EXAMINER HEARING
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 9, 1958

IN THE MATTER OF: Case No. 1410

TRANSCRIPT OF PROCEEDINGS

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EXAMINER HEARING
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IN THE MATTER OF:

Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.) Case 1410

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: We will proceed to Case 1410.

MR. PAYNE: Case 1410: Application of Gulf Oil Corporation for an oil-oil dual completion.

MR. KASTLER: Bill Kastler, representing Gulf Oil Corporation as an attorney. The first witness is Mr. Savage, who has previously been sworn.

GERALD SAVAGE

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

DIRECT EXAMINATION

By MR. KASTLER:

Q Will you please state your name and position?

A Gerald Savage, production geologist with Gulf Oil Corporation in Roswell, New Mexico.

Q You previously testified as an expert witness before this Commission. Are you familiar with the geology of the area surrounding Gulf's well known as No. 1 Lea State "R"?

A Yes, sir, reasonably so.

Q Have you prepared or caused to be prepared a location plat showing this general area, the surrounding operators, and the wells completed in the respective pay zones pertinent to this case?

A Yes, sir, and this lease plat I have labeled Exhibit 1.

Q Will you please describe what is shown on Exhibit No. 1?

A Shown specifically is Gulf's Lea State "R" lease consisting of Lot 1, Section 2, Township 16 South, Range 32 East, and Lot 4 of Section 1, same township and range, consisting of approximately 100 acres. Shown also is the Lea State "R" Well No. 1 located 990 feet from the north line and 660 feet from the east line of Lot 1, Section 2, in the same township and range.

Q Will you state where this proposed dually completed well lies in connection with the Lea State "CL" well which was the subject of Case No. 1409?

A The No. 1 Lea State "R" is located approximately 3/8ths of a mile northeast of the No. 1 Lea State "CL".

Q The Lea State No. 1 "R", being the subject well in this case, is it proposed to dually complete this well in the same formations as in Case No. 1409?

A The No. 1 Lea State "R" was drilled to a depth of 13,391 feet, where 7-inch casing was set. The well was then drilled to a total depth of 13,420 feet, where Devonian production was established. The Wolfcamp zone has been perforated in the intervals 9,828 feet to 9,840 feet, and 9,852 feet to 9,862 feet. It is proposed to dually complete the well in the Wolfcamp and Devonian zones.

Q Is there any other history of the well which you would care to give at this time?

A Nothing, unless it might be that the Wolfcamp zone was drill stem tested while the well was being drilled, and commercial production was established at that time.

Q Is the well presently perforated in the Wolfcamp zone, or is that a proposal?

A The Wolfcamp zone has been perforated in the intervals given.

Q Have you prepared or caused to be prepared a contour map showing the location of the subject well on the structures?

A I have copies of the contour map on top of the Wolfcamp main pay.

Q Is this labeled Exhibit No. 2, Case 1410?

A Yes, sir, it is.

Q Will you please state what is shown on Exhibit No. 2?

A Specifically shown are contours on top of the Wolfcamp main pay with contour interval of 50 feet, and the pertinent Gulf lease as previously described, and the Lea State "R" Well No. 1 located in Lot 1 of Section 2, and it shows that this well lies on the north flank of the Anderson Ranch field structure.

Q Have you prepared or caused to be prepared another contour map showing the subject well in the Devonian structure?

A Yes, sir, I have.

Q Is this Exhibit No. 3?

A Yes, sir, it is.

Q Will you state where this well is situated as shown on Exhibit No. 3?

A It is shown to be the same as on the contour map on top of the Wolfcamp, as previously stated; everything else is the same and it shows that the No. 1 Lea State "R" lies on the north flank of the Anderson Ranch field structure, as shown by contours on the top of the Devonian formation.

Q The other wells shown on Exhibits No. 2 and 3 are those which are also in this vicinity, completed in the Wolfcamp and Devonian formations, is that correct?

A Yes, sir, the other wells are shown on Exhibits No. 2 and 3.

Q Have you prepared or caused to be prepared a log showing the intervals perforated in this well?

A Yes, sir. These logs have been labeled Exhibit No. 4.

Q Specifically what information is shown in the log pertinent to this case?

A Specifically shown at a depth of 8,933 feet, the top of the Wolfcamp limestone, and in the Wolfcamp main pay zone, the perforated intervals of 9,828 feet to 9,840 feet, and 9,852 to 9,862 feet. Also shown, just for information, the top of the Mississippian limestone at 12,616 feet, and then the top of the Devonian formation at a depth of 13,387 feet, which is producing from the open hole interval below the casing from 13,391 feet to 13,420 feet. On a 13-hour test on February 28, 1958, through 2-3/8 inch tubing and 34/64 inch choke, the Devonian flowed 247 barrels of oil, which extended to 24 hours is a potential of 456 barrels of oil, with a gas volume of 299,000 cubic feet of gas per day, gives us a GOR of 656, gravity of that oil was 52 degrees.

Q Has a copy of your application been sent to all offset operators in order to give them notice of this proposed dual completion?

A Yes, it has.

