BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
November 14, 1957

TRANSCRIPT OF HEARING
CASE NO. 1337

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
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BEFORE THE
OIL CONSERVATION COMMISSION
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IN THE MATTER OF: Application of Gulf Oil Corporation for approval of a lease automatic custody transfer system to receive and measure the production from more than eight wells and for permission to commingle the oil produced from the McKee and Ellenburger Pools underlying said lease in Lea County, New Mexico, and for permission to produce the wells on said lease in excess of the monthly allowable tolerance for a limited period of time.	CASE NO. 1337

BEFORE:

Honorable Edwin L. Mechem
Mr. Murray Morgan
Mr. A. L. Porter

TRANSCRIPT OF HEARING

MR. PORTER: The meeting will come to order, please. We will take up next Case 1337.

MR. COOLEY: Case No. 1337. Application of Gulf Oil Corporation for approval of a lease automatic custody transfer system to receive and measure the production from more than eight

wells and for permission to commingle the oil produced from the McKee and Ellenburger Pools underlying said lease in Lea County, New Mexico, and for permission to produce the wells on said lease in excess of the monthly allowable tolerance for a limited period of time.

MR. KASTLER: If the Commission please, my name is Bill Kastler, I am employed by Gulf Oil Corporation, law department in Roswell, New Mexico; and I am appearing for Gulf in this case. Gulf Oil Corporation is seeking an order approving a lease automatic custody transfer system for its Learcy McBuffington Lease in Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, to receive and measure the production from more than eight wells, and further authorizing the commingling of the oil produced from the McKee and Ellenburger Pools underlying the leases.

In part our application which was filed and dated October 11, 1957, stated an exception to Rule 502 II may be required pending completion of sufficient wells to have enough allowable capacity to fill the one thousand surge tank. On the completion of the second Ellenburger well this exception will no longer be required. I'm able to state to the Commission that our second Ellenburger well has been completed at this time and therefore I ask that this portion of the application be stricken. That was item Number Four where Gulf requested exception to Rule 502, which prohibits production in excess of the assigned monthly allowable

plus a tolerance of five days allowable production. We have as our next witness Mr. C. Bumpass from Hobbs, New Mexico. Mr. Bumpass, will you be sworn?

(Witness sworn.)

C. M. BUMPASS

having been first duly sworn, testifies as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q Would you please state your name and the position, your employer, where you live?

A The name is C. M. Bumpass, I'm employed by Gulf Oil Corporation at the Hobbs office and I'm a petroleum engineer living in Hobbs.

Q Have you previously appeared before the New Mexico State Conservation Commission and qualified and testified as an expert witness?

A I have.

Q Are you familiar with Gulf's application for lease automatic custody transfer system and a commingling application?

A I am.

MR. KASTLER: If the Commission please, I move that Mr. Bumpass' qualifications as an expert be accepted.

MR. PORTER: They are accepted.

Q What is the purpose, Mr. Bumpass, of Gulf's application

for the lease automatic custody transfer system and for commingling the oil in this case?

A Well, the primary purpose is to effect economy and effect improved operations of this lease.

Q In what ways will economy be affected?

A Through the conservation of crude saving on manpower through the operation of this automatic equipment and savings in the investment in the equipment.

Q Have you prepared, or at your direction had prepared, a plat showing the location of the lease?

A Yes, I have.

Q This Learcy McBuffington Lease in this area, Lea County, New Mexico, is offered as Exhibit No. 1, Mr. Bumpass, please state what is shown on Exhibit No. 1?

A Well, shown on Exhibit No. 1 is Gulf's Learcy McBuffington Lease, being the south half of Section 13, Township 25 South, Range 37 East. There are several wells on this lease, those of particular interest in this case are the wells No. 3 and No. 4 and are Ellenburger producers.

Q Those are the two wells concerned in this application?

A That is correct.

Q Does Gulf plan any further producing wells in this lease?

A Yes, they very definitely do.

Q Does Gulf own all the working interest in this lease?

A That is correct.

Q I notice there is a farm out to W. C. Birum to 3,500 feet.

A Well, that's below that depth, we own all of it which is the matter of this case here.

Q These two wells are concerned solely with production from below 3,800 feet?

A That is correct.

Q And from an area in which Gulf owns the entire working interest?

A That is correct.

Q Is there a diversity of ownership in the lease or is it all the same?

A It is all the same.

Q Have the neighboring operators been notified of your application in this matter?

A Yes, they have.

