

EXAMINER HEARING  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 26, 1958

IN THE MATTER OF: Case No. 1387

TRANSCRIPT OF PROCEEDINGS

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

EXAMINER HEARING  
OIL CONSERVATION COMMISSION  
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----- )  
IN THE MATTER OF: )

The application of Shell Oil Company for per- )  
mission to commingle the production from two )  
separate federal leases. Applicant, in the ) Case 1387  
above-styled cause, seeks an order granting )  
permission to produce the following described )  
leases in the West Henshaw-Grayburg Pool into )  
common storage: )

Taylor Federal Lease consisting of Lots 9, )  
10, & 11 of Section 4; )

Spencer Federal "A" Lease consisting of Lots )  
13, 14, 15 & 16 of Section 4; )

all in Township 16 South, Range 30 East, Eddy )  
County, New Mexico. Applicant proposes to con- )  
tinuously meter the production from each lease. )  
----- )

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: We will proceed to Case 1387.

MR. MONTGOMERY: J. W. Montgomery. I also appear as the  
only witness in that case.

MR. COOLEY: Let the record show that the witness was  
previously sworn in Case 1386.

J. W. MONTGOMERY

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

DIRECT EXAMINATION

By MR. COOLEY:

Q Would you state your name and position again for the record in this case?

A J. W. Montgomery with Shell Oil Company, mechanical engineer in Roswell, New Mexico.

Q You have previously qualified as an expert witness before the Oil Conservation Commission?

A Yes, sir.

Q Will you proceed, please?

MR. UTZ: Is this your Exhibit No. 1?

A Yes, sir.

(Shell's Exhibit No. 1  
marked for identification.)

A Exhibit 1 is a plat of the area with the two leases shown. The leases are the Taylor Federal Lease which is 120 acres in Lots 9, 10, and 11 of Section 4, Township 16 South, Range 30 East; the Spencer Federal "A" Lease which is 160 acres in Lots 13, 14, 15 and 16 of Section 4, Township 16 South, Range 30 East, Eddy County, New Mexico.

MR. UTZ: Mr. Montgomery, I wish you would clear up what these leases are before we go any further. On your Exhibit No. 1 when you refer to them as "Lots", is the little figure up in the corner the lot number?

A Yes, sir. I don't know about my terminology on this, whether

you would call it an unorthodox section or not, but it is a long section. I have another map with me which might clear that up. It contains more than the normal 640.

MR. UTZ: All right, you may proceed.

A The current wells on this plat are shown in blue, filled in, and the Taylor No. 2 has a well which is now in the process of being completed. All of the wells will be or are producing from the Grayburg formation. I believe it's Basil-Grayburg Premier sand. All wells are flowing at the present, with the exception of two, but may require artificial lift equipment later. The flowing tubing pressure is approximately 70 to 125 psi. The gas-oil ratio is on the average between 200 and 450, and one of them is a little higher than that, but they are all less than a thousand.

At this time I would like to pass out our Exhibit No. 2 which is a schematic and operating directions for the proposed header system.

(Shell's Exhibit No. 2  
marked for identification.)

MR. UTZ: Both of these sheets will be Exhibit 2?

A Yes, sir.

MR. UTZ: Would you care to have one marked Exhibit 3?

A No, they both can be marked Exhibit No. 2. On this schematic diagram, the blue lines are either equipment or oil lines. Our valves, separator and P.D. meter are all shown in the blue line. The red line is just our supply gas for the operation of

the valves. To outline the operation of this system, the oil from either lease would flow into the production header where it is routed either to test leg or to production leg of the header itself. Now the production header is shown right here. There are two separate headers for the two leases.

If a well from either lease is on production, oil is routed directly to the production separator for that lease, and then through a strainer, positive displacement meter, sampler, and flow rate controller, all located upstream from the separator dump valve. The crude is then commingled into storage.

For test purposes, the lease pumper manually routes production from a well into the test leg and operates the toggle switch valves. The manner in which these valves are mechanically coupled will prevent production from the Taylor lease being routed into the Spencer "A" production separator during test. Production is routed from the test leg, through the metering separator and by means of a 3-way, 2-position valve into the correct lease production separator.

