OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

April 28, 1958

COPY

Mr. William Kastler
Gulf Oil Corporation
P.O. Box 669
Roswell, New Mexico

Dear Mr. Kastler:

We enclose two copies of Orders R-1161, R-1164 and R-1166 issued April 22, 1958, by the Oil Conservation Commission in Cases 1411, 1409 and 1410, respectively, which were heard on April 9th at Santa Fe before an examiner.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 4-11-58

CASE 1411 Hearing Date 4-9-58

My recommendations for an order in the above numbered cases are as follows:

1. Approve as requested using Std. Oil-Oil Iron string Dual order.
2. Upper Completion in Jalmat Oil.
3. Lower " " S. Eunice Oil to San Andres

Elvis A. Utz
Examiner

4. Grating approval of 1¼ in. tubing to Jalmat completion because of high GOR + belief that Jalmat zone will go to a gas well soon.

Staff Member

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

IN THE MATTER OF: Case No. 1411

TRANSCRIPT OF PROCEEDINGS

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 5-9546

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

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 J. F. Janda "F" Well No. 3, located 1980 feet from the North and West lines of Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Jalmat Gas Pool and oil from the South Eunice (Oil) Pool through parallel strings of tubing.) Case 1411

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: The next case will be 1411.

MR. PAYNE: Case 1411: Application of Gulf Oil Corporation for an oil-oil dual completion.

MR. KASTLER: Bill Kastler, representing Gulf Oil Corporation. My first witness in Case 1411 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 J. Savage, production geologist with Gulf Oil Corporation, Roswell, New Mexico.

Q You have previously testified as an expert witness before this Commission?

A Yes, sir, I have.

Q Are you familiar with the geology of the area surrounding Gulf's well known as No. 1 J. F. Janda "F"?

A I believe, sir, you mean the No. 3 J. F. Janda "F"?

Q No. 3.

A Yes, sir, I am.

Q Is this a State lease?

A Yes, sir, it is.

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

A Yes, sir, and I have labeled this Exhibit No. 1 in Case No. 1411.

Q Referring to Exhibit No. 1, will you please state, give the location and situation of the well and of the lease.

A Shown on this exhibit is Gulf's J. F. Janda "F" lease, being Section 4, Township 22 South, Range 36 East. Shown encircled and marked in red is the J. F. Janda "F" Well No. 3, located 1980 feet

from the North and West lines of that same Section 4.

Q Would you please describe the offsetting production, offsetting in the Jalmat, offsetting this well?

A Specifically in the Jalmat zone, we have the Sinclair No. 1-AG-157 Well, located in the southeast quarter of the northeast quarter of Section 5, producing from the Jalmat zone; and the south offset to the J. F. Janda "F" No. 3 is Gulf's No. 7 J. F. Janda "F", completed, it's dually completed in the Jalmat Gas and the South Eunice Oil zones, and also located in Section 34, Township 21 South, Range 36 East, approximately 330 feet from the South and West lines of that Section is Gulf's W. A. Ramsay No. 1. It is completed as a gas well, single gas completion from the Jalmat zone.

Q These other Jalmat completions are all Jalmat Gas completions, is that correct?

A Yes, sir, they are.

Q Will you please give the history of the well which Gulf proposes to dually complete?

A The No. 3 J. F. Janda "F" was originally projected as a Jalmat Gas - South Eunice Oil prospect. The Jalmat zone was drilled and on drill stem tests -- I beg your pardon, I wish to change that -- production tests, actually it proved to be an oil well by definition. The South Eunice zone was drilled and 5-1/2 inch casing set at 3,805 feet with a total depth of 3,900 feet; the Jalmat zone is perforated through six short intervals between 3,200 feet and 3,650 feet, which perforations are within the

vertical limits of the Jalmat zone.

Q Have you prepared or caused to be prepared contour maps showing the location of this well on structure?

A No, sir, I have not.

Q Would you explain in your opinion the occurrence of the Jalmat Oil in this area?

