BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 16, 1960

IN THE MATTER OF: Application of Amerada Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the Monument-McKee Gas Pool condensate and Monument Pool oil production from all wells located on the Amerada State B-869 lease consisting of the SW/4 of Section 36, Township 19 South, Range 36 East, Lea County, New Mexico. Applicant proposes to separately meter only the Monument-McKee Gas Pool condensate, and to gauge the commingled production in common tankage.	Case 1917

BEFORE:

Honorable John Burroughs
Mr. A. L. Porter
Mr. Murray Morgan

TRANSCRIPT OF HEARING

MR. PAYNE: "Case 1917. Application of Amerada Petroleum Corporation for permission to commingle the production from two separate pools."

MR. KELLAHIN: If the Commission please, Jason Kellahin, Kellahin and Fox, Santa Fe, representing Amerada. I have associated with me Mr. H. D. Bushnell, a member of the Oklahoma bar.

MR. PORTER: Mr. Bushnell.

MR. BUSHNELL: We have two witnesses to be sworn in.

MR. PORTER: Would you have them stand, please?

(Witnesses sworn.)

MR. BUSHNELL: If the Commission please, Amerada, the applicant, requested that this matter be heard before the Commission instead of at an Examiner's Hearing, and I would like to explain here the reason for that request. Rule 303 as recently amended is in two parts. Rule 203-A, the first part in effect prohibits commingling before marketing, and to that extent is substantially the same as the old Rule 303. The second part, Rule 303-B, the new amended portion authorizes exceptions upon administrative approval. Implicit in Rule 303-A, of course, is the Commission's power to grant exception after notice and hearing. One of the requirements to obtain administrative approval under sub paragraph 3, and this is only one of several, is a showing that the commingled product can be separately measured accurately.

Implicit in that finding, of course, would be a similar finding to be made by the Commission after notice and hearing to grant an exception under Rule A. In the mid portion of 1959 Amerada filed an application in this same field for authority to commingle the Grayburg and Tubb zones from a single State lease. Although we did obtain an order authorizing that commingling, contrary to our position and as a part of that order was the rule that we be required to seprately meter either zone. We are of the opinion that that is an indication of perhaps a policy of the

Commission that separate metering of either zone makes for greater accuracy of the total production plus the shrinkage to be allocated to either zone.

Amerada takes the position that that does not establish additional accuracy, that the metering of one zone is adequate, and is as accurate as the metering of the two is, and the purpose of this hearing today is to present that testimony to the Commission. With those opening comments, I will proceed with the examination of the witness.

MR. PORTER: In other words, you are going to try to convince the Commission that you were right in the first place?

MR. BUSHNELL: Yes, sir, I guess that's the effect.

RICHARD E. BROSCHAT

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

DIRECT EXAMINATION

BY MR. BUSHNELL:

Q Would you state your name and company employment, please?

A My name is Richard E. Broschat. I'm employed by Amerada Petroleum Corporation.

Q In what capacity?

A As District Petroleum Engineer, Monument, New Mexico.

Q Have you testified before this Commission in a similar capacity at prior hearings?

A Yes, I have.

Q In the course of your duties with Amerada, does the areas covered by this application come within your jurisdiction and field of study?

A Yes, it does.

Q Have you made a study of the matters pertaining to this application, that is the lease known as the State "F" Lease and Amerada operates the lease?

A Yes, I have.

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

Q I hand you what is marked as Amerada's Exhibit No. 1, which is a plat of lease ownership showing thereon, outlined in red, the area covered by the Amerada owned State "F" Lease, located in the Southwest Quarter of Section 36. This plat also shows the names of lessees of offset operators. Now, what zones are you producing from, currently producing from on that lease?

A On our State "F" Lease, Wells No. 1, 2, 3 and 4 are completed in the Grayburg-San Andres formation in the Monument Pool.

Q Those are designated by the dark blue?

A Dark blue circles. Well No. 1 is also dualed in the Eumont Gas Pool.