Q And has the pipe line been notified of your operation in this matter?

A Yes, sir.

Q Have you prepared for Exhibit No. 2 a schematic diagram which shows the lease automatic custody transfer system proposed?

A Yes, I have.

MR. KASTLER: If the Commission please, we intend to offer this later as Exhibit No. 2.

Q Mr. Bumpass, will you state what is shown on this diagram, Exhibit No. 2?

A Well, the diagram is shown here is entitled lease automatic custody transfer system. However, it was felt pertinent to show in addition to the euqipment the allied equipment that would be installed up stream of the automatic custody transfer equipment and that would be that equipment to the right of the 1,000 barrel surge tank.

Q For the present will you now confine your explanation to the 1,000 barrel tank and what is beyond that towared the pipe line?

A Yes, sir. That equipment constitutes the lease automatic custody transfer euqipment and consists of various items of equipment that have been proven and accepted by industry for automatic custody transfer of crude.

Q Are the installations that are described here from the 1,000 barrel tank forward, you might say toward the pipe line, substantially the same as those concerned in Shell Oil Corporation's Case No. 1275, lease automatic custody transfer system, which was approved by the New Mexico Oil Conservation Commission?

A Yes, essentially the equipment is the same.

Q In connection with the 1,000 barrel tank, Mr. Bumpass,

will all of the production from these two pays on this lease be commingled at that point or in that tank?

A They will be commingled in the tank. The commingling will actually occur just prior to entering the tank.

Q But they will all be held at that tank?

A That is correct.

Q What will actuate the operation of that tank?

A Well, the tank, in there automatic equipment of this type is equipped with switches set at various levels in the tank; primarily in this tank we have a low level shutoff switch and an intermediate level switch which actuate the operation of the lease automatic custody transfer equipment. When the oil is produced into the tank and as the fluid rises it will rise to this intermediate level switch, approximately thirteen or fourteen feet from the bottom of the tank and on so doing will actuate relays which will open the necessary valves and start operation of the pipe line pump which will in effect transfer the fluid in the tank to the pipe line.

Q Then it is possible and it is proposed that the 1,000 barrel tank will automatically transfer the custody of the oil from that tank into the pipe line?

A Well --

Q And meter it at the same time?

A Essentially the pump will transfer it from the tank

into the pipe line automatically. I did leave out that then the pipe line pump consequently has to have a rate in excess of the incoming fluid so it will void the tank or to the low level shut-off switch at which time the operation of the automatic equipment will be terminated.

Q The automatic equipment is powered primarily by electricity, is it not?

A Yes, sir.

Q If there should be a failure of the electrical, and electrical failure would the apparatus remain open and continue to deliver unmetered oil?

A No, it is designed so that the power failure would permit the equipment to close safe, that is the valve, and terminate the transfer of crude.

Q As an incidence of your application, if this proposal were granted, would it be necessary to have an exception to Rule 303 which prohibits the commingling of oil between pools?

A Yes, it would.

Q Would it be necessary to have an exception to Rule 309 which limits production from only eight units of the same by a six lease into common tankage?

A That is correct. We anticipate sufficient number of wells to exceed that.

Q Would it be further necessary to have an exception to the

Rule 309A, which requires measurement of oil in tanks before such oil is transported from the lease?

A That is correct.

Q Mr. Bumpass, would you outline what is shown to the right of the tank, namely the equipment for each separate pay?

A Well, just to the right of the tank we have such equipment. Starting from the right hand of the Exhibit is the well header, and then we have production and test separator equipment; production and test treating equipment, and then we have metering equipment to facilitate all tests and make records of the oil handled from each pay. I can show that better by the next exhibit and would like to add here that each one of these will be indenticals.

Q Yes. Although they are identical there are two systems here, one for each pay. Would you please state whether or not those two systems work independently of each other?

A I don't know if I understand. You mean equipment for each pay?

Q There is equipment for each pay?

A Operating independently of each other, yes.

Q The equipment for the McKee pay?

A Yes.

Q If the allowable should be produced from the McKee pay first would that separate unit then automatically shut down?

A It would shut down when the necessary equipment that was designed in there signalled the automatic controls to shut in the wells.

Q What precaution has been taken to prevent a back flow in the commingled oil back into one or the other systems?

A Well, just the normal installation equipment such as a check valve.

Q A check valve would guarantee insurance against the McKee pay under any circumstances backing into the Ellenburger pay system, is that correct?

A Yes, sir.