A I believe the occurrence of the Jalmat Oil is purely a local condition, possibly gravity drainage to a localized sand stringer. We have not delineated which exact set of perforations are producing the oil in the Jalmat zone.

Q Have the limited tests to date shown that this well is capable of going to a gas well or that it's possible that it might in the future go to a gas well?

A Yes, it can be reasonably expected that the Jalmat will end up being a gas well.

Q Have you prepared a log to show the formations penetrated and the intervals perforated?

A Yes, sir, I have copies of the electro-log on the No. 3 J. F. Janda "F", which I have labeled Exhibit No. 2.

Q Will you please explain Exhibit No. 2?

A Specifically shown on this electro-log are the tops of the Yates formation at a depth of 3,160 feet, the top of the Seven Rivers formation at 3,400 feet, and the presently perforated intervals between 3,200 feet and 3,650 feet. On a company test on March 13, 1956, through 2-3/8 inch tubing, this zone flowed at

a maximum rate of 2,428,000 cubic feet of gas per day, plus 40 barrels of oil, with 600 pounds back pressure, gives us a GOR of 55,181 cubic feet per barrel, which by definition is an oil well for the Jalmat Gas zone. Also shown is the top of the Queen formation at a depth of 3,749 feet, and the open hole producing interval in the South Eunice Oil zone.

Q Have tests been made there?

A Yes, a test on March 12, 1956, through 2-3/8 inch tubing and 21/64 inch choke, South Eunice flowed 200 barrels of oil with an estimated gas volume of 120,000 cubic feet of gas, which gives us a GOR of 600 cubic feet of gas per barrel.

MR. KASTLER: I have no further questions of this witness, and at this time I would like to move that Exhibits No. 1 and 2 be admitted in evidence.

MR. UTZ: Is there objection to the entrance of Exhibits 1 and 2 in this case? If not, they will be accepted. Any questions of the witness?

MR. NUTTER: Yes, sir.

CROSS EXAMINATION

By MR. NUTTER:

Q You say you have made no determination as to what portion of these perforations the oil is coming from, is that correct?

A That's right.

Q Which do you expect that the oil might be coming from?

A Well, geologically I would make the opinion that it will

be coming from the lower set of perforations, inasmuch as the nearest -- no, I want to change that, inasmuch as the Sinclair No. 1-AG 157 located in Section 5, Township 22 South, Range 36 East, has perforations open only in the Yates formation.

Q It is a gas well?

A It is a Jalmat Gas well.

Q How about your No. 7, south of your No. 3?

A We can make the same correlation. I believe I can say specifically that it is producing also from the Yates formation and is not open in the same section as the two lowermost sets of perforations in our No. 3 J. F. Janda "F".

Q Did you say that you had not prepared a structure map--

A No, sir' I have not.

Q -- of the Yates and Seven Rivers in this area? Are these two wells which are producing gas from the Yates, being the Sinclair No. 1 well to the west and Gulf's No. 7 well to the south, what is their position structurally as compared with your No. 3 well?

A I cannot say specifically, but --

Q Generally.

A -- but the entire area is generally flat.

Q It is?

A Entire immediate area.

Q So that would bolster your opinion that the gas is coming from the upper perforations in your No. 3, and the oil from the lower perforations?

A Yes, it would be.

Q On what do you base your assumption that the well will eventually go to a gas well?

A I have no specific information which would make me believe that, but just by the local occurrence of the oil in our well, whereas the other wells are not making oil within that zone, even though they are not specifically perforated in that lower zone, I would make, I would be of the opinion that it would be a gas well within a short length of time.

Q Do you base this primarily on an increase in gas production and a resulting increase in GOR, or on a decrease in the oil production and an increase in GOR?

A I would base it on this reasoning that we would be penalized, our oil production would be penalized, and when you decrease your oil production, you don't decrease your gas production by the same percentage, and the ratio would then change and we would probably get another penalization.

