BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASES 1253 & 1254

TRANSCRIPT OF HEARING

NOVEMBER 13, 1958

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BEFORE THE
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IN THE MATTER OF:	
CASES 1253 & 1254	In the matter of the hearing ordered to be held by Order No. R-1011 to permit the operators in the Kemnitz-Wolfcamp Pool in Lea County, New Mexico, to appear and show cause why the Special Rules and Regulations set forth in said order should be continued in effect beyond December 31, 1958.

BEFORE:

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

T R A N S C R I P T O F P R O C E E D I N G S

MR. PORTER: Take up next Cases 1253 and 1254.

MR. PAYNE: Case 1253 and Case 1254. In the matter of the hearing ordered to be held by Order No. R-1011 to permit the operators in the Kemnitz-Wolfcamp Pool in Lea County, New Mexico, to appear and show cause why the Special Rules and Regulations set forth in said order should be continued in effect beyond December 31, 1958.

MR. BRATTON: If the Commission please, Howard Bratton, Hervey, Dow & Hinkle, appearing on behalf of Tennessee Gas Transmission Company. I would like to introduce Mr. William Armstrong

of the legal department of the Tennessee Gas Company, who will be associated with me in this case. We would like to present evidence in this case for the purpose of supporting the continuance of the present Rules and Regulations in the Kemnitz-Wolfcamp Pool beyond December 31, 1958. We have two witnesses, and I ask that they be sworn at this time; Mr. Snell and Mr. Carnes.

(Witnesses sworn)

MR. McGOWAN: If the Commission please, I am G. H. McGowan. On behalf of Sinclair Oil & Gas Company, I would like to present an appearance. We are the original applicants in this case. We have no testimony. We will have a statement at the end.

MR. FEDERICI: Seth, Montgomery, Federici & Andrews, appearing on behalf of Shell Oil Company. I just want to make a statement on behalf of Shell. We have no witness. Does the Commission desire the statement now or later?

MR. PORTER: I believe we will wait until the testimony has been submitted.

Will there be any other appearances in the case?

GENE W. SNELL,

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, please?

A Gene W. Snell.

Q By whom are you employed, Mr. Snell?

A Tennessee Gas Transmission.

Q Where and in what capacity?

A Hobbs, New Mexico as an exploitation engineer.

Q Will you give a brief outline of your education and professional background, Mr. Snell?

A Yes, sir. I received a Bachelor of Science degree in geological engineering from the University of Houston in 1951. I worked three years in West Texas and Southeast New Mexico with Tennessee Gas.

Q In your capacity with Tennessee Gas, have you become familiar with the Kemnitz-Wolfcamp Pool?

A Yes, I have.

Q Are you familiar with the Special Rules and Regulations now in effect in that Pool?

A Yes, I am.

Q In your experience with Tennessee Gas, have you made a geological study of the Kemnitz-Wolfcamp Pool?

A Yes, I have.

MR. BRATTON: Are the witness' qualifications acceptable to testify in this case, Mr. Porter?

MR. PORTER: Yes, they are.

Q Mr. Snell, you say you have made a geological study of the Kemnitz-Wolfcamp Field?

A Yes.

Q And are the results of your study shown on Tennessee Gas Transmission Company's Exhibits 1 through 4?

A Yes, they are.

Q Will you refer to Exhibit No. 1 and explain what it is and what it shows?

A Exhibit No. 1 is a development map of the Kemnitz-Wolfcamp Field. Temporary field rule field designation is outlined in red. We have a symbol at the bottom of the exhibit designating the type of producer for each well in the Field. This map was drawn up to show the development of the Field since the hearing for the temporary Field Rules of the Kemnity-Wolfcamp Field. A generalized breakdown in the Field itself at the present, the producers and the type of wells, is as follows:

Tennessee Gas has 17 Lower Wolfcamp producers, 1 drilling well, 1 Cisco well; Shell Oil Company, 3 Lower Wolfcamp producers; Ohio Oil Company, 3 Lower Wolfcamp producers; Pure Oil, 1 Lower Wolfcamp producer, 1 Cisco; Forest Oil Company, 2 Lower Wolfcamp; Sinclair Oil & Gas, 6 Lower Wolfcamp, 1 dry hole Lower Wolfcamp; Humble Oil, 1 Lower Wolfcamp; Phillips, 1 Lower Wolfcamp, 1 dry hole. These totals for the Field are 34 Lower Wolfcamp, 1 drilling Lower Woldcamp, and 2 Cisco, and 2 Lower Wolfcamp dry holes.

Q Is there any further information reflected on Exhibit 1, Mr. Snell?

A No, there is not.

Q Have you prepared a structure contour map of the Field?

