BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 24, 1959

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil Corporation for a gas-oil dual completion and for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Travis Well No. 1, located 1980 feet from the South line and 660 feet from the East line of Section 21, Township 23 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from an undesignated Abo gas pool and the production of oil from the Teague Pool. Applicant further seeks permission to commingle the oil produced from the Teague Pool from said well with the distillate produced from an undesignated Abo gas pool from said well.

Case 1813

BEFORE:
Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 1813.

MR. PAYNE: "Application of Gulf Oil Corporation for a gas-oil dual completion and for permission to commingle the production from two separate pools."

MR. KASTLER: Bill Kastler, District lawyer for Gulf Oil Corporation, from Roswell, New Mexico. Appearing on behalf of Gulf are two witnesses, Mr. Gerald J. Savage and Mr. Vance Hendricks, who has previously testified.

(Witnesses sworn.)

GERALD J. SAVAGE

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

DIRECT EXAMINATION

BY MR. KASTLER:

Q Will you please take the stand and state your name and your position with Gulf Oil Corporation?

A Gerald J. Savage. I'm a Production Geologist for the Gulf Oil Corporation at Roswell, New Mexico.

Q Have you previously appeared and qualified as a Production Geologist and testified as such before the New Mexico Oil Conservation Commission?

A Yes, sir, I have.

Q Are you familiar with Gulf's application in Case No. 1813?

A Yes, sir.

Q Will you explain what the application involves, briefly?

A In Gulf's application in Case No. 1813 they request permission to gas-oil dually complete their G. G. Travis Well No. 1 which is located 1980 feet from the South line and 660 feet from the East line, Section 21, Township 23 South, Range 37 East.

This well is to be completed in an undesignated Abo gas pool in the Teague-McKee Pool, and to also commingle the

distillate production from the undesignated Abo Gas Pool with the McKee oil from the Teague-McKee.

Q Have you prepared or had prepared a lease plat? First, let me ask you, will you please outline the well's history briefly?

A The subject well was originally completed in November of 1948 in the Teague-McKee at a total depth of 9,555 feet and at a plugged back depth of 9,662. In March of 1959 this well was plugged back to 9486 feet and the two lowermost sets of perforations from 9515 to 9585 feet were plugged off.

This well is currently open through two sets of perforations between 9412 feet and 9483 feet, and it's currently closed in.

Q Was the well in Teague-McKee fractured at that time, March, 1959?

A No, sir, I don't believe that it was.

Q Do you have a lease plat showing the location of Gulf's lease, the well on the Gulf's lease, and the names of the offset operators, other completions?

A Yes, sir, I have.

MR. KASTLER: We have prepared this for introduction in evidence as Exhibit No. 1.

(Marked Gulf's Exhibit No. 1, for identification.)

Q Will you refer to Exhibit No. 1 and state what is shown and what is marked and outlined in there?

A Specifically shown on Gulf's Exhibit No. 1 in Case No. 1813 is Gulf's G. G. Travis Lease outlined in yellow, being the North Half of the Southeast Quarter of Section 21, Township 23 South, 37 East.

Q Is the total acreage of this lease 80 acres?

A That is correct.

Q Proceed.

A Also shown is Gulf's G. G. Travis Well No. 1 marked in red. All offset operators and producing wells are also shown.

Q Have you prepared a structure plat contoured on top of the Abo formation for introduction here as Exhibit No. 2?

A Yes, sir, I have.

(Marked Gulf's Exhibit No. 2, for identification.)

Q Referring to Exhibit No. 2, will you please explain what can be seen there?

A On Gulf's Exhibit No. 2 in this case is shown structure contours on top of the Abo formation, using subsea datums and contour interval of 25 feet. Also specifically shown are Gulf's G. G. Travis Lease outlined in yellow and Gulf's G. G. Travis Well No. 1 marked in red.

Q Is this the only well that is presently completed in this undesignated Abo Gas Pool?

A Yes, it is.

Q Have you also had prepared for introduction as Exhibit No. 3 a well log?

A Yes, sir, copies of a well log which I have caused to be labeled Exhibit No. 3 in this case.