Q This well was classified as an oil well by virtue of having a GOR of less than 100,000 to 1, was it not?

A Yes.

Q So being an oil well, is it a penalized oil well?

A That's my understanding. I may be incorrect in that reasoning, though.

Q When was the Jalmat zone first opened up?

A The first potential that we have was on March 13, 1956.

Q That's the test that is shown on the exhibit?

A Yes, sir.

Q What's been the status of the South Eunice open hole completion since the Jalmat was opened up?

A It is my understanding that the South Eunice Oil zone has been producing since that approximate date.

Q So they're both producing now?

A No, sir, the Jalmat zone is not producing.

Q Oh, I see. So you haven't had any change in the GOR?

A We have no change that we can note.

Q You have had no production?

A No production. We had the original tests that were allowed on a gas-oil dual completion; inasmuch as we do not have permission to vent the gas, we do not have a pipe line connection at the present time. We cannot make further tests.

MR. NUTTER: I believe that's all.

MR. UTZ: Any other questions of the witness?

MR. NUTTER: One more question.

MR. UTZ: Mr. Nutter.

By MR. NUTTER:

Q You say you don't have a connection for the gas from the Jalmat zone here?

A At the present time we do not have.

Q If this authority to complete this well were granted, what would you do, produce the well and flare the gas?

A We would then get a pipe line connection. We are unable to have a pipe line connection without permission to flow the line.

MR. KASTLER: You mean a gas pipe line connection?

A Gas pipe line connection.

Q (By Mr. Nutter) Does the well have sufficient pressure to produce into a gas pipe line, or would it have to be into a low pressure gathering system?

A I believe that it does have sufficient pressure, yes, sir, as stated or as shown on Exhibit No. 2, it had flowed at the rate of 2,428,000 cubic feet with a 600 pound back pressure.

MR. NUTTER: Thank you.

By MR. UTZ:

Q The only other Jalmat well on Section 4 is your No. 7, is that correct?

A Yes, that is correct.

Q What acreage is dedicated to that well, do you know?

A It is my understanding that dedicated to that well in the Jalmat zone is the south half and the northeast quarter of that Section 4. I beg your pardon, Mr. Hoover corrects me on that, just the south half of the Section 4 is dedicated to the No. 7 J. F. Janda "F".

Q Is your No. 3 well a top allowable well, 33 barrels?

A From the South Eunice Oil zone?

Q No, from your Jalmat Gas zone. Your Janda No. 3, the well

in question here. Is it a top allowable well in the Jalmat zone? I believe your Exhibit No. 2 stated an I.P. of 40 barrels, that was in the Jalmat zone, was it not?

A That is for 24 hours, and I believe that it would be a top allowable well.

MR. UTZ: Is Mr. Hoover going to testify on this case?

MR. KASTLER: Yes.

MR. UTZ: Then I will defer these questions to Mr. Hoover. Any further questions of the witness? If not, 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 You have previously been sworn under oath. Will you please state your name and position?

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

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

A Yes.

Q Are you familiar with Gulf's application to dually complete its J. F. Janda Well No. 3?

A Yes.

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

A Yes, we have labeled it Exhibit No. 3.

Q Referring to Gulf's Exhibit No. 3 in Case 1411, will you please outline the producing characteristics of this well when dually completed, when and if dually completed?

A This shows the proposed mechanical installation which we will produce it as an oil-oil dual in the Jalmat-South Eunice Pools. The well has 8-5/8 inch casing set at 1615 feet and the cement circulated to the surface. The 5-1/2 inch casing is set at 3,805 feet, and by temperature survey showed that the top of the cement was at 1468 feet. We now have 2-3/8 inch tubing run in the well through a Baker Model "D" Production Packer which is set at 3,753 feet. We have in this tubing string, we have a circulating valve above and below the packer. We propose to run a string of 1-inch, 1.315 inch OD tubing, it is 1 inch nominal, into this well, to be set in the Jalmat section. The reason for the 1-inch is due to the 5-1/2 inch casing. I might say that the South Eunice Oil is the pink color, the Jalmat is the green.