Q Have you prepared or had prepared under your supervision a production and test flow diagram for one pay zone?

A I have.

Q This is more detailed, I take it, than the two pay zones shown in Exhibit No. 2?

A It is.

Q If the Commission please, we propose to offer this production and test flow diagram as Exhibit No. 3 and it should be understood that this is one separate unit for the pay zone, and since there are two pay zones to be commingled in this case this will be duplicated in the actual operation. Mr. Bumpass, will you please explain what is shown on Exhibit No. 3?

A Well, this is just an enlarged flow diagram of one of the

two previously shown. It is the production and test flow diagram for one pay. The well header on the extreme right would be first equipment through which the well string from each individual well would pass prior to entering the equipment illustrated here. For wells that are on production the flow stream would pass into the production separator thence into the production treater for treating of the oil; the fluid on leaving the production treater would pass through a B. S. & W. Monitor.

Q That stand for basic sediment and water monitor?

A That is true. And if the oil is measurable, as shown in the purple areas the fluid would be able to pass on through the master oil meter and into the tank.

If the B. S. & W. cut is above the preset value on the monitor then the monitor would automatically open the valve to the right of the recirculating pump and close the valve just in front of the master oil meter and would reroute the oil back through the production treater until the B. S. & W. content was reduced to within the limits allowed; at which time the valves would open and close in the proper manner and continue to transfer oil.

Q Mr. Bumpass, would the B. S. & W. Monitor reject, for example, oil that had too high a water content?

A Yes, sir.

Q In that event it would go back through the production treater, is this correct, and --

A That is correct.

Q -- and the oil and water would be retreated and more water removed?

A That is true.

Q Then it would again pass down stream through the B. S. & W. Monitor and if accepted as merchantable oil would automatically pass through this valve into the master oil meter, is that correct?

A That is true.

Q Can your headers be switched automatically in such a way as to test the production from each well on the lease?

A Yes, we will have with this equipment here also fully automatic well programming and testing equipment and by setting into this well programer wells will be tested in sequence and for the length of time that is desired.

Q Now, how does that differ from the ordinary test that's made usually with gauger or pumper at work making tests?

A Well, the test is accomplished automatically with this system with the oil and water and gas volumes for that well test being recorded, whereas in the present manner why it is manually in tank gauges.

Q How are the results of tests recorded?

A Beg your pardon?

Q How are the results of tests recorded?

A The results of the tests are recorded automatically on the strip chart in the control.

Q There are printings made from the gas meter, water meter and oil meter involved in the tests?

A That is true.

Q Those are then printed on a sheet and preserved, is that correct?

A Yes, they will be available for making of records.

Q After any particular well has been flowing through the test treater and test separator and the record has been made of the test that has been performed on that automatically, what then takes place to change the well that flows in for the next test?

A Well, that is handled by the well programmer in which that if you want well number one to be on test first, number two second, third, fourth and fifth well like that you set your well programmer such that that will be accomplished and it will be done automatically as soon as the test is completed on well number one that well will be routed from the test phase of the equipment over to the production phase and then the next well up for test will be switched automatically into the test phase of the equipment and that will repeat until all wells are tested and it will start over on the initial well.

Q Will the separate tests that are made be helpful in regulating production more accurately to the allowable?

A Yes, that is true.

Q Will the test also show the need at any particular time

for work overs or anything of that sort?

A Well, yes, they will; that fact will be expedited in that more frequent well tests we feel as accurate or more accurate well tests will result from this type of equipment and we feel that it will, yes.

Q Now, after the testing the oil is again commingled with the other production from that same pay --

A That is true.

Q -- before it gets to the B. S. & W. Monitor?

A That is true.

Q After it passes through the monitor successfully it then goes to the master oil meter, is that correct?

A That is true.

Q What type meter is the master oil meter?

A It is a dump type oil meter.

Q What accessories are on it for compensating different factors that might be found?

A Well, it compensates for the temperature of the flowing string through it. It has the facilities of compensating for shrinkage factor and it also has a set stop counter which is a device whereby the allowable at the beginning of a proration period is set into the meter and as each barrel of production passes through the meter that meter reading is decreased by a like amount, this operation continuing until the last barrel has been metered

through the equipment and then the set stop counter will terminate the operations on this lease.

Q Then, I understand if you have two wells producing from the Ellenburger pay both wells come in here and they are alternatively tested but after the testing their production is then passed forward into the 1,000 barrel surge tank after being accurately measured, is that correct?