After a predetermined number of barrels of fluid have been metered, the 3-way valve on the header, it's shown as Item 3, will be actuated to route production from the test leg directly into the production leg without passing through the metering separator.

The volume of oil produced as determined by tank gauges, will be allocated to each lease by the temperature corrected

positive displacement meter readings and composite samples.

In that respect the allocation of production back to the Taylor Federal Lease or the Spencer Federal "A" Lease is essentially the same as was presented to the Commission for the Pearl-Queen Pool, which was Case 1342. Permission for that method of operation was granted by Commission Order R-1101.

We have gone into considerable detail about this in the Bisti and the Pearl-Queen applications concerning P.D. meter applications. This being, as I stated just a moment ago, essentially the same as it was in the Pearl where we discussed the accuracies under this particular type of application, and I would like to move that the portions of Cases 1275, which was the Bisti, and 1342, the Pearl-Queen, that they be introduced in evidence in cases where they may be applicable to this case.

MR. UTZ: As to the operation of the positive displacement meters, you mean?

A Yes, sir.

MR. UTZ: Is there objection to the entrance of portions of Case 1275, of the Bisti case, and 1342, of the Pearl-Queen case, to be entered as part of this record insofar as they pertain to positive displacement meters? If there are no objections, the parts of these cases pertinent to positive displacement meters will be incorporated into this case. You may proceed.

A In this system the storage at the end of the month may be easily allocated and determined to the leases in question. The

crude is sweet crude. We expect no unusual operations such as corrosion or paraffine. I would like to point out that this will be a normal lease operation, in that it will be operated manually by a pumper. We are not asking for automatic production control or testing; all of the valves at the header will be operated manually and in a sense it is identical to all of our other leases wherein the pumper checks the lease daily. We feel that the calibration of the positive displacement meter varies with throughput rather than time and we request that the check of the calibration be on a throughput basis, and in that, we feel that one hundred thousand barrels throughput would be a good basis. However, in view of the similar suggestion in the Pearl-Queen we feel or we would be willing to go along with a six-month check, calibration check of the equipment.

Now all offset operators and overriding royalty owners, with the exception of the Ballard E. Spencer Estate, have signed waivers stating that they have no objection to our proposal. Co-Executors of the Spencer Estate, Mr. J. A. Fairey and B. E. Gorman of Artesia, have been notified by certified mail of our request for hearing. At this time I would like to read the names of the people and who they represent, that have signed waivers, if that is necessary.

MR. COOLEY: Do you have waivers from each of them?

A I can give you copies of the waivers.

MR. COOLEY: You have a copy of each one?

A Yes, sir.

MR. COOLEY: Identify them as a group as Exhibit No. 3 and read the names off, but give us the waivers as Exhibit No. 3 in a group.

A Pan American Petroleum Corporation, by Mr. C. L. Kelly; Elizabeth C. Chaney; Ruby C. Bell --

MR. COOLEY: Just a minute, please. Slow down, we're trying to follow you on these. Elizabeth Chaney was number two?

A They may not be in order with mine.

MR. COOLEY: What was the second one you named?

A Pan American was first, Elizabeth C. Chaney was second, Ruby C. Bell; Aileen T. Taylor; O. F. Featherstone; Pauline V. Trigg, by Joe H. Trigg; W. B. Macy, Western Ventures, Inc.; Malco Refineries, by Donald B. Anderson; General American Oil Company, L. P. O'Neill; Richardson and Bass, and I believe it is E. W. Sampson, but it may be Simpson.

MR. COOLEY: These ten waivers just mentioned shall be identified as Shell Exhibit No. 3 in this case.

(Shell's Exhibit No. 3  
marked for identification.)

MR. COOLEY: These waivers represent all the royalty and working interest, other than one exception previously mentioned?

MR. GORMAN: A lot of these represent not working interest and royalty interest in the two leases he is referring to, do they not, but offset acreage that is not involved in this matter



before the Commission now?

