

BEFORE THE  
OIL CONSERVATION COMMISSION  
HOBBS, NEW MEXICO

IN THE MATTER OF:

Case 1288

TRANSCRIPT OF PROCEEDINGS

August 7, 1957

DEARNLEY - MEIER & ASSOCIATES  
INCORPORATED  
GENERAL LAW REPORTERS  
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oil wells into a common tank battery in the Southeast Monument Unit, Warren-McKee Pool, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin representing Continental Oil Company. I have as a witness, Mr. Francis.

(Witness sworn.)

R O G E R J. F R A N C I S

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Roger J. Francis.

Q By whom are you employed?

A Continental Oil Company.

Q And your position?

A Production Engineer.

Q Have you testified before the Oil Conservation Commission of New Mexico and had your qualifications as an expert Production Engineer accepted by the Commission?

A Yes, sir, I have.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. MANKIN: They are.

Q (By Mr. Kellahin) Mr. Francis, are you familiar with the application in Case 1288? A I am.

Q What is that application?

A It's an application of Continental Oil Company for the permission to produce more than eight wells into a common tank battery. All wells to be produced into a common tank battery will be producing from the McKee Formation, of the McKee participating area of the southeastern Monument Unit, which is a portion of the New Mexico Federal Unit.

Q Where is that pool located?

A It is located in the Warren McKee Pool.

Q How many wells are presently operating in that unit?

A At the time of the application, there were eight wells producing from the pool into a common tank battery, and there has been a ninth well produced, which is presently being proposed to be put into a common tank battery, and also there are two additional wells in the process of being completed, which brings it to a total of eleven wells.

Q Is another well contemplated?

A At the present time, no, there is not. The eleven wells anticipated allowable will be approximately eleven hundred and eighty-seven barrels per day. The existing tank battery will consist of twelve four hundred barrel storage tanks, and will provide in excess of three days storage.

Q Referring to what has been marked as Exhibit No. 1, will you state what that is?

A I would like to offer Exhibits 1 and 2 as evidence in this case, 1288, please. Exhibit 1 is an ownership plat showing Continental's

acreage, cross-hatched in yellow. That portion of the southeastern Monument Unit, which includes the McKee participating area has been outlined with a dash line that appears on the exhibit. The McKee participating area has been outlined in red, and consists of approximately five hundred and twenty acres, more or less.

Q That is one basic lease?

A Yes, sir, it certainly is.

Q All the oil produced is assigned to common beneficiaries?

A Yes, sir, it is.

Q Is the royalty ownership common? A Yes, sir.

Q This Exhibit No. 1 shows the location of the tank battery?

A Yes, sir, it does, as it exists at the present time, it shows flow-lines. Since that time, 59, directly west of the battery is now connected up to the battery, which is located in the southwest quarter of the southwest quarter of Section 20, Township 20 South, Range 38 East.

Q Where is that tank battery located?

A I just gave that.

Q Would you repeat that.

A The tank battery as it exists is in the extreme flank of the southwest quarter of the southwest quarter of Section 20, Township 20 South, Range 38 East.

Q Referring to what has been marked as Exhibit No. 2, would you state what that is?

A Exhibit No. 2 is a schematic diagram of the existing tank

battery showing the major portions of equipment, which consists of a manifold, two horizontal test separators, and as it is shown, there are ten tanks, or ten four hundred barrel tanks. At the present time, there are two additional tanks being installed at the tank battery. The manifold arrangement is such that all production to the various wells will be directed into either the production separator, or individual wells will be directed into the test separator for testing purposes. This test separator is equipped with an oil volume meter to measure the amount of oil produced, thereby permitting all twelve tanks to be used for storage purposes. However, the flow-line and valve arrangement is such that individual wells must be produced into a tank engaged, by engaged lines to calibrate the metering vessel, or to verify the production of any wells.

Q Does that arrangement enable you to run a test on any individual well at any time? A That is correct.

Q And how often could you run a test on these wells?

A When all wells have been completed, and are producing into the tank battery, it would be possible to conduct a test on any individual well, or on each well every twelfth day.