Q To your knowledge has any objection been received?

A No, sir, no objection.

MR. KASTLER: These are the only questions I have of this witness at this time. I would like to move to admit Exhibits 1, 2, 3, and 4, in evidence in this case.

MR. UTZ: Is there objection to the entrance of Exhibits 1, 2, 3, and 4? If not, they will be accepted. Are there any questions of the witness? Mr. Nutter.

CROSS EXAMINATION

By MR. NUTTER:

Q Would it be your expectation, Mr. Savage, that the Wolfcamp zone in this particular well would be as prolific as the Wolfcamp in your State "CL" No. 1?

A Yes, sir, I might compare the drill stem tests on those, on the Wolfcamp zone of those two wells. In the Wolfcamp in the No. 1 Lea State "R", a test for 45 hours flowed 373 barrels of oil and 41 barrels of water through a 5/8 inch choke, and the information on drill stem test in the Wolfcamp zone in the No. 1 Lea State "CL" shows that it flowed 35 barrels of oil in the first hour and 45 barrels of oil in the second hour with no water.

Would you like me to go over that again?

Q No, sir, it's in the record.

MR. NUTTER: I believe that's all.

MR. UTZ: Any further questions? If no further questions, the witness will be excused.

(Witness excused.)

JOHN HOOVER

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

DIRECT EXAMINATION

By MR. KASTLER:

Q Mr. Hoover, you have previously been sworn and are under oath. Will you please state your name and by whom you are employed and what your position is?

A John Hoover, petroleum engineer with Gulf Oil Corporation, Roswell, New Mexico.

Q Have you previously appeared and testified as a qualified expert before this Commission?

A Yes, I have.

Q Are you familiar with the engineering aspects of Gulf's application to dually complete its Lea State "R" Well No. 1?

A Yes.

Q Have you prepared or caused to be prepared a schematic diagram to explain the features of this proposed installation?

A Yes, and we have marked it as Exhibit No. 5.

Q Will you please explain Exhibit No. 5 to the Examiner?

A This is a schematic drawing of the mechanical installation of the proposed oil-oil dual completion on our Lea State "R" A Well No. 1. We have 13-3/8 inch casing set at 1611 feet with the cement circulated to the surface, 9-5/8 inch set at 4174 feet, and cement circulated to the surface. We have 7-inch casing set at 13,391 feet and by temperature survey indicated the top of the cement at 7600 feet. We propose to run two parallel strings of 2-3/8 inch tubing with the long string set through a Baker Model "D" Retainer

Production Packer, which is set at 13,318 feet, and we'll have a Baker parallel string anchor set, run in this long string at about 9,982 feet, or is run at 9,982 feet. The short string of 2-3/8 inch is set into this parallel string anchor. Again the pink shows the Devonian flow, the green shows the Wolfcamp. This equipment being standard equipment of proved design in actual operation will prevent the commingling of fluids within the well bore. We can determine if there is commingling by a difference of gravity, being 42 in the Wolfcamp, 52 in the Devonian. The tubing is such that both zones can be pumped independently of the other. The differential pressure across the packer will be less than 200 pounds from our calculations of both static and flowing conditions.

We also have another way of checking if there is commingling, due to the Wolfcamp oil being sour, having about one percent hydrogen sulphide, the Devonian oil being sweet. We have a difference in the pressure on the tubing in which a shut-in test could be made by the tubing pressure on the Wolfcamp, being approximately 1300 pounds, on the Devonian 300 pounds, would readily indicate be equalization of pressure if there was leakage.

Q Mr. Hoover, is the proposed dual installation and completion in this case identical or nearly so with that proposed in Case 1409 in Gulf's Lea State "CL" A No. 1?

A Almost identical, with the exception of footage.

Q The size of tubing is identical?

A Yes.

Q The Baker packer is identical?

A Yes, it is.

Q And the Baker parallel string anchor with latching is identical?

A It is identical.

Q Other characteristics in the Devonian and Wolfcamp being the same or approximately the same, would you expect to have the same success in making this dual completion?

A Yes, we would.

Q And would you expect to have the same success in separation of pays in the well bore?

A Yes.

Q If this application were granted, would Gulf comply with the operating tests, reports and procedures required by the Commission?

A Yes, we would.

Q Is this application in the interest of prevention of economic waste?

A Yes.

Q Will it adversely affect any correlative rights?

A No.

MR. KASTLER: Those are the only questions I have, Mr. Utz. I would like to requestthat Exhibit No. 5 be admitted into evidence at this point.

MR. UTZ: Is there objection to the entrance of Exhibit

No. 5? If not, it will be received. Any questions of the witness? The witness may be excused.

(Witness excused.)

MR. UTZ: Do you have anything further in this case?

MR. KASTLER: Nothing further.

MR. UTZ: Any other statements to be made? If not, we will take the case under advisement.

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C E R T I F I C A T E

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 before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript 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 25th day of April, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My commission expires:
June 19, 1959.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1410, heard by me on April 9, 1958.

, Examiner
New Mexico Oil Conservation Commission

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