Q Now, the Eumont Gas Pool is a dry gas and doesn't pertain to this particular application, is that right?

A No, sir, it produces dry gas only. Well No. 5 is completed in the Monument-McKee Gas Pool and produces gas and liquid hydrocarbons.

Q How are you now measuring the gas condensate from the McKee and the Monument oil?

A At the present time we're producing the production from the four Monument wells into separate tanks and the condensate from the McKee is produced into separate tanks.

Q And they're currently being separately measured?

A Yes, sir.

Q Now the Monument production is allocated production, is that correct?

A Yes, sir.

Q The McKee is not?

A No, sir. Production from the McKee gas well is dependent upon gas requirements.

Q Just based on the amount of takes the purchaser makes?

A Yes, sir.

Q Are you meeting the allowable of the Monument wells?

A Wells Numbers 2, 3 and 4 are top allowable wells at the present time. Well No. 1 is a marginal well and has an allowable of 20 barrels per day at the present time.

Q Now, have you made a schematic drawing of the proposed method of commingling?

A Yes, sir, I have.

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

Q I hand you what is marked as Amerada's Exhibit No. 2, which is a schematic drawing. Would you explain what that purports to show?

A Exhibit No. 2 is a schematic diagram of our proposed tank battery on the State "F" Lease. Beginning at the left we can follow the route of the Monument oil from the four Monument wells. It will go through a low-pressure separator from which gas will be taken to low-pressure gas sales and then through a heater treater and then the oil will go into the stock tanks. Fluid from the McKee gas well will first pass through a line heater and then through a low temperature separator from which high pressure gas will be taken to sales and then through a treater and then through a meter where the condensate from the McKee zone will be metered.

Q What type of meter are you using?

A We plan to use a dump type meter.

Q Is that the more accurate method of metering?

A In this case we feel it will be.

Q Is this method, the dump type meter, one that's commonly used within the industry?

A Yes, it is.

Q How do you purport to determine the amount of production from the McKee, considering the shrinkage?

A Well, take periodic tests at least once a month in which the condensate from the McKee will be routed into a separate tank and the production in the tank will be measured and the meter will be adjusted to compensate for any shrinkage that takes place between the dump meter and the actual production in the stock tanks.

Q Then how will you compute the amount of production from the Monument zone?

A Total production from the two zones will be measured in the stock tanks and we will know the McKee production from our meter and the difference between the two will then be the production from the Monument zone.

Q In your opinion is that a method as accurate as it would be if you were using a meter on either zone?

A Yes, it is.

Q Now, referring to the hearing that was commented on in the opening remarks in the early part or mid portion of 1959 on the State "Q" Lease, which is a state lease owned and operated by Amerada in this same field. You have produced commingled production from that lease, the Grayburg and Tubbs since October, 1959. Have you made a study of the comparison or the tolerance by comparing the metered production with the stock tank production?

A Yes, I have.

Q What conclusion did you reach from that study?

A We concluded that the difference between the metered production and stock tank production was extremely small, in this case less than one percent.

Q Is that a tolerance within the one percent that would be expected on this type of meter?

A Yes, that is within the limits of accuracy of the meter.

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

Q I hand you what has been marked as Amerada's Exhibit 3, which is a tabulation. Is this the tabulation from which you have just testified your conclusion?

A Yes, it is.

Q Would you explain it, please?

A In this tabulation we have separate meters on the Grayburg and Tubb zones on our State "Q" Lease. The columns at the left show the monthly production as shown by our meters from the two zones and then the total metered production. The stock tank production is what was actually measured in our stock tanks. Then the difference between the two has been tabulated and percent difference has been tabulated.

Q Now, the period covered by this report represents the total period of commingled production from this "F" Lease, is that correct?

A From the "Q" Lease.

Q The "Q" Lease? A Yes, sir.

Q And the metered figures for each of the two zones for the five months shown represents the corrected figure after you have deducted shrinkage?

