from the wells to be segregated so that the Ellenburger will be segregated from the Montoya?

A Yes, sir.

Q What is the nature of those facilities?

A We have separate lease separators and tanks for the Ellenburger and again for the Montoya.

Q Now, is the No. 5 Well completed so that you can run packer leakage tests from time to time, bottom hole pressure tests from time to time, and bottom hole ratio tests from time to time in accordance with the Commission's Rules and Regulations?

A Yes, sir.

Q And the well will be produced in accordance, of course,

with the Rules and Regulations of the Commission?

A Of course.

MR. SAPP: I would like to ask that the Exhibits heretofore used and referred to by the witness be accepted in evidence in this case.

MR. UTZ: Without objection, Exhibits 1 through 5 will be accepted.

MR. SAPP: I have no further questions at this time of the witness.

MR. UTZ: Mr. Sapp, I think you failed to qualify your witness. Would you like to do that?

MR. SAPP: I beg your pardon.

Q (By Mr. Sapp) Mr. Cook, have you previously testified before this Commission as an expert witness?

A Yes, sir, I have.

MR. SAPP: Do you desire any further qualifications, Mr. Examiner?

MR. UTZ: You have testified before, here?

A Yes.

MR. UTZ: His qualifications are acceptable.

MR. PAYNE: Let the record show that his testimony was received as that of an expert.

MR. UTZ: Are there any questions of Mr. Cook?

MR. PAYNE: One question.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Cook, are you familiar with our revision of Rule 112-A dealing with dual completions?

A Is that the -- for the administrative approval?

Q Yes, sir.

A Yes, sir, I am.

Q And your application here would be eligible for administrative approval but for the fact that there has not been a previous dual completion in the two zones involved?

A That is correct.

MR. PAYNE: Thank you.

QUESTIONS BY MR. UTZ:

Q Mr. Cook, is the thirteen and three-eighths casing circulated -- cement circulated to the surface?

A Yes, sir.

Q And nine and five-eighths, is it also circulated?

A The nine and five-eighths cement is circulated to the surface, that is correct.

Q And the seven-inch was circulated to 3,025?

A That is correct.

Q That would give you a 365 foot bond in between the nine and five-eighths and seven-eighths?

A Yes, sir, that is correct.

Q The parallel packer string anchor, does it serve any useful purpose until you are ready to pump?

A No useful purpose until we are ready to put in the short string in tension.

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

QUESTIONS BY MR. FISCHER:

Q Mr. Cook, could you give me your ideas of shut-in characteristics of this Montoya pay, causing it, after shut-in, to go from a higher pressure to a lower pressure, on the chart that was submitted along with the packer leakage test?

A Let me get in my mind, Mr. Fischer. Is that the first chart?

Q It would be on the chart too, but I am looking at the last sheet graph. After you shut in the Montoya, it built up immediately and then it decreased in pressure?

A That's between -- we are establishing --

Q Right there.

A We are establishing the period of equilibrium before we opened up the Ellenburger, is that right?

Q Right. What I was wondering about is that due to the fact that the liquid level dropped, or I am trying to get your ideas on what you might think is the cause of that?

A Well, as I recall talking with the firm that ran it, Mr. Coleman, of Coleman Engineering Company, we -- those were natural completions, and the Montoya being a rather strong reservoir, Mr. Fischer, possibly that could be the case, the fluid level as

indicated by the bottom hole pressure is right, oh, within 682 feet, 500 feet where you start getting your gradient, if you notice there. That and temperature change, possibly. I don't know whether you could attribute much to the temperature change or not. I doubt that, but mostly the fact that it has a high productive index, which, of course, we have no reservoir characteristics as of yet because we haven't produced it. But all indications reveal that, that possibly recession of the fluid level could cause that slight decrease in your pressure.

MR. FISCHER: Thank you.

MR. UTZ: Any other questions of the witness? If not, the witness may be excused.

(Witness excused)

MR. UTZ: Are there any other statements to be made in this case? If there are no further statements, the case will be taken under advisement. The hearing will be recessed until one-thirty.

C E R T I F I C A T E

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 4th day of August, 1958, in the City of Albuquerque. County of Bernalillo, State of New Mexico.

Joseph G. Trujillo
Notary Public

My Commission Expires:

October 5, 1960.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1486, heard by me on July 29, 1958.

Examiner
New Mexico Oil Conservation Commission