MR. COOLEY: These are waivers from offsets, are they not, rather than from --

MR. GORMAN: (Interrupting) You have the waivers there from the offset people.

A I believe they represent both cases.

MR. GORMAN: Most of them I think you will find are not royalty owners.

MR. UTZ: Will you identify yourself?

MR. GORMAN: B. R. Gorman, one of the co-executors of the Estate of Ballard E. Spencer, deceased, which estate owns one-third of the override on the Spencer lease.

MR. UTZ: All right.

A I think I can clear it up. Aileen Taylor has five percent on the Taylor lease; the Spencer Estate one-third of five percent on the Spencer Federal "A"; O. F. Featherstone has one-third of five percent on the Federal "A"; Mrs. Elizabeth C. Chaney one-sixth of five percent on the Spencer Federal "A"; and Mrs. Ruby C. Bell has one-sixth of five percent on the Spencer Federal "A". According to our records that is the entire royalty interest.

MR. COOLEY: This Aileen Taylor is the Taylor you refer to in the Taylor lease?

A Yes.

MR. UTZ: All of the other waivers are from offset operators?

A Yes.

MR. UTZ: Does that answer your question, Mr. Gorman?

MR. GORMAN: Yes, sir.

MR. UTZ: All right, you may proceed, Mr. Montgomery.

A Our proposal for commingling of production on these two leases has been discussed with the United States Geological Survey and I have their letter which I would like to read at this time.

MR. COOLEY: I would also appreciate it if you would introduce that as an exhibit.

A Yes, sir.

MR. COOLEY: That will be Exhibit No. 4, I believe.

(Shell's Exhibit No. 4  
marked for identification.)

A The letter is to Shell Oil Company in Roswell, New Mexico, Attention: Mr. W. E. Owen. "Gentlemen: Your letter of December 19, 1957, requests our approval of the use of certain facilities for the measurement of oil produced and sold from oil and gas leases New Mexico 06407-B and Las Cruces 060398 in the West Henshaw field, Eddy County, New Mexico. You propose to meter continuously the total fluid production from each lease with individual metering separators prior to being commingled in a common tank battery for pipeline shipment.

No objection is offered to the method that you propose for measuring and selling oil from the leases, provided, that approval is obtained from the New Mexico Oil Conservation Commission for proration purposes. Very truly yours, James A. Knauf."

MR. COOLEY: Before you introduce that, Mr. Montgomery, are the lease identifications referred to in the letter corresponding with the terms that you have been using in this hearing today as the Taylor lease and the Spencer lease? You identified them by number, I believe, in that letter, did you not?

A Yes, sir, they do by number. I can only say this, that personally I didn't check that particular item, but one of the men working on this project under me did, and he said that that is correct, so I'm sure it is.

MR. COOLEY: You don't know which one is which?

A No, sir, I can't answer that question.

MR. COOLEY: But it does cover the two leases in question?

A Yes, sir, it does.

MR. UTZ: You did mention in your letter a Las Cruces lease, didn't you?

A Yes, sir.

MR. UTZ: Well, that's not shown on your Exhibit No. 1. Both of those leases are New Mexico leases.

A I believe that this terminology here must be for the Federal Government terminology because we use New Mexico 1785 and New Mexico 1782.

MR. UTZ: These lease numbers do not correspond with your Exhibit No. 1 in any way, do they?

A No, sir. It's their own identification.

MR. UTZ: The identification shown on your Exhibit No. 1

is Shell's own identification for these leases?

A Yes, sir. I'm sure that it is.

MR. COOLEY: Can you forward us a letter, Mr. Montgomery, at your earliest convenience, showing the acreage contained in the two leases identified in Exhibit No. 4, that is the United States Geological Survey letter, for approval?

A Yes, sir.

MR. UTZ: You may proceed, Mr. Montgomery.

A We feel that commingling of production on these two leases will prevent the waste of unmined hydrocarbons in that such operation will afford lower operating costs and lower capital investment.

That concludes our presentation of direct testimony.

MR. UTZ: Did you want to introduce your exhibits at this time?