(Marked Gulf's Exhibit No. 3, for identification.)

Q Will you testify what is shown on Exhibit No. 3 pertinent to this case?

A Specifically shown on this log at a depth of 6764 feet is the top of the Abo formation, and five sets of perforations in the interval 6764 feet to 7200.feet. Also specifically at a depth of 9412 feet, the top of the McKee formation two sets of perforations in the McKee between 9412 feet and 9483 feet. Also shown, to more clearly show the relative position of these formations, are various other formation tops in between and above.

Q Is there any data pertinent to a well test of the Abo gas undesignated formation shown on there as well?

A Yes, sir. Shown at about a depth of 7100 feet for information, a fifteen-minute OCC test on September 23rd of this year which showed the Abo flowed 2602 million cubic feet of gas through 2 2/8 tubing with 1252 back pressure.

Q Were Exhibits Nos. 1, 2 and 3 either prepared by you or prepared at your request and under your direction and at your supervision?

A Yes, sir, they were.

Q Do you have any other conclusions or additions you wish to state?

A Yes, I neglected to mention in the well history that it was in September of this year that the seven inch casing was perforated at various intervals between 6764 feet to 7200 feet, opposite the Abo formation, and that the distillate production with the Abo gas amounts to approximately 13 barrels per day.

Q That's 13 barrels of distillate with the Abo gas?

A Yes, sir.

MR. KASTLER: Mr. Utz, this concludes the direct questions I have of this witness at this time.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Savage, is the Teague Pool in question here, the pool that is designated as the Teague-Simpson Pool by the Oil Commission?

A Yes, sir, I believe that is correct. That the McKee is part, the McKee, as I referred to it, is part of the Simpson formation.

Q I see.

MR. UTZ: Will your other witness testify as to the dual completion?

MR. KASTLER: Yes, he will. He has a schematic

drawing of a proposed completion.

Q Mr. Savage, in regard to your absolute open flow test, was this 2602 MCF?

A Yes, sir, however that was with a 1252 pound back pressure rather than an open flow test.

Q To clarify the thing, where was the 1252 back pressure?

A According to my information the back pressure was on the 2 3/8" tubing.

Q Actually producing to the atmosphere, was it not?

A Yes, sir, during the test.

Q And your 1252 was actually working pressure, in other words?

A Yes, sir.

Q Do you have a bottomhole pressure on this zone?

A No, sir, I do not.

MR. KASTLER: Mr. Hendricks has that information.

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

MR. PAYNE: Yes, sir.

BY MR. PAYNE:

Q Do you propose just to commingle the Teague production and the Abo production from this one well?

A At the present time that is all we are requesting.

Q Do you anticipate drilling any further Abo or Teague wells on this lease?

A At the present time there are no plans to drill any additional Teague wells. To my knowledge we will not recomplete any more Abo wells in the immediate vicinity.

Q So your application is limited to the request to commingle the production from the two pools from this well?

A Yes, sir.

MR. PAYNE: Thank you.

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

(Witness excused.)

MR. KASTLER: Mr. Hendricks, please take the stand.

VANCE HENDRICKS

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

DIRECT EXAMINATION

BY MR. KASTLER:

Q Will you please state your name, position, employer, and location of work?

A Vance Hendricks, Petroleum Engineer for the Gulf Oil Corporation, Roswell, New Mexico.

Q Are you the same Vance Hendricks who was previously sworn this morning to give testimony for Gulf Oil Corporation in Case No. 1812?

A Yes, sir, I am.

Q Are you familiar with Gulf's G. G. Travis Well No. 1 and with the application that Gulf has submitted requesting Commission approval of its dual completion and are you also familiar with the request Gulf has submitted seeking permission to commingle oil produced from the Teague Pool with condensate produced from an undesignated Abo Pool?

A Yes, sir, I am.

MR. KASTLER: Are the witness' qualifications acceptable?

MR. UTZ: Yes, they are.

Q Have you prepared, or have you supervised the preparation of a sketch showing the proposed mechanical installation in G. G. Travis Well No. 1?

A Yes, sir, I have.

MR. KASTLER: This has been labeled Exhibit No. 4 for introduction in this case.

