BEFORE THE

Oil Conservation Commission

SANTA FE, NEW MEXICO

July 18, 1956

IN THE MATTER OF:

CASE NO. 1102

TRANSCRIPT OF PROCEEDINGS

DEARNLEY-MEIER AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 18, 1956

IN THE MATTER OF:

Application of Sinclair Oil and Gas Company for an order establishing 80 acre spacing in the Dean-Permo Pennsylvanian Pool; for an order amending Order R-757 which created the Dean-Pennsylvanian Pool and in which applicant proposes to rename it as the Dean-Permo-Pennsylvanian Pool and to amend Order R-799 which permitted dual completions in the Dean-Pennsylvanian Pool and Dean-Devonian Pool to allow dual completions in the Dean-Permo-Pennsylvanian and the Dean-Devonian Pool, all in Lea County, New Mexico.

Applicant in the above-styled cause, seeks an order establishing 80 acre spacing for the area presently known as the Dean-Pennsylvanian Pool and which they desire to establish as the Dean-Permo-Pennsylvanian. Applicant further seeks an order to add the Wolfcamp formation to the presently designated Dean-Pennsylvanian Pool and to be known as the Dean-Permo-Pennsylvanian Pool. Applicant desires that the pool area now presently defined as the Dean-Pennsylvanian be further defined as the Dean-Permo-Pennsylvanian. Applicant seeks an order to allow the Wolfcamp formation to be included with the Pennsylvanian formation and dualled with the Devonian formation for oil-oil dual completions in what would be known as the Dean-Permo-Pennsylvanian Pool and Dean-Devonian Pool.

Case No. 1102

BEFORE:

Honorable John F. Simms
Mr. E. S. (Johnny) Walker
Mr. A. L. Porter, Jr.

TRANSCRIPT OF HEARING

MR. PORTER: The meeting will come to order, please. Mr. Gurley, are you ready to proceed?

(Mr. John Gurley, Attorney for the Oil Conservation Commission read the title of the within case.)

MR. PORTER: Is the applicant ready?

MR. HARBEN: Sinclair is ready.

GOVERNOR SIMMS: Ask your witnesses to stand and be sworn.

(The witnesses in the case were then sworn by Mr. Walker.)

MR. HARBEN: I would like to enter appearance of the attorneys; our names are: Nat J. Harben and Layton Webb, attorneys for Sinclair Oil and Gas Company. If the Commission please, before we start our testimony, I would like to make this statement.. The Commission will recall that on March 14, 1956 in Case No. 1017, Order R-757 was entered wherein the Commission defined the Dean-Pennsylvania field in Lea County, New Mexico. On April 27, 1956, in Case No. 1016, the Commission entered Order 799 authorizing and permitting dual completion in the Devonian formation and the Pennsylvanian pool as the Commission had theretofore defined. Now, we are here today asking the Commission for three things: First, we are asking that the Commission enter an order combining the Dean-Pennsylvanian Pool and the Wolfcamp formation and designating such combination as the Permo-Pennsylvanian Pool. We are asking that as our evidence will show because it appears that the probable productive zones of the Wolfcamp would be uneconomical to develop as a separate pool.

Number 2, we are asking for an order establishing the spacing pattern of 80 acres for wells completed in the Dean-Permo-Pennsylvanian pool, and that the 80 acres units embrace center Government quarter sections of the lots within a single governmental

section; that the units run north and south or east and west, but that any well which may be drilled on the unit shall not be drilled closer than 300 feet from the line at the quarter-quarter section.

And three, we are asking for an order amending order No. 799, that is the dual completion order, so as to authorize or permit dual completion of wells in the Dean-Devonian Pool and in the Dean-Permo-Pennsylvanian Pool. I would like to call as our first witness, Mr. Merrill.

H. A. MERRILL,

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

DIRECT EXAMINATION

BY MR. HARBEN:

Q What is your name, please?

A H. A. Merrill.

Q Where do you reside? A Roswell, New Mexico.

Q By whom are you employed?

A Sinclair Oil and Gas Company.

Q In what capacity are you employed?

A As District Geologist.

Q How long have you been District Geologist, Mr. Merrill?

A Three years.

Q Are you acquainted with the area around the Dean-Devonian and Dean-Pennsylvanian Pools?

A I am

Q --in Lea County? A Yes.

Q Have you heretofore qualified and testified before this Commission?

A I have.

Q --as an expert witness. Are the qualifications of the witness satisfactory?

MR. WALKER: They are.

Q Have you made a study of the geological formations in and around the Dean-Pennsylvanian Pool?

A Yes, I have.

Q Are you acquainted with the Wolfcamp formation in that area?

A Yes.

Q I hand you an exhibit No. 1, and Exhibit No. 2. Are you familiar with Exhibits 1 and 2, Mr. Merrill?

A Yes, I am

Q Were those exhibits prepared by you or under your supervision?

A That is correct.

Q And is the information which the Exhibits purport to reflect true and correct information?

A I believe it is.

Q Will you tell the Commission just what information is reflected by Exhibit 1?

A Exhibit 1--

Q (Int.) Just a minute, let me ask you this question before you go to the board. You will notice on the board some cross-sections. Are those the same, do they reflect the same information as Exhibits 1 and 2--they are just enlarged exhibits, is that correct?

A They are enlarged copies of Exhibits 1 and 2.

Q All right. Now go ahead with your explanation of Exhibits 1 and 2.

A All right. Exhibit 1 is a south to north electrical log cross-section. It commences on the south with the Atlantic Federal Dow #1 on one end and terminates on the north with Sinclair at State #735; the cross-section exhibits the presence of the Wolfcamp throughout the pool. Exhibit 2 is the west to east cross-section through the Dean pool commencing on the west with Magnolia Harkrider #1 and ending on the east with Sinclair's State 758 #1.

Q Let's take Exhibit 1--I notice Exhibit 1 has four lines on it running from left to right. Will you state what those lines represent?

A These lines indicate the top of the various formations we have outlined. The uppermost line is the top of the Wolfcamp; the second line from the top is the top of the Pennsylvanian line, and the third horizontal line is the top of the Strawn line. The lower line here is the top of the Mississippi line and the base of the Pennsylvanian.

Q Will you point out on that exhibit the vertical limits of the Dean-Pennsylvanian Pool as it is now defined?

A The very top of the Pennsylvanian formation occurs at the approximate depth here of 10,658 feet, the second horizontal line from the top; and the lowermost point of the Pennsylvanian occurs at a depth of approximately 12,700 feet at the lowermost line.

Q Does that include the Strawn line?

A It includes the entire Pennsylvanian of which the Strawn is a part.

Q How many feet are in that section?

A Approximately 21,000.

Q Did you test the depth of the Mississippi formation?

A Yes, it's approximately 12,700 feet.

Q Now, will you point out on that cross-section the Wolfcamp formation?

A The Wolfcamp is the uppermost line, which occurs at a depth of approximately 9650 feet. The base of the Wolfcamp is the same as the top of the Pennsylvania which is the second line from the top, with a gross thickness of approximately 1,000 feet.

Q Now, will you point out to the Commission the productive zones in the Pennsylvanian formation?