A Yes, sir. I would like to introduce Exhibits 1 through 4 at this time.

MR. UTZ: Is there objection to the entrance of Exhibits 1 through 4 in this case? If not, they will be so admitted. Are there questions of the witness?

MR. GORMAN: I would like to ask a question or two. I am B. R. Gorman, one of the co-executors of the Estate of Ballard E. Spencer, deceased, which estate owns one-third of five percent of the overriding royalty on the Spencer lease which has been described.

CROSS EXAMINATION

By MR. GORMAN:

Q Mr. Montgomery, what is the reason for asking for the commingling of the oil in this manner? Why does Shell want to do that?

A We wish to do it to lower our operating costs and our initial investment.

Q Would it be a lowering of the operating costs or the lowering of the investment that you put in the tanks and batteries and so forth?

A It would be both.

Q How much would you save in the investment here?

A In the investment approximately \$5,000, in capital investment; and on the operating costs I would judge that we will save anywhere from a half an hour to an hour a day in pumper labor.

Q I have a schedule of costs here that was sent to me by Shell. I would like to have you look that over. Show me what you would save in that, what of that installation would you save? I can't see that you save anything. How many tanks have you got up there now?

A I'm not prepared to answer the exact question of how many tanks we have up there. If I am not mistaken, we have one tank battery which is located as shown on this plat, approximately -- I would like to go on and finish your question. As to what we save if allowed to commingle, we would save the amount shown on the particular A.F.E., or the schedule you have shown me, because we will save an entire tank battery on the Taylor lease.

Q Isn't it true that up until the time you completed the first Taylor well you had two tanks on the Spencer lease; since you have completed the well on the Taylor lease you have added two more tanks? Isn't it true that you have enough tanks there now, four three hundred barrel tanks, to take care of all of the oil from both leases without metering?

A I'm afraid you have me at one disadvantage here. Did I understand you to say that we had two tanks on the Spencer Federal "A" and two tanks on the Taylor lease?

Q You had two tanks on the Spencer Federal "A", and since the first Taylor well has been completed, I am informed that two more tanks have been put up on the Spencer.

A On the Spencer.

Q So altogether you have four tanks there now, which should be sufficient to take care of all the production without metering. What I'm trying to get at is I have been told that this is to save money on the installation here. I have been unable to find out where you are saving anything. It looks to me as though it's costing you more.

A Well, maybe I can explain it this way. There is every possibility and probability, I will say, I don't know for sure that we have adequate tankage to handle the production, say on the Spencer Federal "A", but not the Taylor lease. If we place tankage or if we commingle and put all of our production on the Spencer Federal "A" lease, then we would reduce the initial cost of the

tankage there as far as the Spencer Federal "A" is concerned, in that it would be allocated also to the Taylor lease. For the two leases in question, we will save \$11,000. We will save one tank battery. However, we will have the added cost of the header as passed out on the plat, and the positive displacement meter equipment which will come close to \$6,000 installed, which means an overall saving for the tankage requirements for the two leases of approximately \$5,000.

Q You say you would save \$11,000, which is the amount of all of that, which includes the cost of your metering devices?

A The schedule or A.F.E. which you handed me is just a typical tank battery cost for a new tank battery replaced on a lease of this size.

Q And your claim is that you will save one tank battery?

A Yes, sir.

Q But for these two leases, three wells on one lease and two wells on another, you will only need four tanks and you have already got four tanks up there?

A That is essentially what we are asking for is permission to commingle into the tankage up there, yes, sir.

Q Then where would you save anything?

MR. COOLEY: Point of clarification. The rules would require the installation of a tank battery on the Federal lease unless an exception is granted in this case. Does that clarify anything? Unless we grant this exception, there will be a necessity

of installing a tank battery on the Taylor lease.

MR. GORMAN: They have already done it, except they didn't put it on the Taylor. They have put it where they are going to commingle. They have as many tank batteries as if they weren't going to commingle it.