(Marked Gulf's Exhibit No. 4, for identification.)

Q Will you please testify as to what Exhibit No. 4 shows?

A Exhibit No. 4 is a diagrammatic sketch of the proposed mechanical installation of the oil and gas dual completion of Gulf Oil Corporation's G. G. Travis Well No. 1. This schematic shows that the well was originally completed at a total depth of 6,000, pardon me, 9,662 feet and has been plugged back to 9,486 feet. The 13-3/8 inch O.D. surface string was cemented at 316

feet and cemented with 315 sacks of cement, circulated. The 9-5/8 inch O.D. intermediate string was cemented at 2,900 feet with 1300 sacks, which resulted in a cement top at 1,115 feet. The 7-inch O.D. producing string was cemented at 9,661 feet with 700 sacks of cement. The top of the cement behind the oil string is at 5,400 feet. The various Teague Pool perforations in the McKee interval are from 9,412 to 9,483 feet, while gas perforations in the undesignated Abo Pool are in various intervals from 6,764 feet to 7,200 feet. Continuing, the schematic shows that a Baker Model D permanent type retainer production packer is set at 9,305 feet. The 2-3/8 inch Teague oil producing string, shown in red on the exhibit, is latched into a Baker receptacle seal assembly located directly above the Model D packer. As can be seen, a tail pipe assembly extends below the packer. This is made up of 2 four foot 2-3/8 inch nipples, to which a seating nipple, standing valve and pin collar have been added.

Directly above the Baker receptacle seal assembly and described on the exhibit as one retrievable flow valve is a Garrett Oil Tool Company Type SSC sliding sleeve mandrel in which a GOT Type SO retrievable flow valve is housed. The Type SSC mandrel, which has the appearance of nothing more than a 2-1/2 foot tubing nipple having two sets of four closely spaced vertical ports, is run into the well on the long string. The Type SO wire line retrievable flow valve and Type SSC mandrel are so

designed that the ports in the mandrel can be opened when the flow valve is lowered into place. Similarly, the mandrel ports can be closed upon the withdrawal of the flow valve. The GOT Type SO retrievable flow valve is designed to open at 700 pounds per square inch.

Immediately below the Abo gas perforations at 7,253 feet a Baker Model J packer is set. This Baker Model J retrievable packer has been especially designed for installations such as this. The packer is run into the well on the long string, and the long string seats into the Baker Model D packer through the use of an anchor. This Baker Model J packer is set by applying a small amount of set down weight on the long string. This short string seats into the Baker Model J packer through the use of a Baker snap latch seal nipple which effectively seals the packer from above and below. Just above the Baker Model J packer is a Garrett Oil Tool Co. Type BC circulating valve which is located at 7,220 feet. This valve contains an internal sliding sleave which may be opened and closed with a wire line shifting tool. This particular valve has been set so that a jarring motion downward by a shifting tool will close the valve.

Now, the colors have been added to the exhibit to aid in the explanation of the proposed gas lift installation. Abo gas entering the perforations from 6,764 to 7,200 feet into the tubing casing annulus is shown in yellow and can be followed in the

tubing casing annulus to the surface where it passes through a high pressure separator, a meter run, and is sold to the Gulf Teague Gas Lift System. It is proposed that a portion of this produced Abo gas be used in the gas lift operation of Teague oil in this subject well. The injection gas from the Abo is shown in green, is first metered and then flows down the short string into the casing below the Baker Model J retrievable packer and activates the flow valve in the long string at 700 pounds. This causes the Teague oil, shown in red, to be lifted to the surface.

A bottom hole pressure determination was made on November 11, 1959, indicating a bottom hole pressure of 2600 pounds per square inch in the Abo formation at 6,982 feet after shut in time of 26-1/2 hours.

MR. UTZ: What was that again?

A That test again was 2600 pounds opposite the Abo after 26 hour shut in at 6,982 feet. No recent Teague bottom hole pressure has been taken in the subject well, so it is estimated that the Teague pressure, bottom hole pressure that is, is approximately 1,000 pounds per square inch, based on pressure tests taken this year in nearby Teague Pool wells. Therefore, from these pressures a pressure differential across the Baker Model J packer could be as high as approximately 1,900 pounds per square inch, a force which in effect aids in the seating of the Baker Model J packer even more securely. Similarly, a pressure differential

of only approximately 300 pounds per square inch exists.