Q How many additional wells do you contemplate there will be?

A At the present time, we anticipate starting no other wells, therefore, the total amount would be the eleven, all of which are located on Exhibit No. 1.

Q If I recall your testimony, the tank battery will provide

in excess of three days' storage, is that correct?

A Yes, sir.

Q If additional storage is found to be needed, will Continental supply that storage?

A Yes, sir, they will.

Q What arrangements have you for testing the water contents of the oil?

A On down, the extreme side of the oil meter there is a fluid sampler which takes a composite sample of fluid, dumps it into the vessel, and by grinding this sample out, it's possible to determine the percentage water cut to a maximum of fifty percent water cut.

Q Now, the application stated that two additional Warren McKee Pool Wells are currently being drilled. Is one of these being completed?

A No. As I stated, at the time of the application, there were eight wells completed; since that time, a ninth well, SEMU-Mc-Kee has been completed, and is producing into the tank battery; there are in additional **two** other wells, one which is being drilled, and another which has not been drilled, but is in the process of being drilled at this time.

Q The application states that the drilling of at least one additional well is being considered, is that one of the wells currently being drilled?  
A That is correct.

MR. KELLAHIN: At this time we offer Exhibits 1 and 2 in evidence.

MR. MANKIN: Any objections to Exhibits 1 and 2 being received in evidence in this case?

(No response.)

MR. MANKIN: If not, they will be so entered.

MR. KELLAHIN: Those are all the questions I have.

CROSS EXAMINATION

BY MR. COOLEY:

Q Mr. Francis, the application seeks a maximum of eleven wells to be produced in the central tank battery in the southwest quarter of the southwest quarter, shown on Exhibit 1.

A That is correct.

MR. KELLAHIN: The application doesn't seek that necessarily as a maximum; the application seeks approval of any additional wells which may be drilled. I don't know whether there will be additional wells or not.

MR. COOLEY: Likewise in the previous case, the application was opened and concerned that matter, and you stated that the Commission requested--if we could get a maximum limit, it would facilitate writing this order considerably.

MR. KELLAHIN: If it please the Commission, I'd like to call your attention to the order which was entered in the application of Magnolia. In the northwestern part of the State, which left this matter open in that regard, on that basis that these applications were amended.

MR. COOLEY: Well, the application states the southeast

Monument Unit is the area concerned. It has been developed from the testimony that the area concerned is merely a participating area of the southeast Monument Unit. A That is correct.

Q (By Mr. Cooley) And that is as appears on the outline in Exhibit 1, in red? A That is correct.

Q How many possible undrilled locations are within the participating area?

A There will be, assuming the forty acres are participating, three locations after the completion of the wells presently being drilled.

Q Wells, 62 and 60, as shown on that circle, on Exhibit 1, are presently being drilled? A That is correct.

Q If every location in the participating area, shown on Exhibit 1 were drilled, approximately how often could each well be tested, from your present testing facilities?

A Let me think a minute here. We have anticipated that there would be just a little under three days' storage, in excess of three days' storage if we were to drill the other three locations.

Q I believe you misunderstood my question, Mr. Francis. How often would each well be **tested**?

A I am sorry. Well, in the event they were to complete the other three, the wells could be tested every fifteenth day.

MR. COOLEY: That is all.

BY MR. MANKIN:

Q Mr. Francis, you have been referring to three undrilled

locations. however, your plat indicates that, on your Exhibit 1, that you are presently drilling two, No. 60, and 62, according to the way it is diagramed here, there would only be two undrilled locations, which would be, actually, in the southeast of the southeast quarter, and the northeast, and the northeast quarter of Section 30, is that correct?

A Would you repeat that please. Let me follow--

Q (Interrupting) The southeast of the southeast quarter of Section 19 is undrilled at the present time, according to this Exhibit 1, and the other is the northeast, northeast of Section 30.

A You are correct, I would like to amend my testimony to state there will remain two undrilled locations.

Q Which would, therefore, be a maximum of thirteen wells?