Q Having had some experience with this well on previous tests and your other knowledge of the producing characteristics in these formations, will you please testify what the peculiar characteristics of this well are?

A Well, as previously stated, the well produced 40 barrels of

oil at 2,428,000, and gave it a GOR of 55,000 plus, which classified it as an oil well. However, I might mention that that statement of being a top allowable well is only at the rate of 2,428,000, which is more than twice the allowable in the Jalmat, for 160 acres in the Jalmat, average per year only runs approximately a million. So we were almost two and a half times the allowable rate to produce the oil allowable. We believe that if this well -- well, it is classified as an oil well, but when it is produced at an oil rate, which would be 10,000 cubic feet per barrel times the allowable at that time, that we will not get any oil, and we want to prove that point, and I would like to state what we would like to do.

We are proposing to run this 1-inch string, but before we run it, we are asking approval of producing the well this way so that we can get a pipe line connection. The Hobbs, the Commission's office in Hobbs has advised that they would give us an oil allowable to test the well further, but we would have to have a market for the gas. We cannot get the gas company to connect the well unless by their cost of installation they can be assured that the well could be produced in the manner in which we are proposing it. In other words, they could get gas either way, whether it was an oil well or gas well. So before we run the 1-inch tubing, we would like to run a test on that well by closing the lower circulating valve in the South Eunice Pool and opening it in the Jalmat Pool, and produce the well through tubing into the pipe line. We will

produce it at such rates that will definitely prove if it would be a gas well or an oil well. To run this tubing in the well would require an expenditure of approximately $8500.00 and we feel reasonably sure that when we produce it at an oil well rate, we will get no fluid and only gas and it will be back to a gas well, possibly immediately or within thirty to sixty days.

Q You propose to do this testing through the 2-3/8 inch tubing, is that correct?

A Yes.

Q That's before the 1-inch tubing is installed?

A Before the 1-inch tubing is installed.

Q In the event this became a gas well, it might not be necessary to install 1-inch tubing at all?

A Yes.

Q Mr. Hoover --

A (Interrupting) We have run some previous tests which I might bring up, that they were not conclusive, in which we tested through the tubing before. It was not run at long enough time, it was only produced approximately five days. At the end of that five days, it was produced at a standard rate of 2,428,000 and the gas-oil ratio in the five days had increased from when it was first put on, which we would expect a low GOR due to a load oil in there, or I mean a build-up of oil, it increased from 25,900 GOR to 76,000 in five days, producing it at a standard rate of approximately 2,400,000. We feel that maybe the sixth day there, that that, due

to the small indicated amount of oil that is in the formation, that that well would be a gas well. However, it was not thoroughly tested and we are at a point now that we can't test unless we can get a connection. We can't get a connection unless we obtain approval to produce it as an oil-oil dual in this manner, if it turns out to be an oil well.

Q In your opinion is the proposed completion in this case of an oil-oil dual the most feasible and practical course to follow engineering-wise?

A Yes, it is.

Q If completed finally after the proposed test as an oil-oil dual, will the 1-inch tubing be adequate to produce the Jalmat Oil?

A Yes, it will, due to the fact that we have, it's indicated that we have a lot of gas energy and thus we will have no difficulty in producing the oil.

Q You foresee no need for pumping, is that correct?

A No, no need for pumping.

Q Now, if finally completed as a gas-oil dual, what acreage will be dedicated to the Jalmat zone?

A We would dedicate the 160 acres, being the northwest quarter of Section 4.

Q Mr. Savage has previously testified that the south half of this section is presently committed to a unit. Do you have any knowledge what is the situation in regard to the northeast quarter?

A The northeast quarter is attributed to our W. A. Ramsay No. 1. That well has 640 acres attributed to it, which is the southeast quarter of Section 33, the southwest quarter of Section 34, the northwest quarter of Section 3, and the northeast quarter of Section 4.

