

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1649

TRANSCRIPT OF HEARING

APRIL 22, 1959

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BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
April 22, 1959

IN THE MATTER OF: :

Case 1649 Application of Amerada Petroleum Corporation :
 for an oil-oil dual completion. Applicant in :
 the above styled cause seeks an order author- :
 izing the dual completion of its L. W. Ward :
 Well No. 2 located 1983 feet from the South :
 line and 520 feet from the East line of Section :
 11, Township 13 South, Range 38 East, Lea :
 County, New Mexico, in such a manner as to :
 permit the production of oil from an undesig- :
 nated Mississippian pool and the production :
 of oil from the Bronco-Devonian Pool through :
 parallel strings of 2-1/16 inch tubing. :

BEFORE:

Daniel S. Nutter, 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. PAYNE: Case 1649. Application of Amerada Petroleum Corporation for an oil-oil dual completion.

MR. KELLAHIN: Kellahin & Fox, Santa Fe, New Mexico, representing the applicant. We will have one witness, Mr. Houser.

(Witness sworn)

VERNON HOUSER,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Vernon Houser.

Q By whom are you employed, Mr. Houser?

A Amerada Petroleum Corporation.

Q In what position?

A Petroleum engineer.

Q Have you ever testified before this commission before?

A I have not, sir.

Q Would you outline for the benefit of the Examiner your education and experience and qualifications?

A I am a graduate of Texas A & M College and have a B.S. degree in petroleum engineering. I have worked in the capacity of petroleum engineer from April of 1952 to January 1, 1956. From then on I have been employed in the capacity of district engineer in the Gaines District.

Q How long have you been the district engineer in the Gaines District?

A Three years and four months.

Q Is the well, which is the subject of this application, located within your district?

A It is, sir.

Q And are you familiar with it personally?

A Yes, sir.

Q Now, are you familiar with the application in Case 1649?

A Yes, sir.

Q Would you state briefly what is proposed to be done in that case?

A We propose to dually complete the L. W. Ward No. 2 in the Mississippian-Devonian zones.

Q Would you say where that well is located?

A That well is located 1983 feet from the South line and 520 feet from the East line of Section 11, Township 13 South, Range 38 East, Lea County, New Mexico.

Q Now, Mr. Houser, to clarify the record a little bit, is that location within a defined Devonian oil pool?

A It is, sir.

Q What pool is that?

A The Bronco-Devonian Pool.

Q Now, is it located within a defined pool for Mississippian production?

A There is one Mississippian producer at the present time, and that is Amerada Petroleum L. R. Weems No. 7, which is located across the Texas-New Mexico line.

Q And as far as you know the Oil Conservation Commission has not delineated a Mississippian pool in this area?

A They have not.

Q All right. Now, referring to what has been marked as Exhibit No. 1, would you state what that is?

A Exhibit No. 1 is a plat of the area showing the subject well.

Q Would you hand copies to the Examiner, please?

A Exhibit No. 1 is a plat of the subject well, subject

pool, showing the subject well encircled in red. The only Mississippian producer in the pool, which is across the Texas-New Mexico line, is the L. R. Weems No. 7, which is circled in green.

Q Now, the exhibit shows a dashed line encircling part of this acreage. What is the significance of that?

A That is the unit operators. Amerada as the unit operator operates the unit.

Q In other words, the area involved in this application is committed to a unit agreement, is that correct?

A That's correct.

Q And that unit agreement does it include the production from both zones?

A Yes, sir.

Q Now, what is the present status of the L. W. Ward Well No. 2?

A The L. W. Ward No. 2 is currently producing from the Bronco-Devonian. We are producing from 77.8 open hole from 11,650 to 11,871.

Q Where is the top of the Devonian formation located?

A The top of the Devonian formation is located 11,566 minus 6,666 feet.

Q What is the gas-oil ratio?

A The gas-oil ratio from the Bronco-Devonian is 88 cubic feet per barrel.

Q And the gravity of the fluids produced?

A Forty-four degrees.

Q Have you had any recent reservoir information on pressures?

A Yes. We have attained a bottom oil pressure in that well on April 1, 1959. That pressure was 4400 at a datum of 8,000 feet.

Q What was the original reservoir pressure in the Devonian?

A The original pressure was 4789 p.s.i.

Q You say there is a Mississippian producer in the area which is located across the line in Texas. Would you give us what information you have on that well?

A Yes, sir. This Mississippian producer is currently producing the gas-oil ratio of 1528 cubic barrel. This is producing 42 gravity oil.

Q How is that well completed?

A That well is completed from perforations located 10,997 to 11,180.

Q And what were the bottom hole pressures on that well?

A The bottom hole pressure on that well obtained on completion was 4207 p.s.i. at a datum of 7,150 feet sub sea.