A At the present time the Pennsylvanian produces only from the Strawn line zone; it is designated by the third line from the from the top, and I believe there are twelve producers.

Q The 12 wells that are producing are in the Strawn formation?

A Yes, sir.

Q And what is the gross thickness of that productive zone?

A The productive zone gross thickness is approximately 100 feet across the field.

Q What is the approximate depth of that formation?

A Well, the formation is defined at approximately, 11,500 feet throughout the field.

Q Would you point out in this first well shown on the Exhibit

the productive formation in the Strawn line.

A The producing interval is immediately below the top of the Strawn line throughout the field.

Q And is that shown on all those exhibits?

A I believe it is.

Q I mean is it shown on all the logs shown on the exhibit?

A Yes, it is.

Q Now, will you point out the productive formation at the top of the Pennsylvanian formation?

A At the present time there are no producers in the upper Pennsylvania, but the uppermost approximately 40 feet of the formation has indicated possible production in several ways.

Q Can you point those wells out?

A The Sinclair Oil and Gas Company No. 3, State 396, developed flowing oil in the uppermost Pennsylvanian, as did Cities Service No. 2, State AW.

Q And that flow is based on a drill stem test?

A Both of them.

Q What is the gross thickness of the upper Pennsylvanian Zone which appears to indicate production?

A It appears to be approximately 40 feet thick.

Q I believe you stated that no wells have been completed in that formation?

A At the present time that is correct.

Q Now, will you point out on the Exhibit the productive zones or apparently productive zones of the Wolfcamp formation?

A At the present time I believe the only indication of

probable production would be the lower Wolfcamp in the zone occurring at approximately 10,400 feet throughout the field. We haven't indicated the zone, but it is signified by a horizontal line roughly 200 feet above the top of the Pennsylvanian line.

Q Have any wells been completed in that formation?

A No, there have been none.

Q You have testified about three possible productive zones in the Pennsylvania and Wolfcamp formations. Are there any other zones or sections which would appear to be productive of oil or gas?

A At the present time I don't believe any drill stem tests or interpretation of these electrical logs would indicate probable oil production.

Q Did you testify as to the approximate depth of the Wolfcamp formation which appears to be productive?

A It has an approximate depth of 10,400 feet.

Q Now, that is from the producing zone. All right. Now I hand you Exhibits 3, 4 and 5. Are you familiar with Exhibits 3, 4 and 5?

A Yes, I am.

Q And will you state whether or not those Exhibits were prepared by you or under your supervision?

A They were prepared under my supervision.

Q Will you state whether or not the information the Exhibits purport to reflect is true and correct?

A I believe they are true.

Q All right. Now, will you tell the Commission just what Exhibit 3 reflects and exhibit it to them, please sir?

A Exhibit 3 is a structural map of the Dean Pool contoured on the top of the Strawn line. Indicated in green are the present horizontal limits of the Dean-Pennsylvanian Pool.

Q Do you have water-oil contact indicated on that Exhibit?

A Our estimated oil-water contact is indicated by dashed red lines surrounding the pool.

Q Does it indicate there might be probable production over an area greater than the filed as has been defined?

A I believe it indicates probable production where sufficient porosity and permeability are indicated.

Q Are the wells which are producing from the Devonian and Pennsylvanian formations indicated on the exhibit?

A We have colored the individual wells with yellow indicating the Pennsylvanian production, blue indicating Devonian production, and where the two are producing they are colored half yellow and half blue.

Q Point these out, will you please?

A State 396 No. 2 and 396 No. 3 on the Sinclair lease.

Q Would you point to that exhibit and point to the wells which have been completed and which are producing from the Pennsylvania formation or the Strawn line?

A At the present time there are 12 producers from the Strawn line, and the yellow indicates the present Strawn production.

Q All right. Now, will you go over to Exhibit 4 and tell the Commission just what that exhibit reflects?

A This is also a structural map of the Dean Pool contoured on the top of the Pennsylvanian formation itself. The green area

indicates the present horizontal limits of the Pennsylvania Pool.

Q Do you have indicated on that map or Exhibit the wells which are producing from the Strawn line formation?

A Those are also indicated, designated by the yellow color surrounding each well.

Q Now, will you step over to Exhibit 5 and explain that Exhibit to the Commission?

A Exhibit 5 is a structural map of the Dean Pool contoured on the lower Wolfcamp zone which is possibly productive.

Q And how is the Wolfcamp shown on that map there, the possible producing area?

A We have oil-water contact indicated by a dashed red line; it is believed that will be the limits of production in the lower Wolfcamp.

Q Has there any well completed in the Wolfcamp formation?

A No, there has not.

Q Will you point to Exhibit 1 there--or did you point out the productive zone of the Wolfcamp?

A The 10,400-foot zone has indicated production, yes.

Q And how thick is that production zone?

A Approximately 30 feet.

Q That is gross thickness? A Yes, sir.

Q Are there any other sections in the Wolfcamp formation which appear to be productive of oil or gas?

A At the present time I don't believe that the drill stem testing throughout the filed, and also the electric logs, have indicated any other zones of probable production.

Q You have testified that the gross thickness of the zone in the Strawn formation which appears to be productive of oil is approximately 100 feet. What is the average net pay thickness of the Strawn zone?

A It is essentially 30 feet throughout the field.

Q Is that the average thickness over the field?

A Yes, it is.

Q And the Upper Penn--what is the approximate thickness of that zone which appears to be productive?

A It is considerably less, approximately seven feet throughout the field.

Q What is the net thickness of the net pay zone in the Wolfcamp formations which appears to be productive?

A Approximately eleven feet throughout the field.

Q All right. Will you tell us what, would you describe those various formations, how are they made up, what kind of rocks or--.

A The Strawn, the Upper Pennsylvanian and the lower Wolfcamp are very similar, brown to gray in color, with fine and medium crystalline and limestone; there is considerable fracturing and most of the porosity is developed in reservoirs, and the porosity as a whole is rather erratic throughout the field.

Q What kind of reservoirs are those, are they good, or bad, or what kind?

A Of the three I believe the Strawn is by far the best due to its greater thickness, but I would have to classify both the Upper Penn and the Lower Wolfcamp as salvage primarily.

MR. HARBEN: That's all.

MR. PORTER: Does anyone else have any questions to ask of Mr. Merrill?

BY MR. NUTTER:

Q Did I understand you to say that the top of the Wolfcamp has an average depth of approximately 9650 feet?

A I believe that is correct, as shown in the well electrical log cross-section.

Q And the top of the Pennsylvanian occurs at about 10,600 feet, I believe?

A That is correct.

Q And the top of the Strawn?

A At approximately 11,500 feet.

Q And this lower Wolfcamp pay is the only pay that drill stem tests have indicated to be present in the Wolfcamp formation?

A I don't understand the question.

Q I say this lower Wolfcamp, the one you are speaking of at 10,400 feet, is the only pay that drill stem tests indicated to be in the Wolfcamp?

A Correct.

Q And it occurs only 200 feet above the top of the pay?

A Correct.

Q Which is the top of the defined limits of the Pennsylvania Pool at the present time?

A Yes.

