

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 11, 1959

EXAMINER HEARING

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IN THE MATTER OF: )

Application of Gulf Oil Corporation )  
for an oil-oil dual completion. )

CASE 1827

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TRANSCRIPT OF 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 authoriz- )  
ing the dual completion of its Learcy )  
McBuffington Well No. 5, located 1650 feet )  
from the South line and 1980 feet from the )  
East line of Section 13, Township 25 South, )  
Range 37 East, Lea County, New Mexico, in )  
such a manner as to permit the production of )  
oil from an undesignated Paddock pool and )  
the production of oil from the Justis- )  
Blinebry Pool through parallel strings of )  
tubing. )

) Case 1827

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BEFORE:

Mr. Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will take up next Case 1827.

MR. PAYNE: Case 1827: Application of Gulf Oil Corporation for an oil-oil dual completion.

MR. KASTLER: If the Examiner please, my name is Bill Kastler from Roswell, New Mexico, appearing on behalf of Gulf Cil Corporation. Our witness this morning is Mr. John H. Hoover.

(Witness sworn.)

JOHN H. HOOVER

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

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DIRECT EXAMINATION

BY MR. KASTLER:

Q Will you please state your name and by whom you are employed?

A John Hoover, employed by Gulf Oil Corporation, Roswell, New Mexico.

Q What is your position at Roswell?

A Petroleum engineer.

Q Are you an old hand at testifying before the New Mexico Oil Conservation Commission?

A Yes, sir, I have previously testified.

Q Are you familiar with Gulf's application in Case 1827?

A Yes, I am.

MR. KASTLER: I submit Mr. Hoover's qualifications are acceptable.

MR. NUTTER: Mr. Hoover is qualified as an old hand.

Q (By Mr. Kastler) Will you please explain briefly what Gulf seeks in its application in Case 1827?

A Yes, sir. Gulf is asking for permission to oil-oil dually complete our Learcy McBuffington Well No. 5 in an undesignated pool and in the Justis-Blinebry Pool. The New Mexico Oil Conservation Commission, by Order R-1434 in Case 1701 dated July 2nd, 1959, authorized Gulf to oil-oil dual complete this same well, McBuffington No. 5, in an undesignated Paddock pool and in the Justis-Ellenberger Pool. We now propose to abandon the



Ellenberger and recomplete in the Justis-Blinbry. The Paddock perforations will be identical to the original case.

Q Do you propose to produce in this dual completed well, if authorized, through dual strings of tubing?

A Yes, sir.

Q What's the reason for abandoning the Ellenberger in this well?

A The Ellenberger has gone to water.

Q Have you prepared for an exhibit here a lease plat which will show Gulf Learcy McBuffington lease and the location of the well thereon?

A Yes, sir, we have marked it Exhibit No. 1. It shows the Learcy McBuffington lease as outlined in green and described as the South Half of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico. Also shown on this lease plat is the Learcy McBuffington Well No. 5, it's circled and colored in red, being located 1650 feet from the South line and 1980 feet from the East line of this Section 13.

Q Does this proposed lease plat show offset operators as well?

A Yes, it does.

Q Does it show the location of various wells on this lease and offsetting this lease, and the pay zones to which they are completed?

A Yes, it does.



Q Insofar as is material to this cause?

A Yes.

Q Mr. Hoover, have you prepared an electrolog or supervised and directed the preparation of such a log for use here as Exhibit No. 2?

A Yes, it's marked Exhibit No. 2, and this log shows the top of the Glorietta formation at 4654, the base of the Justis Gas Pool at 4892, the top of the Blinebry Pool at 5120 feet, the top of the Tubb Pool at 5680 feet. Also shown are the existing Paddock at 4940 and 4946 feet, as well as a company test that was made on August 6, 1959, in the Paddock pay.

Q What were the results of that test?

A The well flowed 96 barrels of oil and 24 barrels of water through 2-3/8 tubing, with a 15/64ths inch choke, a GOR of 3210

Q Does Exhibit No. 2 also show the areas between which selective perforations will be made in the Blinebry zone?

A Yes, it does. This zone which has not been perforated as yet shows that the proposed perforations will be in the interval 5286 feet to 5538 feet. It will be perforated selectively.

MR. NUTTER: That was 5538?

A Yes, sir. 5286 to 5538.

Q (By Mr. Kastler) Have you prepared a schematic diagram, Mr. Hoover, to illustrate the proposed type of installation to make this a dually completed well?

A Yes, sir, it has been labelled Exhibit 3. This exhibit



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shows the well to be, to have 13 3/8 inch O.D. casing set at 423 feet. The cement was circulated to the surface. 9 5/8 inch O.D. casing set at 3450 feet, cement also circulated to the surface. The well was completed to a total depth of 8300 feet; 7 inch casing set at 8,260 feet, cemented with 1,000 sacks; the top of the cement at 2575 by temperature survey.

The well had a Baker Model "D" Packer set at 8,150 feet, which was set for the dual completion in the Paddock and Ellenberger, and this packer has now, has a Trip Bob set in it and two sacks of cement dumped on top. The calculated top of the cement is at 8,142.

A cast iron bridge plug has been set at approximately 5570 feet. Two sacks of cement dumped on top. The calculated top of the cement at 5562 feet, and this would be the new plugback depth of the well.

This installation shows the proposed method by which we would dually complete in the undesignated Paddock and the Blinebry. We propose to set a Baker Model "DA" Packer at 5,050 feet. We will install two strings of tubing, the short string will be 2 3/8 inch O.D., the long string, 2 7/8 inch Hydril. There will be 2 3/8 inch O.D. tail pipe below the packer set at 5,250 feet. The Paddock perforations, as shown here, are 4940 feet, 4946 feet. These are the same perforations as in the original Paddock-Ellenberger dual. The proposed Blinebry interval is shown here, 5286 feet to 5538 feet with selective perforations within that



interval. The color scheme, we show green to be the Paddock producing string, and in red the Blinebry. I believe that covers the proposed mechanical installation.