A Yes, sir. The meters have been calibrated for shrinkage.

Q I note for the month of November you show your largest figure in terms of percentage, 4.61 variation. Do you have any explanation to make in reference to that?

A During the month of November we experienced mechanical difficulties with one of our meters that was corrected in the next month and we were able to check out very closely again.

Q The remaining figures for the period remaining, however, reflect figures where in your opinion there was no mechanical difficulty, is that right?

A No, I think that is just the normal tolerance in metering of this type.

Q Now, Mr. Broschat, can you draw any conclusion from this study where you have been using a meter on either side to determine the cause or source of tolerance?

A Well, I think one reason for variation would be temperature.

Q Does the existence of two meters, one on either side, give you any answer as to the source of that tolerance from

either zone?

A No, I don't believe it does.

Q Would you have the same amount of tolerance if you had had meter on one zone?

A Yes, I believe you would.

Q What's the purpose of Amerada's application for commingling in this instance?

A On our State "F" Lease by commingling we propose to increase the value of the liquids sold on this lease.

Q And to increase the net return to Amerada, is that correct?

A Yes, sir.

Q And, based on the experienced production of 1959, have you made some calculations of what you estimate will be the net increase to Amerada on a monthly basis?

A Yes. As a result of commingling on this lease we hope to increase our net income by approximately $164.00 per month.

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

Q Now, you have made a tabulation of these figures, is that correct?

A Yes, sir.

Q I hand you what is marked as Exhibit No. 4 which is that tabulation prepared by you or by someone under your supervision.

A Prepared under my supervision.

Q Would you state what that shows?

A This shows an economic comparison between separate production and commingled production. Our average monthly production from the Monument pay, calculated three-month average, is 3499 barrels per month. Gravity of this oil is 31° and the present price is $2.68 per barrel. Average condensate production from the McKee gas well during 1959, twelve-month average was 684 barrels per month. The gravity of the condensate is 67°, and the present price per barrel is $2.73.

If the two pays are commingled the gravity of the commingled production will be 35.8°, price per barrel for this gravity crude would be $2.80, and the net increase 7-8 would be $164.29 per month.

Q Have you made a calculation of the net interest as to the royalty interest to the State of New Mexico?

A That would be approximately $23.00 a month, or $275.00 per year.

Q Is it my understanding, Mr. Broschat, then, that in conclusion, based on the testimony here stated it is your opinion that no greater accuracy, either as to the total production from either zone or as to the amount of shrinkage traceable to either zone, will be obtained by using a meter on either zone compared to using a meter on one zone and computing the production of the other zone

in the manner here proposed by you?

A No, sir, I don't believe any greater accuracy would be obtained by using the two meters.

Q Mr. Broschat, do you have any knowledge whatsoever that the use of one meter on one zone would cause any waste?

A No, sir.

Q If a meter on one zone will cause no waste, then the use of two meters, one on either zone, would not prevent any waste then I assume, is that correct?

A That's correct.

Q Do you have any knowledge that the use of one meter on one zone would be detrimental to the offset operators who owned wells completed in the allocated zone?

A No, sir.

Q As a matter of fact, I would like the record to show that offset operators, which include Shell Oil Company, Gulf, Superior Oil Company, have without qualification given consent to, I'm not sure whether the Commission has copies of these letters, and I'll be glad to offer mine into the record, also that Sun Oil Company has given a qualified consent to the extent Sun Oil Company prefers that the proratable liquid be measured by meter rather than the condensate.

In that connection, Mr. Broschat, in your opinion does it make any difference which side is metered?

A No, sir, I don't believe it would make any difference.

Q So far as the accuracy is concerned?

A So far as the accuracy is concerned.

Q But if there is any administrative reason for the Commission wanting you to meter the allocated side, you would be glad to do so, is that correct?

A Yes, sir.

Q Are all of these exhibits, except for the waivers here mentioned, prepared by you or one under your supervision?

A Yes, sir, they were.

MR. BUSHNELL: I would like to offer those into the record, please.