Q In other words, we would have to increase the vertical limits by 200 feet to take in that pay, is that right?

A That would get the only pay indicated at the present time.

Q And yet your application is to take in the Wolfcamp formation with the Dean-Pennsylvanian Pool and define all that as one pay section, from 9650 to 11,500 feet, is that correct?

A That is correct.

Q Is there any kind of marker in the Wolfcamp formation that is pretty well defined?

A I believe the top of the Wolfcamp is accepted generally by most of the oil companies in that area.

Q Is there any mark below the top of the Wolfcamp?

A None that is consistent.

Q There is not a consistent marker?

A No.

MR. NUTTER: I believe that is all I have.

BY MR. MANKIN:

Q Mr. Merrill, you have referred many times to the Upper Pennsylvanian which appeared to be productive by drill stem tests, is that correct?

A Yes.

Q Is that same area also called the Cisco portion of the Pennsylvanian?

A I believe that is correct.

Q And that could be correlated as the Cisco?

A I believe that's right.

BY MR. NUTTER:

Q Here in the Wolfcamp you have estimated oil-water contact at 9650, is that correct?

A That is correct.

Q How was that established?

A By evaluation of the drill stem tests we have made throughout that zone. Several of the tests encountered water.

MR. MANKIN: I see, I believe that is all.

BY MR. HARBEN:

Q What is the total of the thickness from the top of the Wolfcamp to the top of the Mississippian?

A It would be approximately 3100 feet.

Q And that is the section which we are asking be defined as the Dean-Permo-Pennsylvanian Pool?

A That is correct.

MR. HARBEN: All right.

MR. PORTER: Does anyone else have some questions? If not, the witness will be excused. Do you intend to introduce the exhibits?

MR. HARBEN: Yes, we offer in evidence Exhibits 1, 2, 3, 4 and 5.

MR. PORTER: Without objection they will be admitted.

W. J. ROGERS,

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

DIRECT EXAMINATION

BY MR. HARBEN:

Q What is your name?

A W. J. Rogers.

Q Where do you reside, Mr. Rogers?

A Midland, Texas

Q By whom are you employed?

A Sinclair Oil and Gas Company.

Q How long have you been employed by Sinclair Oil and Gas Company?

A Nineteen years.

Q What is your official position at the present time?

A Division Petroleum Engineer.

Q And as such did you have/under your supervision the engineering work in Lea County?

A Yes, sir.

GOVERNOR SIMMS: The Commission considers him qualified as an expert.

Q Thank you. Mr. Rogers, have you made a study of the Pennsylvanian Formation as it has heretofore been defined, and of the Wolfcamp formation?

A Yes, sir.

Q And what kind of study did you make and for what purpose?

A Well, first we studied the oil reserves and the economics of the Pennsylvanian Zone and we have prepared a tabulation which would--

Q (Int.) Would you speak up a little louder, please, so everyone can hear you.

A We first prepared a tabulation showing the oil reserves and economics of the Pennsylvanian zone and that, I think, we are prepared to introduce as an Exhibit.

Q All right. Have you prepared some data which, I believe, is labelled "Oil Reserves & Economics of the Pennsylvanian Pool?"

A Yes, sir, that is the tabulation to which I was referring.

Q And that is marked Exhibit 6?

A Yes, sir.

Q Before we get into Exhibit 6, have you also prepared an Exhibit No. 7 which shows the oil reserves and economics of the Wolfcamp zone?

A Yes, sir.

Q And did you also prepare some data and information marked Exhibit 8 which reflects the economics of the proposed Permo-Pennsylvanian pool?

A Yes, sir.

Q Were those exhibits prepared by you or under your supervision?

A Yes, sir.

Q And do those exhibits correctly reflect the information which they purport to reflect?

A Yes, sir.

Q All right. Now, let's take Exhibit 6, Mr. Rogers. Will you explain that exhibit to the Commission, please sir?

A Exhibit 6 shows the oil reserves and economics of the Pennsylvanian zone. I might mention here that in case No. 1016 which was heard on February 15th of this year, that Sinclair's Mr. C. L. Wilson presented an economic summary of the Pennsylvanian zone. And the summary which we are presenting heretoday confirms or is essentially the same as the one Mr. Wilson presented back in February. However, we do have additional data that has been obtained, and for that reason I thought it would be well to go

ahead and go thrOugh the same sort of economic calculations to show the picture as it is today. For example, under Item 1 of Exhibit 6, we show the factors used in computing the Pennsylvanian Reserves. The first item A, which is porosity, we find now, using the weighted average of core analysis on eight wells that the average porosity is 5.03%. I believe Mr. Wells testified at the time that the average porosity was 6.47% based on two wells, and we now have an analysis based on eight wells. The second item, 1-B, is effective pay thickness. We find now from an analysis of electric-micro-radio-active logs on 15 wells in the field that the effective pay thckness is 37.7 feet. I believe Mr. Wilson testified at the time that the average pay thickness was 33 feet based on an analysis of seven wells--

Q (Int.) Excuse me--that 37.7 figure includes the productive zone known as the Strawn line and also the Upper Pennsylvania, does it not?

A That's right. Item 1-c is the formation volume factor of 2.315 barrels of reservoir oil per barrel of stock tank oil. That is the same factor used previously by Mr. Wilson. Also the connate value of 16% used today is the same one used by Mr. Wilson. And Item I-e, the oil recovery of 20%, is the same figure used previously. Now, using those figures we come to Item II by which we show the Pennsylvanian oil in place, and that equals 5.350 stock tank barrels per acre. Now the recoverable Pennsylvanian Stock Tank reserves amount to 1,070 barrels per acre. I believe Mr. Wilson's testimony indicated at the time that there were 1200 barrels per acre. We figure now under Item 3-b (III-b)

that the gross barrels of recoverable oil for 40 acres amounts to 42,800 barrels, and on 80 acres that figure is 85,600 barrels. We have used, in computing the economics, a price of $2.83 per barrel; that is the same figure used previously. Then summing up the economics of the Pennsylvanian well, we find that the net loss to the operator with one well on 40 acres would amount to $149,948.00, whereas the reserves under 80 acres in the Pennsylvanian would result in a loss of $51,220.00.

Q In other words, if a well was drilled into the Pennsylvanian formation and the oil was produced from the Strawn Line and the Upper Pennsylvania, an operator could expect to end up with a loss of $51,220, where he was drilling one well to 80 acres, is that right?

A That's right. In otherwords, the 80 acre reserves in the Dean-Pennsylvanian are insufficient for a paying well.

Q Do you have anything further to say about that exhibit?

A No, sir.

Q All right. Let's go to Exhibit No. 7. Will you explain that, please sir?