Q Mr. Hoover, isn't a dual completion such as is illustrated in Exhibit No. 3 a sort of a usual type dual completion that Gulf has previously made with the approval of the New Mexico Oil Conservation Commission?

A Yes, it is.

Q Inasmuch as it uses Model Baker "D" Packer and parallel strings of tubing?

A Yes.

Q Then why is it necessary to have this hearing?

A This is a first dual in which this undesignated Paddock and the Blinebry are open within the same well bore.

Q What tests have been made of the pressures in the respective formations?

A On our McBuffington No. 5 a test was made on June 10th of 1959 in the Paddock for bottomhole pressure. The bottomhole pressure datum of a minus 1860 feet was 2,099 pounds. The shut-in tubing pressure at that time was 1120 pounds. Since the Blinebry has not been opened in this well, we have used a test that was made on our McBuffington No. 6, which is a Blinebry producer, a south offset to this Well No. 5. This test was made on March the 10th, 1959; the bottomhole pressure was 2292 pounds at a datum of a minus 2300 feet. The shut-in tubing pressure was 1480 pounds.



Q Mr. Hoover, is the Blinebry production fairly well established in this general vicinity?

A Yes, it is.

Q Has there been any fluid analysis made?

A We have a fluid analysis on the Paddock formation, which was taken from the north offset well, being Western Petroleum Company well, it's a north offset to our No. 5, indicated it had a gravity of 39 degrees, a sulphur content of .67. On our McBuffington No. 6, the fluid analysis indicated that the gravity would be 38.8, and the sulphur .61.

MR. NUTTER: For what formation?

A For the Blinebry. We have extrapolated these pressures to the proposed setting depth of the Baker Model "D" Packer at 5,050 feet, using the pressure gradients. Our calculated pressure on top of the packer would be approximately 2136 pounds, underneath the packer approximately 2180 pounds, giving us a differential of somewhat less than a hundred pounds across the packer.

MR. NUTTER: That packer will stand that differential?

A Yes, sir, I believe we will never have any trouble with that.

Q (By Mr. Kastler) Can adequate tests be made to determine if there is communication between the two zones at the time that the Baker Model "D" Packer is installed?

A Yes, sir. When the packer is installed, there are two tests run. The long string is latched into the packer, into the



tailpipe assembly, and it is pressured below the packer, down through the tubing below the packer to determine if there is any drop in pressure. Then it is pressured down the casing tubing annulus, which would be on top of the packer, to determine if there is any drop in pressure.

Q In making initial packer leakage tests of that sort, would you use for test purposes pressures far in excess of what you would expect to encounter here?

A Yes, sir. In making the packer test?

Q Yes, sir.

A Yes, sir.

Q Have you made any study to determine the approximate cost of drilling and completing a well to the Blinebry zone?

A Yes, sir. A well to the Blinebry would cost in the neighborhood of \$50,000.00, and the dual completion of this well, since we have our tubing or part of our dual completion equipment already installed, which was used on the other dual, we probably can dual in the neighborhood of \$10,000.00. Therefore, we would realize a saving in the neighborhood of \$40,000.00.

Q In your opinion would the granting of this application operate in such a manner as to prevent waste?

A Yes, it would, it would prevent waste.

Q Have all offset operators been notified of this application?

A Yes, they have.



Q Would correlative rights be adversely affected, if granted?

A No, they would not be adversely affected.

Q Is the royalty ownership common in both zones of the proposed completion?

A Yes.

Q If the application were granted, would Gulf comply with all conditions of approval and perform all required tests?

A Yes, sir.

Q Were Exhibits 1, 2, and 3 prepared by you or under your direction and supervision?

A Yes, sir, they were.

MR. KASTLER: That concludes the questions on direct testimony. I would like at this time to move that Exhibits 1, 2, and 3 be admitted in evidence in this case.

MR. NUTTER: Gulf's Exhibits 1, 2, and 3 will be entered. Does anyone have any questions of Mr. Hoover?

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Hoover, your Exhibit No. 3 shows that you propose to install a Baker Model "DA" Packer. Is that the usual Baker Model "D" Production Packer?

A Yes, sir.



Q Do either of these zones make water?

A The Paddock.

Q The Paddock only?

A Of course, we haven't opened the Blinebry in this one, but the Paddock on the initial test did make a little water.

BY MR. NUTTER:

Q Do you have gas-oil ratios on these two zones, Mr. Hoover?

A On our McBuffington No. 6 in the Blinebry, the gas-oil ratio was 916. On this Paddock, I believe on our log the test shows that the gas-oil ratio was 3210.

Q What was the actual status of the Ellenberger prior to the time you plugged it off?

A You would like the last test?

Q Yes, sir. What it was producing prior to the time it was shut in.

A Yes, sir. I don't have the exact test here, but it was in the neighborhood of 11 barrels of oil and 440 to 50 barrels of water.

Q Is this No. 5 well in the north end of the pool as far as the Ellenberger is concerned?

A I believe it is, yes, sir.

Q I note on your Exhibit 1 that for the No. 5 you have the symbol "H.E." What does that stand for?

A That's our designation for Holt or Paddock.



Q I see.

A That's the Paddock-Ellenberger. That's dualled now, or was in the Paddock-Ellenberger.

Q In other words, you are calling the Paddock the Holt?

A Yes, it is Paddock.

MR. NUTTER: Any further questions of Mr. Hoover? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kastler?

MR. KASTLER: No, I haven't.

MR. NUTTER: Does anyone have anything further for Case 1827? We will take that case under advisement.

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