Q Do I understand that the Abo gas is proposed to be produced through the tubing casing annulus and that the McKee oil, or the Teague oil, is to be produced through the 2-3/8 inch tubing that's designated in red on Exhibit No. 4?

A That is correct.

Q Now, the tubing that is shown as exhibit, on Exhibit No. 4 as green going through the Baker Model J retrievable packer is tubing for the purpose of injecting gas for the purpose of gas lift?

A That is correct.

Q Is Gulf requesting the commingling of oil production from the Teague Pool and condensate from the Undesignated Abo Pool?

A Yes, Gulf wishes to commingle the Teague Pool oil with the condensate.

Q What surface equipment is provided for doing this then?

A Gulf proposes to produce the gas from the Undesignated Abo Pool through a high pressure separator which will dump the Abo condensate into the Teague flow line near the well when both pays are producing together. The commingled Teague oil and the Abo condensate will then pass through the flow line to a low pressure separator at the tank battery. The low pressure separator will then dump into the two existing 250 barrel tanks. Based on the most recent test, it is estimated the daily Abo

production will be approximately 13 barrels. This, coupled with 35 barrels from the Teague Pool, means that existing tankage will provide approximately ten days storage.

Q Well, all of the Abo gas that is produced after being run through a high pressure separator will then be metered?

A All the Abo gas produced from this well will be metered.

Q Before any of that gas is taken and reinjected into the well for gas lift purposes?

A That is correct.

Q And the gas that is taken and reinjected, will it then be separately metered?

A It will be separately metered before injection.

Q Does this proposed installation provide a means of accurately measuring production from both pays at reasonable intervals?

A Yes, it does.

Q How is the Abo Pool measured again?

A The testing of the Undesignated Abo production can be facilitated by merely shuting the Teague pay and then measuring the condensate produced into the tanks.

Q Abo gas is metered separately?

A It is metered separately.

Q How is the Teague pay measured?

A Well, to test the Teague pay, the two pays are produced

as a normal production. However, the Abo condensate that was previously dumped from the high pressure separator into the Teague flow line is diverted into a separate flow line which empties into the tank not receiving the Teague production.

Q Then I understand you have actually two tanks, one of which can be used for the purpose of diverting the flow from one pay zone during the time you are taking measurements?

A That is correct.

Q Nevertheless, you are proposing to commingle the production of the condensate with the Teague oil?

A Under normal operation, yes, sir.

Q Are the two oils compatible?

A Yes, sir.

Q What is their relative gravity?

A Based on recent run tickets from the purchaser, the gravity of the condensate has been approximately 55.2 degrees API while the Teague --

Q For which?

A That's the Abo condensate.

Q That's the Abo condensate.

A While the Teague oil is approximately 42.5 degrees.

Q Both of them have the same characteristics as to either being sweet or sour crude oil?

A That is correct.

Q They're both sweet perhaps?

A They're the same.

MR. UTZ: Are they sweet or sour?

A They're sour.

Q Mr. Hendricks, actually you have two packers set between the Teague-McKee pay and the Abo pay, is that correct?

A Yes, sir, a Baker Model D and a Baker Model J.

Q So, therefore, it would necessitate a leakage of both packers before oil or gas could be commingled in the relative zones?

A In the well bore, yes, sir.

Q Now, then, if there was leakage on the top or the retrievable packer, how would this come to your attention?

A It would come to our attention by causing a leakage into the pressure chamber, would cause the pressure to increase and cause the retrievable flow line valve to open, at which time the gas would go to the surface on the long string and give an extremely high GOR.

Q As I understand it, above the Baker Model J packer, the retrievable packer, you have Abo gas production that will build up to approximately 2600 pounds pressure?

A If it is shut in, yes.

Q Whereas below you have the injected gas lift gas that has been reinjected. And what is the approximate pressure of that?