Q What is the current production on the well?

A 157 barrels per day.

Q Were you producing any water from the Mississippian?

A No, sir. We are not.

Q Do you have a log of the subject well, Mr. Houser?

A Yes, sir. I do sir.

Q Would you present that as Exhibit No. 2, please?

(Thereupon the document above referred to was marked Exhibit No. 2 for identification.)

Q Now, referring to what has been marked as Exhibit No. 2, have you marked thereon the proposed perforations?

A Yes. We have the proposed perforations marked on the log.

Q What interval would that be?

A For the Mississippian 10,939 to 10,964.

Q Will your production from the Devonian remain as it is at the present time?

A Yes, sir.

Q Have you perforated the entire Devonian section in this well?

A No, sir. We have not. The top portion is still to be perforated.

Q The top portion?

A Yes, sir.

Q Now, have you prepared a diagramatic sketch of the proposed completion?

A Yes, sir. We have, sir.

Q Would you present that as Exhibit No. 3, please?

Now, referring to what has been marked as Exhibit No. 3, would you first describe from that exhibit the present completion of the well?

A Yes, sir. We have 13-3/8 inch casing set at 319 feet.

That was foot hole cemented. And we have 8-5/8 inch casing set at 4533. The top of the cement behind is located at 2276. 5-1/2 inch casing is set at 11,650 and cemented; the top is located at 7185.

Q Now, how do you propose to make this dual completion?

A We propose to set a permanent type packer, Baker Model "D" Packer, between the two zones and run two parallel strings of 2-1/16 inch Hydril tubing.

Q Will the tubing be set at a depth to meet the requirements of this Commission?

A It will, sir.

Q Now, you will then produce from the open hole at the bottom of the packer?

A Yes, sir.

Q And you say this is Baker Model "D" Packer?

A That's correct.

Q What pressure differential will you anticipate under this well under producing conditions?

A From the information obtained on our L. R. Weems No. 7, we would have a differential as great as 2,000 pounds.

Q In your opinion, is the type of packer proposed to be used adequate to protect against communication between the two producing horizons?

A Yes, it is. From the information that we have calculated and received from Baker, the packer can handle a 25 pound differential with 8,000 pounds weight set on the packer.

Q In your opinion, is the type completion you propose

adequate to protect the producing horizons?

A It is, sir.

Q Can you perform the packer leakage tests prescribed by this Commission?

A Yes, we can.

Q Do you have any other means of determining whether leakage is occurring during producing occasions?

A Yes, sir. We can use a two-pen recorder recording pressures shut in flowing from the two zones. We can also use a pressure gauge in recording pressures with the zones flowing and shut in.

Q Do you propose to take those precautions in connection with this well?

A Yes, we do.

Q In your opinion, is the approval of this application in the interests of conservation and the prevention of waste?

A Yes, sir.

Q Would it be practical, in your opinion, to drill for production from the Mississippian?

A No, sir. Because of the depth and the rapid decline in rate that we are receiving in our Weems No. 7, I don't believe it would be practical.

Q Were Exhibits 1 and 3 prepared by you or under your direction and supervision?

A They were.

Q And Exhibit No. 2 is a log prepared by what company?

A Core Laboratories.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibits 1, 2, and 3.

MR. NUTTER: Without objection Amerada Exhibits 1 through 3 will be entered.

MR. KELLAHIN: That's all of the questions I have, Mr. Examiner.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Houser, when was this Mississippian well in Texas completed?

A It was completed in November.

Q What was its potential when it was completed?

A 299 barrels.

Q Now, this 157 barrels that you stated it is presently producing, is that its capacity?

A That's the capacity discoverable. It would be 255 at that depth.

Q We would refer to this Mississippian as a marginal well at this time?

A That's correct.

Q Have you taken any drill tests in your Ward No. 2 well?

A Yes, sir.

Q And it indicated that it would be productive?

A Yes. It indicated that it would be productive.

Q Mr. Houser, what did you say those bottom hole pressures

on the two zones were?

A The Ward No. 2 was 4474 in the Devonian, and the latest pressure we have on the Mississippian which is from Weems No. 7 is 4207. Those are both static pressures after 48 hours.

MR. NUTTER: Any further questions of the witness.
He may be excused.

(Witness excused)

MR. NUTTER: Does anyone have anything further they wish to offer in Case 1649. If not we will take the case under advisement and take Case 1650.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

SS

I, Ned A.Greenig, Court Reporter, 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 that the same is a true and correct record to the best of my knowledge, skill, and ability.

Ned A. Greenig
COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1649 heard by me on 4-22, 1959.
Laurel A. Miller Examiner
New Mexico Oil Conservation Commission