MR. COOLEY: I do not mean to argue with you. Unless we grant this exception, there will be a necessity of installing a tank battery on the Taylor lease. The rules would require the installation of a tank battery on the Federal lease, unless an exception is granted in this case.

MR. GORMAN: I want to make a statement. I do not want to get into an argument with Mr. Montgomery, because I am not an expert on the matters. I would like to ask a question about the royalty before going into the statement.

Q When you went over that, didn't it appear that there was three ownerships of overriding royalty on the Spencer lease, and didn't you say four, and one on the Taylor?

A Yes, sir.

Q Do you happen to know, and isn't it true that that five percent override that's now in the name of Taylor is actually owned by O. F. Featherstone, and these other two, Bell and Crosby, whose names are on there, and that there is an assignment from Taylor to the largest part of that already? Do you know that?

A We had no indication of that on our records, sir, and none in our correspondence with Mr. Featherstone.



Q It is my belief that outside of a very small interest, that is, override, that is perhaps owned by Taylor, that the Spencer Estate is the only overriding royalty owner that is affected by this, that when Featherstone made this agreement he already owned a part of the Taylor lease and that Crosby and Bell have an interest --

MR. COOLEY: (Interrupting) Is that Crosby or Chaney?

MR. GORMAN: Chaney now. The name has been changed. They also have the same interest in the Taylor lease as they had in the Spencer. My statement would merely be to the effect --

MR. COOLEY: Excuse me. May I interrupt? If you have no further questions of the witness, may we proceed with cross examination and hold your statement until a later time? Do you have any further questions?

MR. GORMAN: No, sir.

MR. COOLEY: Mr. Examiner, I have a couple of questions.

MR. UTZ: Proceed, Mr. Cooley.

By MR. COOLEY:

Q Mr. Montgomery, does the installation, and it's rather complex for me to understand, the result is what I'm interested in, does the measuring and metering assistance provided in your proposal afford an exact measurement of the amount of oil produced from each lease as exact as would tank battery installations, for instance, separate tank batteries, or is it an estimate?

A I think we discussed that quite thoroughly in the Pearl

and know it would be quite as accurate as manual tank gaugers figures under ideal conditions in both cases. There is a possibility they could be better, but for ideal --

Q This is continuous measurement of the production from each lease?

A Yes, sir.

Q Rather than an estimation on the basis of periodic tests?

A That is correct. Pardon me, it is a continuous measurement of all production from each of the two leases.

Q And that each lease will be, and consequently the royalty owners and interest owners on each lease will be paid on the basis of the meter readings, with the exception that they may be necessary to correct them for temperature or other necessary corrections? It will be paid on the basis of the meter readings as corrected?

A Yes, sir. The meter reading is temperature corrected and the allocation of the production back to the two leases and royalty payments will be based on the meter readings and the composite sample.

Q What about shrinkage, if the amount of oil sold from the tank is 100 barrels less than the total amount of oil metered into the tanks, how is that accounted for?

A The two meter readings would be -- I don't quite know how to compare it, I guess you would say to the tank gauge or the sold production, and each would bear its proportionate share, based

on the meter readings. I doubt seriously if the meter readings would be exactly the same as the tank runs.

Q There will be a corrected reading?

A Yes.

Q On the basis of which the royalty owners and working interest owners will be paid?

A Yes, sir.

Q In your opinion will this provide a reasonably accurate measurement of the oil produced from each of the leases?

A Yes, sir.

Q Mr. Montgomery, I believe you stated that Shell would be willing to follow a calibration procedure essentially the same as heretofore prescribed for P. D. meters presently installed in the State of New Mexico?

A Yes, sir.

Q I believe that system has been a calibration of once each month for each six months and then a calibration for each six months thereafter?

A No, I didn't understand that, but we will be willing to accept that procedure.

Q Do you feel that such a program of calibration will afford an adequate check of the accuracy of the meters?

A Yes, sir. In fact, we feel that we can start out immediately from all experience that we have been able to find.

Q You feel it will be more than adequate?

A Yes, more than adequate.

Q The maximum number of wells that can be produced into this tank battery is what?

A Seven on the two leases shown.