MR. PORTER: Without objection, the exhibits will be admitted.

MR. BUSHNELL: Would you like copies of those letters?

MR. PORTER: Mr. Payne, do we have copies of those letters?

MR. PAYNE: We haven't received any that I'm aware of.

MR. PORTER: I think there are some in the case file, Mr. Payne. I think we can check that for you in just a moment, Mr. Bushnell.

For the record, the Commission has a letter from Skelly Oil Company concurring in the application, and Gulf, they offer no objection, Superior offers no objection, and Shell.

MR. BUSHNELL: Well, to complete your record I will offer

here Sun's letter prepared by A. R. Ballou and Superior Oil Company is not an offset operator, but the other operators are as shown by Exhibit 1. That's all the questions I have of this witness at this time.

CROSS EXAMINATION

BY MR. PORTER:

Q Mr. Broschat, I believe that you testified that there are three top allowable wells in the Monument Pool producing from the Monument Pool?

A Yes.

Q And one marginal well?

A And one marginal.

Q On the State "F" Lease? A Yes, sir.

Q And they propose to produce into common tankage with a McKee gas well which is producing some liquids?

A Yes, sir.

Q Could you tell us about how much liquids the McKee formation is producing? Of course, I realize it depends on the gas takes.

A Mr. Porter, on the last exhibit we showed 684 barrels per month and that was an average over a twelve-month period.

Q About 22 barrels a day?

A Yes, sir, it fluctuates from month to month.

Q Then your Monument production would be slightly in excess

of 100 barrels a day?

A Yes, sir.

Q And in your proposal you are proposing to meter the unprorated McKee liquids?

A Yes, sir.

Q And not to meter the prorated oil liquids from the Monument pay?

A As we stated, it doesn't make any difference to us.

Q You would do it either way?

A We would do it either way.

MR. PORTER: Mr. Payne, do you have a question?

MR. PAYNE: Yes, sir.

BY MR. PAYNE:

Q I believe you testified, Mr. Broschat, that you would have an additional revenue of $164.00 a month if you are allowed to commingle these two zones, is that right?

A Yes, sir.

Q You'll have that increased revenue whether you have to separately meter each zone or not, wouldn't you? You'll still be commingling?

A Yes, sir.

Q How much does a meter cost, Mr. Broschat?

A Oh, a meter of the type we're thinking of would probably be around $600.00.

Q So that it would only take you some four months to pay out the cost of the additional meter if you are allowed to commingle and the order requires separate metering, is that right?

A Yes, sir.

Q Mr. Broschat, apparently you have some manner of calculating the shrinkage factor, is that right?

A We can compensate our meters for shrinkage by checking the meter reading against a tank gauge.

Q How often do you check this?

A Once a month.

Q Once a month? A Yes, sir.

Q If you do meter one zone and use the subtraction method to determine the production from the Monument Pool, it is true, is it not, that all the shrinkage in the absence of the shrinkage factor would be charged against the Monument zone?

A If the meter was not adjusted that would be the case. However, it will be adjusted for that.

Q Now, Mr. Broschat, aren't there a number of factors that influence shrinkage which change from time to time?

A Oh, factors such as temperature will influence the amount of shrinkage.

Q Does a rise or lowering of barometric pressure also influence the amount of shrinkage?

A I don't think it would be significant.

Q It does affect it, doesn't it?

A I don't know.

Q If you open a theif hatch would that affect the amount of shrinkage?

A If it was left open for a great length of time it would.

Q A change in the gravity of the oil produced from either or both zones would also affect shrinkage, would it not?

A To a certain degree.

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

BY MR. PORTER:

Q Mr. Broschat, do you think the use of two meters here would offer any safeguards, as far as the Commission is concerned, that the use of one meter would not?

A It might serve as an additional check just as two meters in series on one side would serve as check, one against the other. However, we don't feel that it is justified.

Q You think your company would not object to the principle of the Commission allowing commingling of prorated and nonprorated liquids with only one of the liquids being metered?