A That is correct.

Q However, at the present time, it is not anticipated to drill these two wells, but it might be sometime in the future?

A As well as I know no other wells will be drilled, but, there is that possibility.

Q In other words, when the eleven wells are drilled, or drilling is completed, that is your present plan, however, there may be two additional wells participating, which will make it a maximum of thirteen wells? A That is correct.

BY MR. COOLEY

Q This application is limited to the participating area as it now exists, am I--

MR. KELLAHIN: (Interrupting) No, sir.

MR. COOLEY: The application as stipulated, they are requesting permission to produce in excess of eight wells into a common tank battery, and all production is to be obtained from the McKee pay of the Simpson Formation, and it's all within the boundries of the southeast Monument Unit.

BY MR. MANKIN:

Q Then, Mr. Francis, let's go a step further. As shown on Exhibit 1, there is a <sup>well</sup> Warren McKee, which that pool is likewise also in the Warren McKee Pool, is that correct?

A You mean off-setting the southeastern Monument, to the southeast?

Q Yes, sir, is the Warren McKee in the SEMU Unit?

A The Warren McKee is in the New Mexico Federal Unit, it does not include the three southeastern Monument Unit.

Q Alright, sir, you then show some other acreage in Section 19, which is explicitly in the northwest quarter of the northeast quarter of Section 19, the Continental Burger B-19, west, that well is in the northern Warren McKee Pool? A That is correct.

Q Where as these other wells are in the Warren McKee Pool?

A Yes.

Q Since you are all talking about all wells in the SEMU Unit, it probably would be involved, even though you have two pools involved, you feel that the two wells could be put together, if you are going to develop this thing in the SEMU Unit?

A Let me state the question, you mean, what would be the complications including the Burger B-19?

Q Yes.

A I think principally the reason is that the royalty interest would not be common; as to the ninth well, we believe it includes the three Southeastern Monument Units.

Q Then the participating area that is shown here in red is separate and distinct, and different royalty interest from that corner, or the Continental Burger B-19 in the balance of the SEMU Unit, is that correct?

A No, the Burger B-1-S is not included in the Southeastern Monument Unit. If you will notice the dark line encloses that portion of the southeastern B-1-S -- or excuse me, the Burger B-19.

Q That would be outside of the SEMU Unit?

A That is correct.

BY MR. COOLEY:

Q You don't mean to imply the dashed red line impression forms the entire Southeastern Monument --

A (Interrupting) I mean to imply that the dashed red line, indicated, and encompasses that portion of the Southeastern Monument Unit which includes and adjoins the participating area presently designated the McKee Pool, or the SEMU-McKee. The Southeast Monument as it exists covers several sections, as you will note in Case 1288, it covers lands located in Sections 13, 14, 15, 22, 23, 24, 25, 26, and 27, of Township 20 South, Range 37 East, and Sections 19, 20, 29.

, and 30, Township 20 South, Range 38 East.

BY MR. MANKIN:

Q Then, Mr. Francis, what is being produced here together, by volume, is fifty or a hundred wells then?

A No, sir, I don't think so, because the limits of the Warren McKee Pool wouldn't permit that.

Q Of course, it then gets into the north Warren McKee, which are the two pools adjacent, and possibly should be adjoined, but, they are not at the present time; in other words, this SEMU Unit would involve a very large acreage from the McKee Pool; that is why we asked that the administrator's proposal be deleted, and was done so by counsel. Then, we cannot limit the eleven or thirteen wells according to the application here today.

A No, sir, that is not our application.

Q We don't know how many then, is that correct? That is your answer, we don't know how many wells will be involved here, as to whether the tankage is adequate, and--

A (Interrupting) As we interpret the producing formations at the present time, we are anticipating drilling on eleven wells; however, we point out, if at some future time we need additional tankage, whether it be from drilling additional wells or increasing the allowable of sections, we are prepared to install additional tankage.

Q Would it be any burden on Continental to have this particular order tied to the thirteen wells in the participating area?

A No.