Q Now the northwest quarter of Section 4 in which the subject well is located is not presently dedicated to any acreage or any well in the Jalmat zone--

A No, it isn't.

Q -- as a gas well? Is it presently being drained?

A Yes, it is, by an offset, offset well.

Q Has an installation of this type been previously approved by this Commission, proposed here?

A Not exactly of this type, but similar installations.

Q The basic components of this proposed installation is two strings of tubing with a single Baker "D" Packer?

A Yes.

Q Does it insure adequate separation of the pays in the well bore?

A Yes, it does. It's the standard packer and we have means of indicating, if we have leakage it will be indicated. The South Eunice is very sour, or the gas in the South Eunice is approximately 250 grains of hydrogen sulphide, in the Jalmat only about 50. We have a pressure on the Jalmat tubing of around 1,000 pounds; the South Eunice has a tubing pressure around 300 pounds, which

would give us enough differential that by shut-in test that would indicate by equalization of pressures if we had leakage.

Q What is the pressure differential across the packer?

A The pressure differential across the packer would be less than 100 pounds. The bottom-hole pressure packer in the South Eunice is 1,036, the Jalmat, it would be 960.

Q Is it possible to tell if any commingling of pays should occur?

A Yes.

Q If the application is granted, will Gulf comply with the operating tests, reports and procedures required by the Commission?

A Yes, they will.

Q What pipe line connections are proposed?

A Permian Basin Pipe Line will take the gas if this application is approved, and Shell Pipe Line is running the oil from that lease at the present time and they would in all probability purchase the Jalmat oil if it's an oil well.

Q Is this application made in the interest of the 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 of this witness. I would like to move the entrance of Exhibit 3.

MR. UTZ: Is there objection to the entrance of Exhibit 3?

If not, it will be received.

CROSS EXAMINATION

By MR. UTZ:

Q Mr. Hoover, how long did you say that you wanted to run this test?

A We feel that thirty days at the maximum, we should be able to run the test.

Q Can you tell me how much gas a 40-acre oil well in Jalmat or this well, if it remains an oil well, can produce?

A At the present allowable of 33 barrels, it could produce 330 mcf per day.

Q Would that be about 9.9 million a month?

A Yes, sir.

Q Do you know what the 40-acre Jalmat gas well average allowable was for the last six months?

A No, sir, but I have it. Oh, for the last six months?

Q Yes.

A No, I don't have it for the last six months.

Q Was it more or less than 9.9 million a month?

A For the year 1956, I have, it's an average for the total year, which would take into account the seasonal change, the average was 672 mcf a day on 160. For 40 acres would be one-fourth of that, 160, 65.

Q Would be 168 a day?

A Yes, sir.

Q It would be about five million forty a month, right?

A Yes, sir.

Q However, that's for a year. The allowables have gone up in Jalmat in the last several months, is that right?

A I believe they have, the first three months of this year. They dropped over 1956, in 1957, and I used the higher rate of 1956 figure, but I believe it is correct that the Jalmat figures are slightly higher at the beginning of this year.

Q This may not be a fair question, I don't know, but do you think that a 40-acre gas well should have less allowable than a 40-acre oil well, the 10,000 to 1 ratio?

A Well, I might, without going into that, I might say that I don't believe you could drill gas wells economically on 40-acres or complete them on 40-acres.

MR. UTZ: Any other questions of the witness? Mr. Nutter.

By MR. NUTTER:

Q Mr. Hoover, your potential purchaser is Permian Basin Pipe Line, is that correct?

A Yes, sir.

Q Will they run a line up and connect this well, if it is classified as an oil well?

A Yes, sir.

Q For this 330,000 mcf per day?

A Yes, it just happens they have a line close enough that they can do it economically. If their line was further off, then

possibly they would not, but we are fortunate that they are within about, I believe 900 to a thousand feet of this well with their main line.

Q You anticipate that this well would definitely be classified as a gas well if it produced as an oil well for thirty days?