A Exhibit 7 is a tabulation showing the oil reserves and economis of the Wolfcamp Zone. Under Item I-a we have used a porosity of 5.3%; we obtained that value from a core analysis on one well in the field, the Magnolia Owens #1. By core analysis and by analysis of electric-micro-radio active lots on 13 wells in the field, we estimate the effective pay thickness to be 11.4 feet. Under Item I-c we used a formation volume factor of 1,880 barrels reservoir oil per barrel of stock tank oil. That figure was ob-

tained from a reservoir fluid analysis obtained in the Gladiola Wolfcamp fluid. We believe the fluid there is similar to what we have in the Dean-Wolfcamp zone, and it is also similar to the reservoir fluid we have in the Strawn line. We have used a connate water factor of 27% and, again, we have used an estimated oil recovery of 20% for the Wolfcamp formation. Putting those factors together, we calculate under Item II that the Wolfcamp oil-in-place equals 1820 barrels per acre, and that the recoverable reserves then amount to 364 gross barrels per acre which would give 14,560 barrels per 40 acres, and 29,120 barrels per 80 acres. Skipping on down to the economics, we have calculated those on the basis of 80 acres and find that a single well drilled to the Wolfcamp formation and using the 80 acre reserves would result in a loss to the operation of $152,125.00. Now, if it were possible to dually complete a well in the Wolfcamp and Pennsylvanian formations, we have calculated the economics of the Wolfcamp section itself and find that based on the reserves for 40 acres, it would be possible to show a profit of $284.00.

Q Do you mean on a 40 acres or 80 acres?

A On 80 acres,--this would show a profit of $284.00. Now this $284.00 profit is in the Wolfcamp only and it doesn't begin to offset the $51,220.00 loss which would result in the drilling of a well and the completion and operation in the Pennsylvanian formation, of the same well.

Q What would that reduce the loss to?

A Well, approximately $51,000.00.

Q Now, of course, if you drill one well to each 40 acres,

the losses would be much greater than that?

A That's right.

Q Do you have anything else to say in connection with Exhibit 7?

A No, sir.

Q All right. Let's go to Exhibit 8, and will you explain that exhibit to the Commission, please?

A Exhibit 8 shows the economics of the proposed Permo-Pennsylvanian pool. Under Item I we have added the recoverable reserves in stock tank barrels per acre for the Pennsylvanian Zone and the Wolfcamp Zone. The sum of those two amounts to 1434 barrels per acre. And skipping on down to the economics, we find that a single Permo-Pennsylvanian well on 40 acres would result in a loss of $120,954.00. Whereas the reserves on 80 acres would result in a very small profit, being $11,768,00.

Q And that small profit of $11,768.00 would only result after an investment of some $300,000.00, isn't that right?

A Yes, sir, that's right.

Q Or approximately so. All right. Do you have anything further to say in connection with Exhibit 8?

A No, sir.

(OFF RECORD to enable commission and witness to check Sinclair Exhibits to be sure all copies distributed were identical.)

Q Mr. Rogers, I hand you Sinclair's Exhibit No. 9, and ask you if you are familiar with that Exhibit?

A Yes, sir.

Q Was that prepared by you or under your direction?

A Yes, sir.

Q And is the information reflected on that exhibit true and correct?

A Yes, sir, it is.

Q Now, I hand you Exhibit 10 and ask you if you are familiar with that exhibit?

A Yes, sir.

Q Was that prepared by you or under your supervision?

A That is correct.

Q And is the information reflected thereon true and correct information?

A Yes, sir.

Q I hand you Exhibit 11 and Exhibit 12. Were those two exhibits, 11 and 12, prepared by you or under your supervision?

A Yes, sir.

Q And is the information reflected on those exhibits true and correct?

A Yes, sir.

Q All right, will you take Exhibit 9 and explain that to the Commission, please, sir?

A Exhibit 9 is a chart showing the reservoir performance of the Dean-Pennsylvanian pool. In this chart the bottom hole pressure, the monthly oil-gas production, the gas-oil ration, and the number of hours completed in the field are all plotted against time.

Q Now, what do you mean by 'plotted against time', Mr. Rogers--I wonder if you would explain that a little further?

A Well, the horizontal scale at the bottom of the chart is plotted in months. Shall I explain Exhibit 10?

Q Yes, please.

A Exhibit 10 is the same data plotted against cumulative oil production. In other words, the bottom scale is cumulated oil production for the Dean-Pennsylvanian pool.

Q Now as to those exhibits, will you explain the line across the top of the exhibits?

A The line across the top shows the bottom hole pressure history of the Dean-Pennsylvanian pool up to date.

Q All right. Now, will you go to Exhibit 11?

A Exhibit 11 is a chronological summary of, or tabulation of the bottom hole pressures that were used in plotting the bottom hole pressure curves on the charts.

Q All right--and Exhibit 12?

A Exhibit 12 is a tabulation showing the production data for each well in the Dean-Pennsylvanian pool, and that data was plotted on the two charts, exhibits 9 and 10.

Q All right. Now going back to Exhibit 12--no, Exhibit 11, will you comment upon the bottom hole pressures as shown on that exhibit, please sir?

A Yes, sir. I would like to point out, first, from these exhibits that up until July the first, 1956, there had been some ten wells completed. Of course, all of these completions were in the Strawn zone. Now, the cumulative oil production up to the same time, that is July 1, 1956, was approximately 246,000 barrels. As can be noted from the chart, Exhibit 9, the first production

from the pool was obtained in December, 1955. The production for the month of June, 1956, was approximately 50,000 barrels of oil and 100,000 m.c.f. of gas, and you will note, too, from Exhibits 9 and 10, that the gas ratio has increased from approximately 1600 cubic feet per barrel to 2,000 cubic feet per barrel. You will the bottom hole pressure decrease from an initial pressure of 4,056 p.s.i. to 3,620 p.s.i. as of June, 1956, which represents a dop in pressure of about 436 p.s.i. Now, in respect to that bottom hole pressure history, our two charts, Exhibits 9 and 10, we have used a symbol which is used to denote the initial bottom hole pressure or newly completed wells, and from that chart--

Q (Int.) Which exhibit are you referring to now?

A On both 9 and 10, we used the same symbol, of course, on both charts.

Q Yes, all right.

A We note from this that the bottom hole pressure on newly completed wells, regardless of location, are approximately the same as average reservoir pressures at the time, and we state and feel that this is very good evidence that there is excellent communication throughout the field, and that a well can effectively drain in excess of 80 acres. I believe that summarizes our bottom hole pressure history.

Q Now, the bottom hole pressure as shown on Exhibit 11, that is the pressure taken in the wells producing from the Strawn line, is it not?

A Yes, sir, that's right.

Q And that does not take into consideration the pressures

which might be found in the top of the Pennsylvanian or in the Wolfcamp zone?

A No, the only wells completed were completed on the Strawn line, section, and that is the section on which we have the bottom hole pressure history.

Q Now, Mr. Rogers, from the information which you have been able to gather, from your study of the Pennsylvanian formation, and the Wolfcamp formation, and from the testimony which you have given here before this Commission, do you have a recommendation to make to the Commission as to the combining of the Wolfcamp formation with the Pennsylvanian pool?

A Well, yes. I think that they should be combined as a matter of economics and drainage efficiency. I think that since the lower Wolfcamp and the Upper Penn sections appear to be very similar geologically, and also by oil stem tests and oil gravities, since those are similar to the Strawn section, we would also expect a well completed in those formations could drain in excess of 80 acres, so by reason of the economics and drainage efficiency, we can certainly justify the 80 acres being added to the Pennsylvanian and designated as the Permo-Pennsylvanian pool.