A Yes, sir.

Q And when the allowable for those two pays has been reached is there an automatic shut down --

A Two pays.

Q -- from both pays?

A That is true.

Q Both pays have produced their allowable, is that equipment shut off?

A Yes, that is true. Each pay will have identical equipment on it.

Q Will it be set up on a monthly allowance or daily allowance, will this master oil meter be set daily or monthly?

A Monthly allowable.

Q Will it be read daily?

A It will be recorded daily which will allow us to read it daily to keep close check on the operation of the performance of the wells for daily production checks.

Q Will you state what you know of the accuracy of the dump master oil meter?

A Well, we do not have any of these type meters in operation, therefore we do not know the accuracy first hand.

Q Have you made investigations to find out what accuracy has been reported for this type meter?

A Yes, I have. There was a consulting firm of Purnell and White that conducted extensive tests on the accuracy of the dump type meter and the accuracy reported by them was that the average accuracy was never less than 99.8% and in, I believe it was five or seven of the tests it was not, well, just let me read it here: "The average accuracy of the meters tested never fell below 99.8% for any set of tests run and fell below 99.9% for only seven of the twenty-eight groups of tests performed."

Q In other words, in all but seven cases this type master oil meter was accurate to 99.9%?

A That is true.

Q And in the seven cases it was accurate to 99.2%, is that correct?

A 99.8%.

Q Was that experiment a laboratory or field experiment?

A No, it was very definitely a test conducted in the laboratory under ideal control conditions.

Q To the best of your knowledge has the field experience

with this type of meter been satisfactory?

A As I said before we have not performed any but I do think that meters of this type in operation in the field will give a good or better accuracy than manual gauging of tanks.

Q After the master oil meter has been passed the oil then passes through a check valve again and before it reaches the 1,000 barrel tank it is commingled with oil from the other pays, is that correct?

A That is true.

Q Is there any reason that you know of why oil from the McKee pay and oil from the Ellenburger pay can not successfully be commingled?

A No, I do not.

Q In your opinion would the granting of the applicant's, request in this case, be in the interest of conservation and would it protect correlative rights?

A Yes, I feel it would.

Q Would it protect the correlative rights of the royalty owners as well as the operator?

A Yes, sir.

MR. KASTLER: If the Commission please, I would like to move at this time for the admission into evidence of Exhibits 1, 2 and 3 heretofore referred to, and that is all of the questions I have at this time.

MR. PORTER: Without objection Exhibits 1, 2 and 3 will be admitted. Anyone have a question of Mr. Bumpass? Mr. Cooley?

BY MR. COOLEY:

Q Mr. Bumpass, how many Ellenburger completions did you say you had on the Learcy McBuffington Lease at the present time?

A We now have two.

Q How many McKee completions?

A We have none at this time.

Q How many proposed completions in each of these pools will you have when the lease is completely drilled up, do you have any idea?

A Well, that is a purely, a function of development and structure. We think it could conceivably be in excess of eight units.

Q Eight completions in each pool?

A No, I wouldn't know that, Mr. Cooley, because I don't know how many wells that we could have in each pay.

Q Now, this automatic custody transfer equipment will be installed only on the Learcy McBuffington Lease?

A That is true.

Q To receive production from that lease alone?

A That is true.

Q Consequently the oil that would be measured on the lease would not be measured in tanks as required in 309 but it will

be measured on the lease?

A I probably overlooked a point. This shows that the battery location would be to the west of No. 4 or that would place that battery location in the southeast quarter of the southwest quarter of Section 13.

Q It would be measured on the lease?

A It would, yes.

Q How often if this lease is drilled to the maximum density, how many wells would there be on there?

A Well, there would be eight for the Ellenburger and eight for the McKee.

Q And, as I understand it, you would have separate testing equipment for each pool?

A Each pay, each pool, yes, sir.

Q Then there would be eight wells being tested by one set of equipment?

A That is true.

Q How often then would it be possible to test each well continuously?

A Well, if we test them a full twenty-four hour period we would be able to get through, well, if we had thirty-two days in a month we could get four per month.

Q It is your opinion that the positive displacement meters, these are positive displacement meters?

A These are what are called dump type meters.

Q Will you explain that and compare them to the positive displacement meter?