Q Therefore it would not exceed the more than eight well limitation?

A No, sir.

Q You are herein requesting permission to measure the production from the Taylor lease off that lease, are you not?

A That is correct.

Q Which is also an exception to Rule 309, Commission Rule 309?

A Yes, sir.

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

MR. UTZ: Does anyone else have a question of the witness? If not, the witness may be excused.

A I had one other thing I would like to say on this that I neglected. I said before that this was a normal lease operation to be visited by the pumper. I also want to state that we are not shutting off our wells at the header. They will be shut off at the well just on a standard lease operation; that this is not a request for automatic production control or unusual control at the header system; and that we do have suitable safety devices throughout the header system to prevent oil from one lease being metered in the production separation and P. D. meter with the other production from the other lease, even if the pumper should accidentally fail

to do his job correctly, it is impossible for the oil to get from one lease to the other prior to the commingling point.

MR. COOLEY: That raises one more question. Are you through?

A Yes, sir.

By MR. COOLEY:

Q The installation of this equipment will in no wise make it more difficult for your pumper to keep the wells within the allowable authorized by the Oil Conservation Commission?

A No, sir. I don't feel that it will.

MR. COOLEY: That all I have.

MR. UTZ: Mr. Nutter.

By MR. NUTTER:

Q Mr. Montgomery, has the Automatic Custody Transfer system in the use of P. D. meters as authorized by the Oil Conservation Commission been installed in the Pearl-Queen Pool yet?

A No, sir, we are in the process of installation right now. We expect to have the system in and in operation by the 1st of April.

MR. NUTTER: Thank you.

MR. UTZ: Is there more or less chance of physical waste of oil by the method you propose here than by measuring a tank battery?

A I believe to the best of my ability, my opinion would be that it would be less. There would be less chance of wastage in

that we have fewer tanks in the two cases and less times for them to be open and so forth, and that this system of metering is a closed system up to the tanks, so I think in reality we would have less waste.

MR. UTZ: You say that from the standpoint of shrinkage in the tanks or waste through drainage of tank bottoms?

A Well, with the fewer number of tanks and fewer times opened, I would say it would be in both cases.

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

(Witness excused.)

MR. UTZ: Is there further statements in this case? Mr. Gorman.

MR. GORMAN: Yes. I would like to state that as a representative of the Ballard E. Spencer Estate that has this overriding royalty, we feel that it is possible we are the only owners of overriding royalty that could be adversely affected by this ruling that is proposed, and it has been given and we have been given to understand by the Shell Oil Company that they asked this ruling as a matter of economics to save money, but in discussing it with them, in detail, we have been unable to find where there is any appreciable saving. At least they have failed to convince us of it. For that reason we have decided, because of the fact that by the terms of Mr. Spencer's Will, the Spencer Estate will become invested in some twenty-five different heirs whom, with the exception of Mrs.

Spencer and one other heir, all reside outside of the State of New Mexico, none of these people are familiar with the oil business and none of them will be capable of making any checks, we hesitate to take the responsibility under the circumstances, of acceding to this request.

MR. UTZ: Any further statements in this case? Mr. Montgomery, did you introduce your exhibits?

MR. MONTGOMERY: I believe so, 1 through 4.

MR. UTZ: Let the record show that the exhibits were introduced and accepted.

The case will be taken under advisement. Let's take a ten-minute break, please.

(Recess.)

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C E R T I F I C A T E

STATE OF NEW MEXICO    )  
                                  ) ss  
COUNTY OF BERNALILLO   )

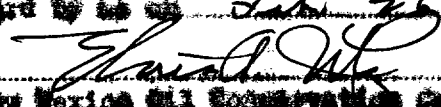
I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal 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 12<sup>th</sup> day of March, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

  
NOTARY PUBLIC

My commission expires:

June 19, 1959.

I do hereby certify that the foregoing is a complete record of the proceedings in the New Mexico Oil Conservation Commission held by me on Feb. 26, 1958.  
  
Ada Dearnley, Reporter  
New Mexico Oil Conservation Commission