Q In your opinion would the Wolfcamp as a separate pool be developed by operators and the oil produced therefrom if it remains a separate pool?

A Well, the reserves in the Wolfcamp are not sufficient to show a pay-out.

Q And an operator would not be justified to drill a well

to the Wolfcamp zone to recover oil from that formation?

A No, sir; I think it will be recovered only as salvage.

Q In your opinion would it prevent waste if the Wolfcamp formation is combined with the Pennsylvanian Pool and designated as one pool, the Dean-Permo-Pennsylvania Pool?

A Yes, sir.

Q All right. Now, would you state your recommendations as to the drilling pattern or drilling units?

A Well, I would suggest that the 80's could run in either a north-south or east-west direction, and that the well could be located on either forty of the 80-acre tract so long as the well is drilled no closer than 330 feet to the boundaries of the 40-acre tracts.

Q Of the quarter-quarter section?

A Yes, sir.

Q And the units to run either north and south or east and west as may be elected by the operator?

A Yes, sir.

Q Now, what is your recommendation, Mr. Rogers, with respect to the dual completion of the Devonian and Permo-Pennsylvanian pools?

A Well, the order as it is written now permits dual completions between the Dean-Devonian and Dean-Pennsylvanian pools. I think it should be amended or a new order be entered permitting completion of the Wolfcamp with the Devonian formation in the Dean-Permo-Pennsylvanian and Dean-Devonian pool.

Q And would you recommend using parallel strings of tubing?

A Yes, sir.

Q And to be dually completed in the same manner as required under the present order?

A Yes, sir.

Q Do you have any other comments you wish to make, Mr. Rogers?

A No, sir.

MR. HARBEN: I believe that is all of this witness.

GOVERNOR SIMMS: Bill, I would like to ask a question. Is the cumulative effect of these last four exhibits in layman's or psuedo-layman's language to the effect that there is good communication both from the point of conservation and economics on this lease?

A Those exhibits show good communication in the Strawn line section. All of our Pennsylvanian wells are completed at the present time in this Strawn lease and those exhibits show that there is excellent communication horizontally in that particular section.

GOVERNOR SIMMS: But not vertically?

A Not vertically with respect to the Wolfcamp or Upper Penn, no, sir. There is no communication vertically. However, I do think since these formations are similar geologically to the Strawn section that we would have good horizontal communication in these sections above.

GOVERNOR SIMMS: Thanks, Bill.

BY MR. HARBIN:

Q I have one question: In your opinion, a well to every 80 acres would recover all the oil in the Pennsylvanian and Wolfcamp

formations? A Yes, sir.

Q And you would eventually recover as much oil with one well to every 80 acres as to every 40 acres?

A Yes, sir, the performance to date indicates very good communication and very good drainage throughout.

Q And it would not be ecomically profitable to drill a well and produce the Pennsylvanian formation by itself and drill another and produce the Wolfcamp formation by itself?

A No, sir; they are both marginal sections and we are fortunate, I think, in having this Wolfcamp stringer there to help pay for the development in the field. It is very marginal, even with all three formations lumped together.

BY MR. PORTER:

Q Mr. Rogers, to complete a well in the Wolfcamp there, approximately where would the perforations be?

A Approximately at 10,400 feet.

Q 10,400--and the Pennsylvania, I believe, is presently producing from below 11,000?

A 11,500.

Q Do you realize that to extend the vertical limits of that pool, it would automatically lower the depth range and also the allowable?

A No, sir, I hadn't given that consideration. I can see--

Q (Int.) Well, of course, your discovery of a well in the pool establishes the depth range in that pool and in this case if the limits are extended and the well is perforated at a lesser depth, you would lower the--

A (Int.) We would have a smaller allowable as a result. I think in looking at the overall picture that it would be desirable to have that in spite of the reduction in the allowable, however.

BY MR. NUTTER:

Q Mr. Rogers, turning first to your Exhibit 6, do you have the individual porosities on those eight wells?

A Yes, sir.

Q The eight that you have the core analyses on?

A Yes, sir.

Q What is the range of those, please?

A I see a low of 3.4% and a high of 7.3; our average of 5.03 per cent is a weighted average.

Q Now, on this--if you do have a tabulation of those, I would like to have the tabulations rather than your reading it out and cluttering up the record with the figures.

A I would be happy to give them to you.

Q Now, the economics of the Pennsylvania well shown on Exhibit 6 are purely for a single completion well, are they not?

A Yes, sir.

Q And a dual completion is not shown?

A No, sir.

Q The economic picture would be changed, however, if it were a dual completion, would it not?

A Well, I can give you several tabulations; Exhibit 7 shows the result of dually completing between the Wolfcamp and the Pennsylvanian, and the result of that as shown on Exhibit 7, we could gain $284.00 from the Wolfcamp reserves by dual completion. How-

ever, the Pennsylvania section in the same well would lose $51,220.00.

Q But on Exhibits 6, 7 nor 8 have you shown the economics of dually completing a well in the Pennsylvanian or Permo-Penn and Devonian--was there no consideration for the Devonian development?

A No, sir. I have estimated, however, the amount of money that could be realized by dually completing in an existing Pennsylvania well equipped with 7"--in other words, if you already had a Pennsylvanian well drilled and compled with 7", it would be possible to show a profit there of $21,769.00.

Q And on Exhibit 7 in paragraph I, sub-section (c), your formation volume factor should be 1.880 rather than 1,880, should it not?

A That's right, this is a missprint.

Q Where was that volume factor obtained?

A From the reservoir fluid analysis from the Gladiola Wolfcamp. You will note the factor being 1.88 as compared to a formation volume factor in the Pennsylvanian being 2.3. We think the formation volume factor would be somewhere in the range of that one we got from the Gladiola Wolfcamp analysis.

Q You suspect the communication across the Wolfcamp would be favorable--I think you stated a while ago that you have had good communication across the Strawn as evidenced by Exhibit 11, and you stated you expected the communication across the Wolfcamp would be good because the formations were similar?

A Yes, sir.

Q And I think you said the formation volume factor is comparable too?

A Yes, it is different but it is still a comparatively higher formation volume factor. In other words, there should be a lot of gas in solution there, and we expect that fluid to be very mobile as it is in the Strawn section.

Q Do the electro and radio-active logs on the Gladiola resume the ones in the Dean-Wolfcamp?

A When we computed the formation volume factor, we were concerned mostly with the similarity of the reservoir fluids. I don't recall checking the electric log characteristics especially.

Q What was the source of your connate water figure of 27%, on Exhibit 7?

A I believe we estimated that as a result of core analysis in the Gladiola-Wolfcamp.

Q That came from the Gladiola-Wolfcamp too. And why did you use a recovery factor of 20% there?

A Because we expect the performance to be similar to that in the Pennsylvania-Strawn.

Q You expect it will be pretty much the same insofar as that is concerned?

A Yes, sir.

Q I think we pretty well established at the last hearing that 20% is a reasonable figure for the Strawn.

A I think so too.