A I don't know if I follow your question there.

Q Well, it's apparent that you wouldn't, since your application is asking for that.

MR. BUSHNELL: That's right

MR. PORTER: Any further questions?

MR. PAYNE: Yes.

BY MR. PAYNE:

Q I believe you testified that you had some difficulty here during the month of November with one meter being off for some reason?

A Yes, sir.

Q Now, if you were metering both zones, it would come to your attention more rapidly, would it not, that one meter was not functioning correctly?

A I don't think it would. The production from our Monument wells is settled, we know what those wells will make every day, any discrepancy we would know it if we only had one meter.

Q Well now, in view of the fact one well was marginal, how do you know how much it's going to make every day? Apparently it is declining, is it not?

A It has an allowable of 20 barrels per day and that is what the well is capable of making. We run periodic tests on all our wells.

Q That's a relatively constant figure?

A Yes, sir.

MR. PAYNE: Thank you.

MR. PORTER: Mr. Nutter.

BY MR. NUTTER:

Q Mr. Broschat, you stated that you would make your meter correction once a month, is that correct?

A We would run a check once a month, yes, sir.

Q Now, any factor that you would derive from the once a month test would be applicable for the following month, is that correct?

A Yes, sir.

Q And that factor would depend upon the conditions the day that you ran your calibration?

A Yes, sir.

Q And if conditions changed during the month, then the factor would be in error?

A There would be certain random errors, which is inherent in any metering.

Q Now, your Exhibit No. 3 shows the small percentage of error that you encountered on the State "Q" Lease. This test was run over a five-month period, I believe October through February?

A Yes, sir.

Q This is in the coldest part of the year down in Lea County, is it not?

A Well, as I recall, October was quite warm.

Q October through February wouldn't be as warm as May through September, however, would it?

A I believe this test is valid for the entire year.

Q And shrinkage is a factor of temperature as well as other things?

A Yes, sir.

Q So the conditions here were ideal as far as temperature was concerned to get a good comparison?

A I wouldn't say they were ideal. We had considerable temperature fluctuation during the entire five-month period.

Q The point I'm trying to make, Mr. Broschat, is the fact that you stand a chance to get a better comparison by taking a winter test than by taking a summer test, wouldn't you?

A I don't know if you would or not.

Q You don't feel that temperature is a factor in shrinkage?

A Temperature is a factor in shrinkage, however, I believe it is a factor that can be compensated for.

Q Mr. Broschat, your State "F" Lease, during the month of April, assuming that three of the wells are top allowable wells and one of them is capable of making 20 barrels a day, would have a total allowable of some 3750 barrels for the month. Could you give me any idea as to what storage facilities you would have on this tank battery which you propose?

A The one we propose?

Q Yes.

A Or the one we have now?

Q The one you propose.

A We aren't entirely sure. I think we probably will have three tanks.

Q What size? A Three 500 barrel tanks.

Q Your allowable per day would be some 125 barrels, is that correct?

A Yes, sir.

Q So it would take at least three or four or five days to fill up a tank in order to be able to run it?

A Yes, sir.

Q There would be some weathering shrinkage of the oil during the time it's sitting in those tanks for three or four or five days, right?

A Yes, sir.

Q When you make your calibration to determine the accuracy of the meter, do you place that distillate in the tank and allow it to weather for three, four or five days before you make your correction?

A We haven't been. However, I think by far the greater part of the weathering will occur during twenty-four hours.

Q And you allow it to stand in the tank for twenty-four hours before you measure it then?

A Yes, sir.

Q Just how do you arrive at the shrinkage factor, Mr. Broschat?

A Well, as we stated, the production into the tank is measured by standard measurement tank gauge and if our meter is

reading either long or short, we have adjustments on the meter which will bring it in line with what is actually measured in the tank. It's a matter of compensation to get our meter to read what is in the tank.

Q Mr. Broschat, how do you determine how much of this difference is meter error and how much of it is shrinkage?