A I could stand to be corrected on this, but I understand that is a meter with veins that are moved as oil pass through them, pass through the meter. I don't think you would call it a rotating disc but it is a vein type meter, when oil moves into the meter by the veins moving in and out from the center of the meter they trap a unit volume and it is by that design of the meter that I understand the P. D. Meter gets it's name of a positive displacement meter. These meters here are a vessel of which the fluid is entered, it's entrance and it's leaving of the meter is controlled by valves and actuated by either floats or arrangements of floats and valves where you trap a specified volume in the meter and that cycle is complete in that when the valve is actuated, say the opening valve is opened, the fluid moves into the meter and while this is being accomplished the valve that will allow the fluid to leave the meter is closed when the vessel fills to the upper level a float will be actuated to close the inlet valve and it will be discharged then through the outlet valve. There is no interference there between the inlet and the outlet of the fluid. That is in my opinion the main difference in the types of meters. This is a dump type meter.

Q I believe you stated a few moments ago that the accuracy

of this dump type meter is at least as good as a manual type measurement?

A That is true, based on this information and what we have been able to gather.

Q The amount of oil for which you will be paid by the pipe line will not be measured by the dump type master meters. Will there not be another meter between the 1,000 surge tank and the pipe line?

A That will be the P. D. Meter.

Q The equipment shown on Exhibit Two?

A Yes, sir. In the P. D. Meter Unit that meter there it's illustrated by that circle between the Dearerator and Prover Meter Connection.

Q Do you feel that there would be any appreciable discrepancy in the volume of fluid passing through the P. D. Meter into the pipe line and the combined totals of the fluid passing through the dump type meters on the automatic custody equipment?

A I don't believe there will be an appreciable error, yet I think we can not expect them to flow within 100%. I just formed that opinion based on what is accurate when we talk about the meter accuracy versus tank gauge accuracy.

Q Aren't there going to some elements beside accuracy, some settling and evaporation? Is there any way you can lose volume of fluid between the dump type master meter and your

automatic custody equipment and the point where the oil is metered into the pipe line?

A All right. To answer your question we are trying to equip this such that that difference will be a very minute amount. I would like to restate that the dump type meter will be temperature compensating as is the P. D. Meter so that will place our barrels at the correct temperature for reading which they should flow. The P. D. Meter will have worked into the metering part of the meter, that is in the counterpart a shrinkage factor which will take care of the decreased volume in the dump type meter because of the gas in solution. Say it is at fifty pounds we have a certain amount of gas in solution, at fifty pounds that meter will be set after the shrinkage factor is determined to allow us to have as near a barrel or if that is a barrel dump which this proposed to be one barrel dump as near as one barrel dump as we can effect.

Now, we have our temperature compensation and we have our shrinkage factor and the P. D. Meter has its temperature correction and the fluid going through it should have the same amount of gas in it since we have taken into consideration the shrinkage factor in the oil in the dump type meter so that the accuracy should be very close.

I mean the agreement of the meter from one with the other should be very close. I don't think we'll be able to get 100%.

Q My point in this line of questioning I feel it would

certainly be necessary that your allowable production would be determined by the measurements on your dump type meter regardless of what your sales were?

A Your allowable would be what?

Q When you have produced your allowable as reflected by your dump type master meter in the automatic custody system then that pool would have to be shut in?

A That is true. That will be affected by the Set stop.

Q The allowable control will be affected at the dump type meter and will not be a combined allowable at the positive displacement meter?

A That is true. We have a set stop counter on that other meter too, it's just a further prevention.

Q You said the automatic equipment could keep the wells within their monthly allowable tolerance. Will it be possible to keep them within the daily allowable tolerance provided by Rule 302, Roman numeral one?

A We will endeavor to do so, not to produce over 25% of the daily allowable.

Q And the equipment is so designed --

A That is true. If we take a test and it is exceeding that rate --

Q -- it can be adjusted?

A Adjusted, yes.

MR. PORTER: Mr. Nutter.

BY MR. NUTTER:

Q Mr. Bumpass, who is the purchaser of the oil from your McBuffington lease?

A Tidewater.

Q Have you discussed this installation with Tidewater?

A Yes, sir.

Q Are they agreeable to the use of an automatic custody transfer system?

A I understand that they are, sir.

Q I think you stated that for the time being at least the only formation that would be producing into this system would be the Ellenburger unit. You have no McKee wells completed?

A That is correct.

Q Is this 1,000 barrel tank to be installed, has that tank been strapped or would it be strapped?

A Yes, sir.

Q In other words, you know the volume of it and you would only be producing one formation into it you could probably run a series of tests to determine the accuracy of your dump type master oil meters?