Q That is what I was trying to get around to, if this was limited to these thirteen wells, then, at some future date, which you don't anticipate developing, that would be handled at that time, rather than the administrative procedure--

MR. KELLAMIN: (Interrupting) If the Commission please, the administrative procedure was not completed, from the application, for purposes of requiring a hearing, but for the purpose of providing an order at this time, which would cover all the anticipated wells.

Q Thirteen were all in the anticipated area?

A Actually, it would amount to fifteen.

Q Would you please locate those.

MR. KELLAMIN: We will put another witness on if you want.

MR. COOLEY: I would like to know where the fifteen are. If you have another witness, please put him on.

MR. KELLAMIN: I'd like to finish with Mr. Francis.

REDIRECT EXAMINATION

BY MR. KELLAMIN:

Q Mr. Francis, in the event additional wells were drilled in the area, and it was found that additional tankage was needed, would Continental install that?

A They certainly would.

Q And in the event that additional wells were drilled, would you be willing to file with the Commission any necessary reports or information required by the Commission?

A Yes, sir, we would.

MR. KELLAHIN: That is all I have.

MR. MANKIN: Any other questions of the witness? Mr. Fischer, do you have any?

BY MR. FISCHER:

Q I notice on the proration schedule, this is the SEMU-McKee in Unit "N" of Section 20, 20, 38, was shut in?

A Well, that is now back on production.

MR. FISCHER: That is all I have at this time.

MR. MANKIN: Anything further of this witness?

(No response.)

MR. MANKIN: The witness may be excused.

(Witness excused.)

(Witness sworn.)

E. V. BOYINGTON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please?

A E. V. Boyington.

Q By whom are you employed?

A Continental Oil Company.

Q What is your position?

A As District Production Engineer.

Q Have you previously testified before this Commission as a District Production Engineer and had your qualifications accepted as an expert?

A I have.

MR. KELLAMIN: Are the witness's qualifications acceptable?

MR. MANKIN: They are.

Q (By Mr. Kellahin) Mr. Boyington, in connection with Case No. 1288, are you familiar with the application?

A I am.

Q And how many wells are contemplated to be drilled by Continental Oil Company in connection with this common tank Battery?

A As stated by the previous witness, we contemplate now that only the wells presently drilling will be completed; however, that is because of structural interpretations on the western flank of the McKee structure. If you will notice, we have pulled number -- the locations of 51 and 57 in considerably to gain structural position. In the future, however, if it proved necessary from the standpoint of recovery, or if it is desirable for other reasons. There are two additional locations in Section 19 at the present participating area, and one is in Section 30. They are presently anticipating it could possibly be drilled, and these participating areas are very flexible; in other words, that could be enlarged by merely an application for enlargement, and it would be very possible that it would be desirable to drill the location south of our Burger B-19, 1-S, and include that forty acreage in the participating area; but, from the structural standpoint, and the interpretations of the

structure, with reference to several dry holes to the south and east, we do not believe, at the present time, that it would be complete production, that it isn't possible.

Q Could it in any way handicap you to put a limit on the number of wells, at the present time, to be produced in this common tank battery?

A No, I don't think there would be any.

Q What limit would you suggest as being a proper one?

A I would suggest fifteen wells.

Q Where are those other additional wells aside from these in the participating area, possibly be located?

A Possible location is in the southwest quarter, or northeast quarter, in the northeast quarter of the southeast quarter, northwest quarter of the southeast quarter.

Q What section? A Section 19.

Q And is the royalty ownership and working ownership common in that area with the present participating area?

A When an additional well is drilled to the McKee Formation and the acreage is included in the participating area, then the royalty ownership will be common, yes, sir.

Q The participating area extends how far, it is separate?

A That is right.

MR. KELLAHIN: That is all.

CROSS EXAMINATION

BY MR. MANKIN:

Q Mr. Boyington, then the presently drilled or drilling wells will become a maximum of eleven wells in the participating area, is that correct? A That is correct.

Q There are presently two possible undrilled locations within the participating area, is that correct?

A Actually, yes, that is correct.