A 700 pounds per square inch.

Q So that leaves a pressure differential of perhaps as high as 1900 pounds?

A Yes, sir.

Q What is the pressure differential across the Baker Model D packer between the injected gas and the Teague oil?

A Approximately 300 pounds per square inch.

Q If there were any leakage between this or in the Baker Model D packer, how would this matter come to your attention?

A Similarly, a gas would flow into the long string and cause an extremely high gas-oil ratio in the McKee production.

Q Is there a present market for the high pressure Abo gas?

A Yes, there is.

Q What is that market?

A That high pressure gas is being sold to the Gulf Teague Gas Lift System.

Q For the purpose of injecting for gas lift purposes?

A That is correct.

Q Is there a present market for the low pressure gas that is produced with the Teague-McKee oil?

A Yes, sir, El Paso Natural Gas is taking the low pressure gas.

MR. KASTLER: I believe that concludes the questions I have on direct testimony, except for this:

Q Was Exhibit No. 4 sketched or drawn by you or at your direction or supervision?

A Yes, it was.

MR. KASTLER: I would like to move that Exhibit 4 be made a part of the evidence in this case.

MR. UTZ: Without objection it will be received.

CROSS EXAMINATION

BY MR. UTZ:

Q I wonder if you will tell me how you are going to make packer leakage tests on both of these packers?

A Packer leakage tests can be facilitated by closing in one string with a pressure gauge and by permitting the other pay to flow, and if there is any increase in the shutin pressure of the shutin pay, then you would know that you had communication between the flowing pay and the shutin pay. Likewise, if the other pay was shutin and the other pay was permitted to flow, the same test could be made.

Q Actually, though, you have two packers between the pays, don't you?

A Yes, sir.

Q How do you determine which packer is leaking?

A I believe if you would make a series of tests you could eliminate and determine which packer was leaking.

Q Is it your intention in regard to the packer leakage

tests to test both packers together then, if you determine leakage, to figure out which one, and make further tests in order to determine which packer is leaking?

A I have not given it considerable thought, but it is our full intention if there is a leakage to determine actually where the leak is occurring and diligently see that it is repaired.

Q If just Baker J packer is leaking, unless you test these packers separately, the only way you can determine leakage is by high gas-oil ratio on the produced McKee zone, is that correct?

A Well, I would have to go into it in detail. If a leak existed in the Baker Model J and the pressure went into the chamber between the Model J and Model D, first, your injection pressure would go up. That would facilitate knowing that a leak is occurring across the Baker Model J packer. If the leak occurs across the Baker Model D packer, an increase in pressure at the well head will also occur.

Q Each of these packers, in your opinion, can be tested separately?

A Yes, sir, that's what I'm trying to say.

Q You would have no objection to this order, if it's granted, to require that those packers be tested?

A Certainly not.

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

MR. PAYNE: Yes, sir.

BY MR. PAYNE:

Q Mr. Hendricks, as I understand it, you propose to produce the Abo gas through the casing tubing annulus, measure it and then reinject a portion of it?

A Yes, sir.

Q And the remainder of the Abo gas you propose to utilize for gas lift operations on another lease?

A That is correct.

Q Now, how do you determine that amount?

A The amount that actually leaves this lease?

Q Yes, sir.

A There is a meter run and it is constantly measured.

Q On the flow line that's leaving this lease?

A Yes, sir.

Q All right, now, since you do propose to produce the gas through the casing tubing annulus rather than through tubing, could you tell me if you have any liquid problem in this Abo zone?

A Based on the latest test, it does not appear that the liquid will be of sufficient magnitude to give a problem.

Q So that you feel that this well should be entitled to an exception and the gas not be produced through the tubing?

A Yes, sir.

Q Now, when you commingle the condensate from the Abo with the Teague oil it's going to raise your commingled gravity,

isn't it?

A Yes, sir, it is.

Q Is that going to have any effect on the price paid?

A I've looked in that and it indicates, based on the proportion of oil that is being produced from the Teague to the condensate in the Abo, it indicates that the commingled gravity will be approximately 46 degrees. Now, in regard to the exception, based on that and based on the current price will continue, it will mean that there will be approximately a dollars difference in the daily revenue by the fact of its being commingled. It will be a dollar less than if it were measured and sold separately.