Q Mr. Rogers, I have one question on Exhibit 9: During the month of April, gas production zoomed up quite a bit from previous production. What was the cause of that?

A The actual figures are shown on Exhibit 12. And you are comparing April with March, is that--?

Q Well, I was concerned, comparing April with March and May, the two months on either side of it.

A I believe that would be due--if you will refer to Exhibit 12 and look at the production on Magnolia-Anderson's Estate No. 1, we note in the month of March that well produced 8,166 barrels of oil and 11, 939 cubic feet of gas, whereas in the month of April, it produced 6,866 barrels of oil and 30,569 cubic feet of gas or m.c.f. of gas. In other words, apparently there was a sharp increase on the gas-oil ratio in that well in April--I believe that is the only well through the month of May that had what we call--what we considered a high gas-oil ratio. The others all showed oh, fifteen and seventeen hundred.

Q Is that the well in the Northwest corner, Section 5, 16 something--16, 36--?

A Referring to Exhibit 3, it is the well in the Southwest corner of the field, being lot 4 in Section 5, range 37 east, township 16 south.

Q From the drill stem tests, are you able to determine what the acual flowing pressures of this Wolfcamp formation would be?

A We compared the shut-in bottom hole pressures obtained on drill stem tests in the Wolfcamp with those in the Upper Pennsylvania and the Strawn, and those structures correlated to common data are almost identical when you compare the original pressures in each zone. As for flowing bottom hole pressure, as recorded on drill stem tests, I believe it varied quite a bit in the Wolfcamp and also in the Pennsylvanian.

Q Did they vary on the flowing pressure or just on drill stem testing?

A Well, I mean the flowing, due to the erratic nature of the three formations from one location to another, the flowing pressure, drill stem tests and recovery might vary.

Q But they compare favorably?

A Almost exactly when referred to common data.

Q How about fluid analysis in the Wolfcamp as compared with the Strawn section?

A We don't have one in either the Wolfcamp or the Pennsylvanian. The only one we have is on the Strawn section. However, the oil gravities are similar. I believe in the upper Wolfcamp they are 38 or 39 as compared to 43 and 44 in the Strawn line.

Q Mr. Rogers, in essence, what this application is for, if you take all three parts of the application, is to set a spacing pattern for a pool that has never had a well completed, is that correct?

A Not if we combine three strings, we already have some 12 wells completed in the Pennsylvanian pool--we are just asking that the Wolfcamp stringer be added so that we may produce it as salvage--we already have 12 wells completed in the Wolfcamp.

Q But if we set an 80-acre spacing pattern for the entire pool and then through the Wolfcamp, we would be setting a spacing pattern for a pool that has never had a completed well in it, isn't that correct?

A That is correct.

(MR. NUTTER indicated that he had no further questions.)

BY MR. MANKIN:

Q Referring again, Mr. Rogers, to this Magnolia-Anderson well, which has had a very large, very rapid, increase in gas-oil ratio, would you say that possibly the reason for this was that this well was completed on the edge of the pool and had a small oil column---~~had~~ mostly a gas column?

A Yes, I think it is due in part to the fact that the net oil effective pay in that area is very thin, and not that there was a gas cap there, but the bottom hole pressure in that particular well has decreased to a point below the saturation pressure.

Q There was only about a 17-foot perforation in that particular well, wasn't there?

A A very small amount, yes, sir.

Q Smaller than most of the other net pay zones in the other 11 wells?

A That's right, less than the others.

Q Another question in regard to ldual completions--I believe you recommended continuing the parallel strings for the Permo-Pennsylvanian and the Dean-Devonian, is that right?

A Yes, sir.

Q That is your recommendation? A Yes, sir.

Q You would not favor a single string completion of one tubing string in the Permo-Pennsylvanian and Devonian because it might leave a lot of liquid underground?

A I would not favor it personally.

Q Do you think because of the waste--

A (Int.) It would depend on which formation was depleted

first. It is possible you would get the same oil but it might take a long time to do it and it would depend on which zone was depleted first.

Q Then you think a better reservoir performance would be had by continuing with parallel stringing as you have done in the past?

A Yes.

Q There have been some 40-acre completions, and the Ohio Dean which is a possible completion, and the Magnolia L. What provisions did you make for 80-acre spacing for those wells?

A I believe the operators of the tracts off-setting could be pooled and form 80-acre units in those cases. For instance, the Atlantic Dow 40, actually that is about a 50-acre governmental lot, could be combined with the governmental lot to the south, being Magnolia's State L lease.

Q It would be to the south or to the east as well, couldn't it?

A This plat doesn't show it, but the Magnolia K well to the east shows on your exhibit as a location; actually it has been completed recently so it could not be formed with the governmental lot to the ast, it would have to be to the south.

Q You say it has been completed? A Yes, sir

Q So it would have to be with the Magnolia's 40 acres to the south of the Atlantic Dow?

A Yes, sir.

Q Are there any other exceptions or problems that might arise other than the Ohio Dean? -- and the Magnolia L?

A No, sir, I don't recall any problems that would arise.

Q Then you have no particular solution for the 80 acres if the Ohio Dean was a Pennsylvanian completion?

A Well, yes, sir; that 40 acres could be added to the 40 to the east, the Sinclair Oil and Gas Company Lease 413.

Q If that was a producing Sinclair, it would be agreeable?

A I think we would certainly negotiate along those lines, yes, sir.

Q That's all.

BY MR. NUTTER:

Q On our order 799, which requires that cement be circulated to a point 500 feet above the top of the Pennsylvanian, if these areas were combined into the Pennsylvanian, would you recommend it at 500 feet above the top of the Wolfcamp?

A I would suggest 500 feet above the uppermost producing section.

Q So far we only have one section producing--is there a possibility there might be more later on?

A There is that possibility, yes; however, what I meant by that was that if an operator was circulating his cement and found it came 500 feet above that 10,400 stringer, and if for some reason he wanted to go higher in the Wolfcamp zone, he can perforate I believe, he would as a prudent operator, go in there and put up his cement high enough above the uppermost section he contemplates perforating. However, if the Commission should write that in the order, that it must be 500 feet above the top of the upper Wolfcamp, I am sure the operator can do that physically in the well.

MR. NUTTER: I believe that's all.

BY MR. MANKIN:

Q Mr. Rogers, order R-799, which you are seeking revision of here, indicated that the Devonian-Pennsylvanian zone would have pipes set on the bottom, 500 feet above the Pennsylvanian, and permeate two zones?

A Yes, sir.

Q Do you still recommend that?

A I think that the important thing there is to have the cement from the bottom of the oil stem come up high enough to protect the upper formations and whether you had an open hole in the Devonian below the oil formation I don't think is important; I think it would be satisfactory if the order were to indicate that the open hole in addition to the perforation could be utilized in the Devonian.

Q Then it is your recommendation that possibly the order Should have an additional provision for administrative approval if the open hole completion was necessary, that it could be granted administratively rather than in another hearing?

A Yes, sir, I think that would certainly take care of it.

BY MR. TERRELL COUCH:

Q Mr. Rogers, I was interested in your statement that Ohio Oil Company's Ohio Dean could be added to the 40 acres to the east and Sinclair would be willing to negotiate with us on the pooling of our 40 acres to the east. I take it that you have no objection to the recognition of the Ohio Oil Company's exception to the spacing pattern insofar as what has been completed?