Q And there are also two possible undrilled wells to the west of the participating area, that is in Section 19, in the southwest and northeast quarter, and the northwest, and southeast quarter, is that correct? A Yes, sir.

Q So would ~~the~~ possible locations and the extent of the participating area, there would be a possibility of fifteen wells, is that correct? A Yes.

BY MR. COOLEY:

Q How often could each well be tested with fifteen wells producing, with the present testing facilities?

A Every sixteenth day, I believe.

BY MR. MANKIN:

Q Mr. Boyington, then to reiterate to what has been said, if those fifteen wells were drilled, Continental Oil would be agreeable to installing adequate tankage and testing facilities to handle whatever was necessary to take care of these fifteen wells?

A That is true.

Q I didn't get this from the previous witness, possibly you can tell me. Who is the pipe line taking the oil?

A Shell.

MR. MANKIN: Any further questions of this witness? Mr. Fischer?

BY MR. FISCHER:

Q Maybe this should be directed to Mr. Francis, but you may be able to tell me this. In testing this battery, will it be by dump meter? In other words, would you need a separate tank for testing?

A Roily valve meter installed there.

Q I don't know this type of producing mechanism in this field, could you tell me if that is a water **drive**?

A **Gas drive.**

Q **Any water drive?**

A We have produced water, but we are trying to avoid it at the present time because we also get sand when we get water.

Q In the event that your water cutting would go above fifty percent of the volume of production, how would you determine that?

A We would expect to install a free-water knock out and a water meter.

Q That would be before it went to the volume check?

A Yes, that is true. We measure the water and oil for each individual well, separately.

MR. FISCHER: That is all I have.

BY MR. MANKIN:

Q I have just one other question. In this case, since we are

talking about the land that adjoins the other pools, do you have any knowledge what that barrier is within the Warren McKee and the North Warren McKee Pool?

A I think that is what we have set out to do, with this additional drilling, to properly connect those two pools, which I believe we have done.

Q So, there is no reason why they couldn't be adjoined together?

A No.

MR. MANKIN: Any further questions of this witness?

MR. KELLAHIN: In what has been developed, I believe there is some confusion in regard to our amendment. I'd like to make a brief statement if I may. At the time the application was filed, Continental was asking for an administrative approval for the inclusion of additional wells. Continental has no objections to such a procedure if the Commission sees fit to impose it. However, the amendment was made to conform with the policy which was set by the Commission in regard to the Magnolia Case, where they allowed the production of any wells drilled on one basic lease or any wells contemplated, or any further wells to be produced into a common tank battery. When we first offered the Commission the amendment, it was not made to **cut out** the procedure, necessarily, for the administrative approval. Now, if the Commission sees fit, I believe that this application is broad enough in providing information as to any restrictions they see fit on the inclusion of additional wells and also on the tank battery, they can limit the number of wells,

they can set up a procedure, or reports, or administrative approval, or deny that portion of the application. The advertising, I think, is sufficiently broad to put any one on notice, if you seeking the one thing, that is an overall order for the overall production of any wells, and the Commission, under that application, could then put any restrictions upon the producer, which would have to be followed, and Continental would have no quarrel with any reasonable restrictions in that regard.

MR. COOLEY: Are we restricted to an area, or we attempting to put this case on substantially the same basis as the Magnolia Case, which you have just referred.

MR. KELLAHIN: I understand that.

MR. COOLEY: There we have it defined, on not to large an area, and if we are to define the probable locations that may be drilled, and with this in mind, with this area as outlined by Mr. Boyington, we will then proceed to consider this case, but to consider the entire southeast Monument Unit even though it is now underlined by the Warren McKee Pool, is somewhat appalling to us.

MR. KELLAHIN: I don't think Continental had any such thing in mind as that when we did put Mr. Boyington on the stand to show the possible--

MR. MANKIN: (Interrupting) The comparison between the Magnolia Case and this case, it was gas development, which this is oil development, and that is why we have attempted to pin point this. Oil development, it's usually more restrictive than gas development.