A By meter error, what do you refer to?

Q Well, I'm sure that all meters have a certain amount of error that may be slippage of fluid past the veins of the meter or a number of other things. How do you determine how much of this is some of the other things and how much is actually shrinkage of the fluid after it is in the tank?

A In the dump type meter that we propose using we will measure a positive volume of fluid in a vessel, and I don't see where any other meter error would necessarily be a great factor. That's all I have.

Q Do you think that on a dump type meter the only error that you would ever encounter then would be the factor of shrinkage?

A I think that would be by far the greatest, I think the others would be random errors inherent in the meter.

MR. NUTTER: I think that's all.

MR. PORTER: Anyone else have a question of the witness?

BY MR. PAYNE:

Q Assuming you had five percent shrinkage of the Monument

zone, would this allow you to produce five percent in excess of your allowable?

A We propose to measure the Monument production, the Monument production will be weathered in tanks when we measure it, since we will be subtracting the McKee production from the total.

Q So that if your shrinkage factor is correct, you will be producing exactly your allowable?

A Yes, sir.

MR. PAYNE: That's all, thank you.

MR. PORTER: Any further questions? Mr. Bushnell.

RE-DIRECT EXAMINATION

BY MR. BUSHNELL:

Q Mr. Broschat, we can clear up a couple of points here that have been inquired about. Let me ask you, are you in this hearing taking any issue as to the validity of the principle of using meters as an accurate method of computing quanitites?

A No, sir.

Q In your opinion, is your company taking such a position?

A No, sir.

Q Is there any rule in the orders of this Commission covering your "Q" Lease which requires you periodically to check the accuracy of your meters?

A Yes, sir, I believe.

Q There is a rule requiring you to check the determination

of the amount of shrinkage?

A I believe the rule states that the meters shall be checked for accuracy once a month.

Q And you would check those once a month for the purpose of computing the amount of shrinkage, is that correct?

A Yes, sir, that is correct.

Q As a matter of fact, your Exhibit No. 4 shows the comparison of the meter production with the stock tank production on both sides, as metered on both sides, is that correct?

A Yes, sir.

Q So that any variation in the month of November which you were asked about is reflected where they're metered on both sides, is that correct?

A Yes, sir.

Q Does the change of gravity affect the accuracy of metering in this type of meter in your opinion?

A In my opinion, no.

Q Do you recognize, or is it your opinion that changes of weather is a factor for determining the amount of shrinkage?

A Changes in temperature will influence shrinkage to a small degree.

Q And if the change of weather changes the temperature of your oil, it will make a change in the amount of shrinkage, is that correct?

A Yes, sir.

Q That's one of the factors? A Yes, sir.

Q Those factors or differences of factors exist in whether you are using one meter or two meters, is that correct?

A That's correct.

Q And if the factors are known, is it your opinion that that would affect the determination of the accuracy of the amount of production?

A No, I don't think it would.

Q What is the allowable based on, is it based on the amount metered or the amount run from the tank?

A It's based on the amount run from the tanks.

Q Is that after weathering or before weathering?

A It's after weathering.

MR. PORTER: That's all the questions?

RE-CROSS EXAMINATION

BY MR. PAYNE:

Q How does your Exhibit No. 4 indicate in any way that you can accurately compute shrinkage?

A I don't believe I said it did.

Q Then what is the purpose of Exhibit 4?

A The purpose of Exhibit 4 was to show the saving or the increase in value of the crude by commingling.

Q Maybe I have the wrong number.

MR. BUSHNELL: I think you are referring to the Exhibit 3.

Q It's the one that has at the top "State "Q" Lease".

MR. PORTER: Exhibit 3.

Q Does Exhibit 3 in any way indicate that you can accurately determine the shrinkage?

A Yes, I believe it does.

Q Now, it is based, is it not, on two zones which are each separately metered?

A Yes.

Q But you propose to separately meter only one zone?

A Yes.