A No, sir. I believe that the application stated that the wells already completed previous to the order would be exceptions.

Q And Ohio was in that category? A Yes, sir.

MR. COUCH: Thank you.

MR. PORTER: Any other questions of this witness? If not, the witness will be excused.

MR. HARBEN: I would like to offer the exhibits identified by Mr. Rogers, exhibits 6, 7, 8, 9, 10, 11 and 12.

MR. PORTER: Without objection they will be received.

(RECESS.)

MR. PORTER: The meeting will come to order, please. Does anyone have anything further in this case?

MR. HARBEN: I would like at this time to offer in evidence the testimony which was given on February 15, 1956, in case 1016. That was the dual completion hearing which was had on that date and pursuant to such hearing, Order R-799 was issued on April 27, 1956, and I would like that testimony to be made a part of the record in this case.

MR. PORTER: Without any objection, it will be made a part of the record.

MR. HARBEN: That is all we have--I would like to make a short statement before the Commission.

MR. PORTER: Does anyone else have a statement?

MR. COUCH: Mr. Couch for Ohio Oil Company. The AC Dean No. 1 was drilled at the time this application was filed and, as shown by our application filed January, 1956, the well was projected to test the Pennsylvanian and Devonian formations. Now it

is drilled approximately 13,000 feet and located 660 feet from the west line and 990 from the north line of Section 35, township 15 S range 6 east. It is the opinion of the Ohio Oil Company that this should be recognized as an exception to any 80-acre spacing put into effect for the Dean-Pennsylvanian pool as it now exists or hereafter may be enlarged, and the well should be granted the same allowable as under the rules for 40-acre pattern and the depth at which a well is dually completed. And we request that this be considered in any order entered in this case.

MR. GRADY: Mr. Robert Grady of Columbian Carbon Company. We have a working interest in the Dean field and concur with Sinclair's recommendation.

MR. TOMLINSON: W. T. TOMLINSON for the Atlantic Refining Company. We operate one well in the Dean-Pennsylvanian pool. In the beginning of the development of the Dean pool, Atlantic delayed drilling of its well hoping that 80-acre spacing would be the spacing adopted. We continue our support of 80-acre spacing by concurring in Sinclair's application for it in this instance.

MR. PORTER: Thank you, Mr. Tomlinson.

MR. WALKER: Don Walker, representing Gulf Oil. We have no operations in the area at the time; however, we have leases which we expect may be productive in the future and would like to state that we are in accord with the request made in this application.

MR. PORTER: Anyone else?

MR. HARBEN: I would like to make a brief statement, if I may. If the Commission please, Sinclair and other operators

are justified in asking the Commission to grant the orders which we have asked for in our application. We have a situation here where we have a small stringer or zone 11 feet in thickness, I believe, in the Wolfcamp. It has been testified to that there are approximately 364 barrels per acre recoverable oil from the presently known zone of the Wolfcamp formation which will probably produce oil. We believe that because of the economics involved, that the Commission should enter an order combining the Wolfcamp formation with the Dean-Pennsylvanian formation and designating it as the Permo-Dean-Pennsylvanian pool. Otherwise it seems to me that if the Wolfcamp formation is left as a separate pool, that the probabilities are that the oil would never be recovered which is now in the Wolfcamp formation; because of the economics, no one could afford to drill a well in the Wolfcamp formation in order to recover that small amount of oil. I believe the exhibit will show the Devonian formation does not cover the entire area covered by the Pennsylvanian Pool, and therefore, as to some of the Pennsylvanian formation and the Wolfcamp formation, there would be no possibility of a recovery of that by perforating Devonian wells, and in order to prevent waste, to protect correlative rights, and as a measure to further conservation, in order that the oil may be recovered from the Wolfcamp formation, we believe that the Commission should enter an order combining the Wolfcamp and the Dean-Pennsylvanian pools and designating it as the Dean-Permo-Pennsylvanian pool, and that the dual completion order be amended so as to permit dual completion in the Devonian and Dean-Permo-Pennsylvanian pool. We also believe we are justified

in asking for 80-acre spacing, for it is obvious that the economics do not permit the drilling of a well on every 40 acres to recover in the Pennsylvanian and Wolfcamp formations, and our Mr. Rogers testified that as much oil can be recovered by drilling one well to every 80 acres as can be recovered by drilling one to every 40 acres. We believe the unit should be run either north and south or east and west, according to the election of the operator. Thank you.

MR. PORTER: Anyone else have anything in this case? If not, we will take the case under advisement. We will take up next, case No. 1103.

****

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, DOROTHY B. MYERS, a Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the Oil Conservation Commission for the State of New Mexico, was reported by me in shorthand and reduced to typewritten transcript by me, and that the same is a true and complete record of said proceedings, to the best of my knowledge, skill and ability.

WITNESS my hand and seal this 9th day of August, 1956.

Dorothy B. Myers
COURT REPORTER

BEFORE THE

Oil Conservation Commission

SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1102

TRANSCRIPT OF PROCEEDINGS

DEARNLEY-MEIER AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

November 13, 1956

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
November 13, 1956

IN THE MATTER OF:

(Rehearing) Application of the Ohio Oil Company for rehearing in Case 1102, Order R-892, which established pool rules for the Dean Permo-Pennsylvania and Dean-Devonian Pools, Lea County, New Mexico. Applicant, in above-styled cause, seeks reconsideration by the Commission of the spacing and allowable provisions for the Dean Permo-Pennsylvanian Pool with particular attention to the allowable for existing wells on 40-acre tracts. Applicant contends that such wells should retain the normal 40-acre allowable rather than one-half of the normal 80-acre allowable as established by Order R-892.

BEFORE:

Mr. A. L. Porter
Mr. E. S. (Johnny) Walker

TRANSCRIPT OF PROCEEDINGS

MR. PORTER: We will consider next, Case 1102.

MR. GURLEY: Application of the Ohio Oil Company for rehearing in Case 1102, Order R-892 which established pool rules for the Dean Permo-Pennsylvania and Dean-Devonian Pools, Lea County, New Mexico.

MR. PORTER: Mr. Couch.

MR. COUCH: Terrell Couch for the Ohio Oil Company. I would like to make a statement at this time, if I may, please, sir.

MR. PORTER: You may proceed.

MR. COUCH: The undisputed facts are that the Ohio's A. C. Dean Well No. 1 was commenced on 3-31-56 projected to the Pennsylvanian and Devonian formations on a leasehold tract of 200 acres. The well site is of course the NW/4 of the NW/4 of Section 35 and the NE/4 of Section 34 being the adjoining quarter section to the west is the remainder of the 200 acre tract.

On June 20, 1956, a drill stem test was run in the Strawn. At the hearing approximately one month later I requested that the well be recognized as an exception to the spacing provisions of the order proposed by Sinclair Oil and Gas Company. I also requested that the allowable of the well be permitted to remain at the allowable determined under statewide rules applicable at the time it was drilled. The Ohio did not at that time request a full 80 acre allowable - we requested only that the allowable not be cut by the application of the proposed rules.