A Yes, sir.

Q By crude of that tank, could you not?

A Yes, sir, we could.

Q You have never proved them in the field?

A That is true.

Q This would give you an opportunity to do so?

A Yes.

Q Would Gulf be willing?

A We certainly would. We would do that in any event because we are interested in obtaining this information ourself.

Q Mr. Bumpass, your application includes the question to authorize the production of the wells on the lease in excess of the monthly allowable tolerance?

MR. PORTER: That portion of the application was withdrawn.

MR. KASTLER: Withdrawn.

A Yes, sir.

Q Mr. Bumpass, will this automatic custody transfer system require as much attention as a normal tank battery installation would?

A Well, I think --

Q Personal attention on the part of the pumper or switcher?

A Well, I think it will require less after he becomes familiar with it and we become familiar with it.

Q In other words, wouldn't be any attendant on the lease --

A No, sir.

Q -- as frequently?

A That is true. That is one way we can save man hours by spreading him over other areas to handle other properties.

Q Do you think that with all the electric gadgets and automatic shut-in devices that you have made adequate protection to avoid the waste of oil if you have a line break since you wouldn't have an attendant on the lease as frequently?

A Well, there can always be continual improvement on something. If the need so arises we will, we have it designed for fail safe conditions, but if a flow line was to rupture it would be no more difficult than our present operations, we would find that when the pumper made his next round.

Q But the pumper wouldn't make the rounds as frequently on this installation?

A No, sir.

Q Now, when you are running oil out of the 1,000 barrel tank what happens to the production from the wells?

A It will continue to enter the 1,000 barrel tank.

Q In other words, this is not a measuring device in any way, it is just a storage tank?

A Just a surge tank, I think it is referred to.

Q In the event that the B. S. & W. Monitor reroutes the oil to the treater --

A Yes, sir.

Q -- what happens to the wells?

A When the fluid level builds up in the heater treater due to the termination of the passage of the fluid through it then the high level switch in the treater will shut in the wells as the header.

Q They are shut in at the header and not the well head?

A There is a valve shut in at the header and then there is a pressure sensitive valve that is shut in at the well.

Q Have you made provision in your installation here to calibrate the positive displacement meter?

A Well, we have here a proved meter connection but for sometime until we have enough P. D. Meters to wear and perhaps a prover tank or a prover meter why we will use the services of a firm in Midland, who is a representative of the particular type of meter that we continue to calibrate our meter.

Q It will be possible to calibrate the P. D. Meter at regular intervals?

A Yes, sir.

Q In response to Mr. Cooley's question you said that the allowable production could be set on the dump type meter, would it be the allowable production for the month?

A That is true.

Q The wells would not have to exceed the monthly allowable production?

A No, we don't intend for them to exceed the monthly.

Q But there would be no control over producing within the 125% daily tolerance?

A Yes, sir, we would have our wells flowing on choke and these chokes sizes would be determined after the automatic well test had been performed and after the wells had been set on their allowable or within 125% of the allowable, then they would be producing, we could assume they would be producing at that same rate during normal production operations.

Q An effort would be made by sizing the chokes to produce the daily allowable or within 125% of it?

A Oh, yes, sir.

MR. PORTER: Does anyone else have a question of Mr. Bumpass? Mr. Cooley.

MR. COOLEY: I have one more question.

BY MR. COOLEY:

Q How, in this equipment, do you determine your lease storage at the end of the month?

A You can't do it by pays, Mr. Cooley. In other words, to say that some barrel in this tank is McKee. That is why we felt the necessity, that is why we have to have a meter here, the master meter from each pay before it goes into that tank.

Q You don't even have a method of determining how much total barrels of oil you have on hand at any given period do you, you have no provision for testing the amount of oil or measuring

the amount of oil you have in storage at any given time, do you?

A No, just gauging it I guess, that's the only way I would know how to do it.

Q It would have to be mainly gauged at the end of each month?

A Yes, sir. That's the only way I can see right at this time to do it.

Q Would you need another automatic gadget?

A Well --

Q Gulf would be willing to determine the amount of oil they did have on hand as required by C115?

A Yes, sir.

MR. COOLEY: That's all the questions I have.

MR. PORTER: Anyone else have a question of Mr. Bumpass? The witness may be excused. Anyone have anything further to say in this case? We'll take the case under advisement.

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 Hearing before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me and/or under my personal supervision; that same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 27th day of November, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1959.