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

MR. PORTER: Any further questions? The witness may be excused.

(Witness excused.)

R. S. CHRISTIE

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

DIRECT EXAMINATION

BY MR. BUSHNELL:

Q Would you state your name and company for which you are employed?

A R. S. Christie, Amerada Petroleum Corporation.

Q In what capacity? A Proration engineer.

Q Have you ever testified before this Commission in that capacity in prior hearings?

A Yes, sir.

Q Mr. Christie, based on your experience in the oil industry, do you have any opinions to express concerning the accuracy either as to the total production or as to the amount of shrinkage to be attributable to zones where you are metering only the one and computing the quantity of the other zone by the method testified to by the prior witness?

A I think the volumes you obtain, one by meter and the other by difference in the tanks, is a reasonable, accurate method.

Q That is both as to the quantity of the oil and considering the factor of shrinkage, is that correct?

A Yes, sir.

Q That is true also regardless of the variation of the factors of shrinkage?

A Yes, it is true.

Q It is your opinion that you obtain no more accuracy by the use of a meter on either zone?

A No more accuracy, no, sir.

Q Now, do you have any comment that you would like to make concerning the requirement in an order authorizing commingling which requires an operator to put meters on either of the two zones?

A I believe that where you can obtain a reasonable, accurate measurement with the one meter, I don't think the Commission should require an operator to install the two meters. Counsel for the Commission raised the question of the cost of the meter. I think he was given a figure of approximately $600.00. That in itself in a single instance probably wouldn't be worth complaining about if that was all we were arguing about was $600.00, but this has occurred, this would be the second time that we have filed an application for this type of production, gauging and metering production. I'm sure that we'll have others in the future, and not only that, all the other companies that are operating in this area or in New Mexico will probably have similar applications.

Taking the sum total of all the applications that might come in for something like this, if the Commission would grant it, could amount to a substantial figure.

Now, I'm not crusading for the other companies here by any means, but I think that all the companies, and the Commission is well aware of this, are trying every way they can to reduce expenses, and this is just one way to do it. I think where the accuracy of the production which is either measured or metered is satisfactory, I see no reason why the industry should be burdened with that additional cost even though it is minor insofar as one application is concerned.

I understand that there have been several applications granted

in the past for using one meter, but those I understand are, also have been on marginal wells. I'm not so sure that the Commission should make a distinction between a marginal well and a non-marginal well as long as you are talking about metering production. Talk about the shrinkage for a minute, I'm not quite clear whether the Commission is interested in the actual shrinkage of the oil. If they are, there's a lot better or more accurate way of their determining shrinkage by calibrating a meter against measured volume. Your engineering staff knows that very well. I think the only thing that you should be interested in is what you gauge and sell and whether you measure it by two meters or one meter and take the difference by tanks, I can't see where it makes any difference.

That is particularly true on a lease where your two zones are on the same lease. Now, if you were commingling production from two different leases with different royalty owners and different operators or something like that, that's a different problem, but where you have a single lease with the interest the same, I don't see that it makes any difference whether your meter calibrates within one percent or two percent or whether you have one meter or two as long as you do not produce over and above your allowable assigned to your allocated wells.

I might, it seems to me that the fact that we have received waivers from offset operators would indicate that the issue of

correlative rights is certainly not involved here. Otherwise, we wouldn't have got these waivers signed by these offset companies. I think that the Commission should grant this application. I think it's a reasonable thing to ask for. I think it's something that the other companies are interested in, and if they feel that they can save money, we are trying to save here, they will probably file similar applications.

Q You think the matter here requested is a matter of good conservation practices then, I take it?

A Well, actually, as I define conservation, I don't think it really has anything to do with conservation.

Q You are not asking for anything?

A We are not creating any waste. We are not disturbing any correlative rights to any extent. We aren't, if we were producing both of these zones into separate tankage we have a certain amount of loss due to evaporation and so forth, we will have probably even less if we commingle them, because the condensate will be more or less stabilized in the crude, and I think if there is any conservation at all I think it would be to the interest of conservation.