Q So that this installation would save you more money than what you are going to lose --

A By all means.

Q -- except that the royalty owner, he doesn't have to worry about the cost of operation, does he? His royalty is going to be less under this installation than it would be producing them separately?

A You direct that question to me?

Q Yes.

A Pardon me. It will be very, very slight.

Q Not enough to worry about? A That's right.

MR. PAYNE: Thank you. That's all.

BY MR. UTZ:

Q What type meter are you going to use to measure the gas lift gas that goes back into this same well bore?

A As I understand it, the meter run that now exists is an orifice type and with a pressure recorder.

Q Do you have a gas-oil ratio for the Abo zone?

A Yes, sir, based on the test recently, it's approximately 200,000 to 1.

Q Now, in regard to measuring the liquids from the Abo, did I understand you to say that you would measure all of the liquids from the Abo into the separate tank before you commingled or just measure during the testing period?

A The production from the Abo will be measured during tests.

Q So most of the time it will not be measured?

A That is correct, Mr. Utz. Production will be allocated by the test.

Q Is the McKee side of this completion, top allowable well?

A No, sir, it is not. It's currently, last test was 35 barrels per day.

Q It's a marginal well? A Yes, sir.

Q That makes it worse. Would Gulf have any objection to continuously metering the Abo liquid production?

A Only to the extent that it would entail additional cost.

Q How many tanks did you say you had on this lease?

A Two tanks.

Q You need them both for storage?

A To facilitate production and test, it's advisable to have the two tanks, yes, sir.

Q You would have to add another tank in order to continuously measure the Abo production before commingling?

A Yes, sir, that would be required.

Q In view of the fact this is a marginal well and you are commingling liquids from an oil prorated pool, it might be necessary to do that.

A I see.

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

BY MR. PAYNE:

Q Do you feel that you could take a deliverability test on the Abo gas well due to the fact that it is not tubed and is producing considerable liquids?

A To my knowledge as to the test necessary for deliverability, that is possible.

MR. PAYNE: I see, thank you.

BY MR. UTZ:

Q When you ran the open flow test stated by you earlier, did you flow the well through the annulus?

A The test that was quoted by the previous witness?

Q Yes, sir.

A That was through the tubing.

Q That was flowed through the tubing?

A Yes, sir.

Q You actually don't know whether you could test the well through the casing then, due to your liquid problems?

A I do not know that if a test has actually been done, but I believe that it can be tested flowing through the tubing casing annulus.

Q In case you do have liquid problems, you could clean the well out by opening your sleeve valve on the bottom of your gas lift injection tubing, is that correct?

A That's correct, using a shifting line tubing.

MR. UTZ: Are there any other questions?

MR. KASTLER: May I ask a couple of questions on re-direct examination?

REDIRECT EXAMINATION

BY MR. KASTLER:

Q Mr. Hendricks, is there a common royalty ownership throughout in this lease?

A Yes, sir.

Q Or through all pays? A Yes, sir.

Q What would be the top allowable for the Teague-McKee pay if this well were able to produce it?

A 132 barrels per day.

Q Do you contemplate in the realm of possibilities of things that your distillate production would in any event exceed, what is the present distillate production?

A Approximately 13 barrels per day.

Q Or condensate. A From the last test.

Q 13 barrels per day? A Yes, sir.

Q Do you have any reasonable expectation that that might increase?

A I have no reason to believe that it will. I have nothing to base it on.

Q So then you don't believe that the totaled commingled production would in any event or approximate 132 barrels per day?

A I would think not.

MR. KASTLER: Thank you.

MR. UTZ: From both zones?

MR. KASTLER: Yes, in both zones.

MR. UTZ: Are there other questions? If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there other statements to be made in this case? If there are none, the case will be taken under advisement.

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 5th day of December, 1959.

Ada Dearnley
Notary Public-Court Reporter

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. 1613, heard by me on Nov. 24, 1959.

Elvis A. Utz, Examiner
New Mexico Oil Conservation Commission