A Yes, sir, we do.

Q What are your plans, then, to shut in the South Eunice Pool and produce through the 2-3/8 inch tubing to start with?

A Yes, sir, in order to get the test through tubing which we feel is a better test for an oil well. We could produce it through the casing, but we feel that producing it through the tubing would be a better test and give us absolute proof if it's going to be an oil well and/or gas well.

Q And the Hobbs office of the Oil Conservation Commission has told you that if you had a connection for the gas, they would permit you to produce this well through the --

A (Interrupting) They would give us an oil allowable to test.

Q Oil allowable, to produce through the 2-3/8 inch tubing after you shut in your South Eunice zone?

A Yes, Mr. Montgomery advised us verbally on that.

Q But Permian Basin won't go and hook up the well unless you have the authority to produce both zones?

A They're only concerned with the gas, with the Jalmat section.

Q Unless you have dual completion authority, they won't connect the well?

A No, sir, they feel that they can't spend the money to lay a line over there if it turns out that the well is an oil well, and we have not got permission to produce it through the two strings of tubing as we propose.

Q They don't share your confidence that this will become a gas well?

A Well, I think they are going just on the facts that we have now. They haven't looked into the well, I'm sure, as much as we have, and we have just negotiated with them to get a connection.

Q How about the other wells on this lease, do they have casinghead gas connections?

A Yes, they do, Phillips. We also considered selling it as low pressure, but Phillips advised us that they would be glad to take it but their system was overloaded and they couldn't take it.

Q Is this in an area where Phillips Petroleum Company is in a process of expanding their low pressure gathering systems?

A Yes, sir.

Q Will they be able to handle more gas in the future than they are at the present time?

A That is my understanding, that they expect to have the facilities ready by the 1st of June, to handle it.

Q Could the pressure be dropped, if it were produced as a high pressure well, could the pressure be dropped so it could go into the Phillips low pressure system?

A Yes, sir, it could be, but I don't think it would be

economical to drop the pressure and take a price reduction in the gas, just from dropping the pressure. In other words, we have the energy to sell it into a high pressure system. We would be dropping the pressure to go into their low pressure system at a lower price, and they would take it into our plant and spend the money to boost it back up and put it into our high pressure system. It is capable of going into the high pressure system, and if we can get approval, which we are asking here, which we think is feasible, then we can utilize the well's energy and get the maximum price and get the most return on our money, and it would also be protecting the royalty of the State. They would benefit by the extra price, also.

Q Of course, that would be for a short time, would it not, that the well would be producing into a low pressure system, while it was classified as an oil well, if you produced this thing as an oil well?

A I get you.

Q At a low pressure connection?

A I thought you meant on a low pressure basis.

Q No, for a short time while the well was changing its producing characteristics, you would be producing the well into a low pressure system, would you not, and then if the well did become classified as a gas well -- do you have authority for the dual completion, to start with?

A Yes, sir.

Q As a gas-oil dual?

A Yes, that was DC-257 which gave us permission for a gas-oil dual completion.

Q So you have an authorization, approval for the gas-oil dual once it becomes classified as a gas well?

A Yes, sir.

Q What size 5-1/2 inch pipe is in this hole, what weight?

A Fourteen pounds.

Q Is the internal diameter of the 5-1/2 inch pipe such that parallel strings of larger tubing, perhaps a flush joint or a CS joint high drill tubing could be run in this well?

A No, it can't.

Q What weight is that 5-1/2 inch?

A Fourteen pounds.

MR. NUTTER: I believe that's all. Thank you.

MR. UTZ: Any further questions of the witness? If not, the witness will be excused.

(Witness excused.)

MR. UTZ: Any further statements in this case? If no further statements, the case will be taken under advisement.

The hearing will be adjourned till 1:15.

(Recess.)

* * * * * * * * * *

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
t
h
1411,
April 9, 58.
r
New Mexico Oil Conservation Commission