Q It is not detrimental to conservation?

A It certainly is not in my opinion.

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

CROSS EXAMINATION

BY MR. PORTER:

Q Do you think the fact that one of the zones is unprorated should have any bearing on the Commission's decision?

A No, I really don't. It seems to me as though it's rather a simple matter that if you gauge or meter one zone and take the other by difference, it doesn't make too much difference which one you do it with. I'll admit that from the Commission's standpoint it would probably be better to meter the allocated production and get the other by difference. Since there is a variation in the amount of condensate that's produced from month to month, whereas your production will be fairly constant from your oil wells.

Q There's no ceiling on the condensate production?

A That's right.

BY MR. PAYNE:

Q Mr. Christie, the ownership is common at all depths on this lease, isn't it?

A Yes.

Q I would like to ask you a question just for a matter of information since we have you on the stand and available. Is there any correlation between the amount of money that you might save in New Mexico because you receive an order allowing you to do something which a general rule prohibits? Is there any correlation between that saving and the amount of money budgeted in New Mexico?

A I doubt very much if the company would consider $600.00

in their budget one way or the other. That would be, more or less come under your nominal operation expenses. I don't think it would even show up in the budget. Of course, we're also saving, if this is granted we are also saving in the salvage of tank that we can use other places, and it amounts to considerably more than just one meter. I don't think the Commission should, just because we can pay this thing out, should make us do it.

Q I agree with you there.

A The same thing is true about drilling wells. Just because you can pay them out by drilling more, there is no reason that you should drill more wells. There's always a question of drainage.

Q What I was actually interested in though was if you have achieved a certain amount of savings in New Mexico because you are getting exception to a particular rule, is it actually reflected for that state in your budget or do they look at their management as a whole?

A I would say they look at them as a whole.

MR. PORTER: The witness may be excused.

(Witness excused.)

MR. BUSHNELL: If there is any implication that we are back saying that the Commission was wrong, I can't deny that, but I hope that you won't attribute any ill will to us.

MR. PORTER: We will distribute ill will equitably

among everybody.

MR. BUSHNELL: That's all I have.

MR. BRATTON: Mr. Bratton, Humble Oil and Refining Company. Humble Oil and Refining supports Amerada Petroleum Corporation in their application in Case 1917, as a matter of principle. Humble feels that the simplest and most economical means of accurately determining the separate production from separate fields or leases should be approved. Humble feels as a matter of principle that Mr. Christie, as so ably stated here, that certainly these are unsettled times in the oil industry, and I believe in answer to Mr. Payne's question that certainly the cost of doing business in New Mexico is an item that is considered not necessarily by one company, but certainly by the oil industry generally, the cost of production.

I don't mean to suggest that what's good for General Bull Moose is necessarily good for the country, but I certainly do feel that in conformity with the Commission's duty to protect correlative rights and prevent waste that an important function they can render to this state is to reduce reasonably the cost of doing business.

Now, I feel that the Commission has become increasingly aware of this and the industry is appreciative of the Commission's concern in this regard and we sincerely request that you continue your careful attention to this matter.

MR. PORTER: Mr. Kelly.

MR. KELLY: John Kelly, Independent, Roswell. I would like to emphasize to the Commission the plight of all producers and especially the independent producers that we are caught in a tight situation or tight economic wise, declining profits due in part, of course, to the declining allowable and in part to the increased cose of labor and material. I, as an individual, support the Amerada application and feel the Commission should aid any operators to reduce their operating cost by allowing a type of situation as Mr. Christie has requested and other situations that might come up in the future. To answer Mr. Payne directly, I operate only in New Mexico. If I cou d save $600.00 on one well I would be spending it on other wells in New Mexico.

MR. PORTER: Anyone else have anything further to offer? We'll take the case under advisement and recess until one-thirty, at which time we will take up Case 1919.

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 28th day of March, 1960.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1963.