As we all know, it appears doubtful whether a Permo-Penn well will pay for itself even under 80 acre spacing with only a normal 80 acre allowable. It is certain then that a well cannot return the invested capital if the allowable is limited to 1/2 of such an 80 acre allowable. That is the cut Order R-892 would place on the Ohio's well.

It has come to my attention that some of the operators have

obtained the impression The Ohio favors 40 acre spacing in the Dean Permo Pennsylvanian Pool. We do not. On the basis of all available information to date, The Ohio's management definitely advocates 80 acre spacing as the proper method of developing the pool. If it is desired to avoid any exception to 80 acre spacing insofar as the Ohio's acreage is concerned, that can readily be accomplished by recognizing a full 80 acre unit out of Ohio's own 200 acre tract. I repeat, The Ohio approves 80 acre spacing.

That brings us almost up to date. Early last evening Sinclair Oil and Gas Company and The Ohio arrived at what appeared to be an acceptable basis for forming an 80 acre unit within Section 35. The Ohio's leasehold is not state acreage. Our 200 acre tract is covered by three undivided interest leases containing no pooling provision. Royalty owners interests must be taken into account. With these facts in mind The Ohio suggested to Sinclair a continuance of the case to the regular December Hearing, with an interim order continuing The Ohio's allowable in effect until that date. It is my understanding that Sinclair has no objection to the continuance of the case, but as of last night Sinclair insisted that the cut in allowable must be effective December 1st, 1956.

In my opinion, if Sinclair desires to work out an agreement on the basis discussed last night there is every reason to believe the entire transaction including a satisfactory arrangement with

our royalty owners can be worked out prior to the December Hearing. I have attempted to consider carefully all aspects of the problem. I have concluded that a continuance of this case will be in the best interest of attempting to work out an 80 acre unit within the standards and limitations of the order. The cause of 80 acre spacing in New Mexico will, in my opinion, be better served by continuing this case at this time to permit a good faith effort to comply with the provisions of Order R-892. I therefore request that the case be continued until the regular December Hearing and in fairness to The Ohio, I request the Commission enter it's interim order continuing the allowable of The Ohio's well in effect until the regular December Hearing.

MR. HARBEN: May I make a statement?

MR. PORTER: Mr. Harben, I presume that your statement would be limited to the motion of Mr. Couch at this time.

MR. HARBEN: Yes, sir.

MR. PORTER: You may proceed.

MR. HARBEN: If the Commission please, Sinclair Oil and Gas Company does not object to continuing this case until the next term, or the next hearing date, but we do vigorously object to the well, the Ohio's well producing its present allowable after December 1st.

Now, the 40 acres which we have on the east of their 40 acres is state land. If the well continues to produce its present

allowable from December 1st until this hearing comes up on December 15th, it will be draining considerable oil from our lease. It would be depriving the State of New Mexico and the school system of royalties which would rightfully belong to them. Now, we think that this well should be brought within this Commission's order which was entered into October 4th, and that on December 1st, the allowable be reduced in accordance with that order.

Now, as Mr. Couch says, some negotiations have been conducted between Sinclair and Ohio. I believe myself that there be no question but what the 80 acre unit would be for. Perhaps before December 1st, I understand from Mr. Couch that his problem may be with his royalty owners, but it seems to me that he has two and a half weeks before December 1st. Possibly all of his royalty owners can be contacted before that time and the 80 acre unit formed before December 1st, and then if that happens, why, of course, it would take its regular 80 acre unit allowable, but I don't know, I have no control over his royalty owners. Maybe that might not be possible, to get their consent and maybe something might come up on December 15th where this case wouldn't be heard. In the meantime, this well would be producing, what is it, 90 barrels per day or more than it would be allowed under the order entered by the Commission on October 4th. Therefore, we are perfectly willing and recommend that the case be passed until, I believe it

is the December 15th Hearing, the 13th, but that well be brought within the order of this Commission, and of course, I assure the Commission, as far as Sinclair is concerned, why we will use every effort in trying to work out the 80 acre spacing before December the 1st. As a matter of fact, we have made our definite offer, and it is, I believe, as to whether or not he can get his royalty owners signed up.

MR. PORTER: Mr. Gregg.

MR. GREGG: Gregg with Humble Oil, and I would normally oppose the continuance of the allowable to Ohio on this well. However, I think, under the circumstances, we have no objection to the continuance of it as Mr. Couch indicated. We might suggest that a possibility of a way out would be an understanding that if nothing is arranged by the December Hearing, that the allowable could be retroactive to December 1st at that time or whatever time it comes out, and make the over production at some later period, which they would make during the interval.

MR. HARBEN: If the Commission please, may I say one more thing?

MR. PORTER: Mr. Harben.

MR. HARBEN: It seems to me that the Ohio be protected by permitting this allowable to reduce December 1st under this Commission's order, and then in the event that this 80 acre unit is

not formed, and in the event that they ultimately win in their application, then this Commission could grant them their back allowable which they lost during that period of time.

MR. PORTER: Mr. Thomlinson.

MR. THOMLINSON: W. P. Thomlinson for Atlantic Oil Company. We have no objection to having the case continued. We have no objection to Ohio receiving the larger allowable until the case is settled, provided that the same advantage is extended to other wells in the field that have proration units less than 80 acres.

MR. PORTER: You heard Mr. Thomlinson. Did you have any reference to any specific unit?

MR. THOMLINSON: Yes, sir, we have one in the same site.

MR. PORTER: How many acres does that unit contain?

MR. THOMLINSON: That is a 52 acre unit, 52, I believe, and some fraction, and we do support 80 acre spacing and hope that it can be established in the pool, but we believe that if an advantage is to be offered to one well in the pool, if it has a proration unit of less than 80 acres, it should be the same as for any other.

MR. PORTER: Have you estimated or computed the allowable that would be granted to a 53 acre unit?

MR. THOMLINSON: Under what circumstances, 80 acre or 40 acre?

MR. PORTER: Using a 40 acre formula.

MR. THOMLINSON: I think our allowable would be about, some two hundred and eighty some barrels a day.

MR. PORTER: Does anyone else have a statement with reference to Mr. Couch's motion?

The Commission has ruled that it is willing to continue the case until the December Hearing, but that the allowable provision of Order R-892 will go into effect on December 1st.

MR. COUCH: I would like to state at this time, if the Commission please, that Ohio feels that the provision of the allowable is not in compliance with the statute or the rules that apply to Ohio's well. I want also to assure the Commission that we will do everything we can to work out this agreement we have discussed with Sinclair. If we are unable to do it by December 1st, I want to state frankly now that I will be before this Commission prior to December 1st for a request to continue the case status quo of Ohio's well until such time as the December Hearing.

MR. PORTER: The Commission has ruled that Case 1102 will be re-continued to the regular December Hearing which I believe is on the 13th, but that the allowable provisions of Order R-892 will go into effect on the scheduled date.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me; and that same is a true and correct record to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal, this, the 26th day of November, 1956, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. A. Trujillo
NOTARY PUBLIC

My Commission Expires:

October 5, 1960