A Yes. Exhibit No. 2 is a structure contour map of the Lower Wolfcamp Field on what Tennessee calls the Kemnitz Lime. It is a 10,600' marker, log marker and lithology marker which we have used. This map is somewhat different than the structure map we presented in the original hearing in that this structure is some 350' lower structurally than that map. Our structure maps in the area have not sufficiently given us information in regards to further development drilling in that the trap itself is stratigraphic, and locally our structure does tell us a story, but generally, structure in that area is of no great help.

Q Is that for the reason that the structure does not reflect the occurrence of porosity in the pay?

A Yes, that's right.

Q This being a stratigraphic trap. Now, have you prepared Isopach maps of the Pool?

A Yes. Exhibit No. 3, which is the Isopach of the Gross Microlog porosity, Lower Wolfcamp Pay. And Exhibit No. 4, Isopach of Net Microlog porosity of the Lower Wolfcamp Pay. Again, the Field limits are designated in red. The dashed red line across the bottom of both porosity maps, Isopach map, is what we believe to be the oil-water contact of the Field. The difference in the two maps is that map, Exhibit No. 3, Gross, takes into consideration both our oil porosity and water porosity. Exhibit No. 4, which is Net oil porosity, cancels out all water which is effectively what

we are producing in the Field. These maps were constructed basically from the microlog with other information such as other logging devices, drill stem tests and production data gathered in the pay zone to delineate the amount of pay we had.

Q Now, speaking generally, what do those Isopach show with reference to the productive limits of the Lower Wolfcamp?

A Both Exhibit No. 3 and 4 indicate the Lower Wolfcamp pay pinchout to the north, to the east and to the west. The southern limits of the Field are yet undefined by development drilling, but we feel by the encountering of water in the Lower Wolfcamp pay that we have established about its southern limits of production.

Q Now, these maps were prepared from all available microlog data in the Field from all wells?

A Yes.

Q From any other data?

A Production data on each well through the pay zone, drill stem tests and that's about it.

Q Is there anything else you would like to tell the Commission with reference to these two Exhibits?

A No.

Q Is there anything further which you would like to testify to in this case?

A No.

Q Were Exhibits 1 through 4 prepared by you or under your direction?

A Yes, they were.

MR. BRATTON: We would like to offer Exhibits 1 through 4 in evidence.

MR. PORTER: Without objection, Tennessee Gas Company's Exhibits Nos. 1 through 4 will be admitted.

Anyone have a question of the witness?

CROSS EXAMINATION

BY MR. COOLEY:

Q Mr. Snell, can you draw any conclusions from the studies you have made which are portrayed by Exhibits 1 through 4 as the propriety or advisability of 80-acre spacing in this Pool?

A I think that will be covered in later testimony, sir.

Q Very good.

MR. COOLEY: No further questions.

QUESTIONS BY MR. NUTTER:

Q I wanted to ask the witness one question. Do you think that the presence of this water-oil contact would indicate that some of the acreage that is dedicated to the wells in the southernmost portion of the Field might not be productive of oil?

A Let me see if I understand you correctly. In the southern portion of the Field down here we feel that both structure and stratigraphy are going to be the main things to delineate the oil porosity. We think that the oil porosity will be too small further south of what we have designated the oil-water contact to make a commercial producer.

Q Do you think that a well that may be commercial, however, but is located north of the portion that you have drawn the water-oil contact, the well may be a commercial producer but have considerable acreage dedicated to it that is below the water-oil contact, might not be productive of oil, is that possible?

A Yes, it would be possible.

Q Are you familiar with the pool rules for the Kemnitz-Wolfcamp Pool?

A Yes, sir.

Q Are you aware that the rules require that either the E/2 or the W/2 of a governmental quarter section be dedicated to the well?

A Yes, sir.

Q Could you tell me, for example, what acreage is dedicated to Shell Oil Company's State "W D" No. 1, located in the NW/4 SW/4 of Section 29?

A That would be the east eighty.

Q That would be the east eighty of the SW/4?

A Yes, sir.

Q Do you think that the south forty there is productive of oil?

A Present indications point that it is not.

Q What acreage is dedicated to Tennessee Gas Transmission Company's State "B" No. 1 in the NE NW/4, Section 21?

A The east eighty, "B" 1.

Q Do you think the south forty there is productive of oil?

A Not in the Lower Wolfcamp pay.

Q What acreage is dedicated to, I believe it is a Pure State "E" Well No. 2 in the SW SE of 21?

A That Well is producing from the Cisco and is dry in the Lower Wolfcamp, and I assume under Cisco it would be the west eighty.

Q The No. 1 is in the Cisco or the No. 2 is in the Cisco?

A I am sorry. Did you say the No. 2?

Q No. 2.

A It would be the west eighty.

Q Do you think the north forty is productive of oil?

A Not in the Lower Wolfcamp.

Q Do you think it is advisable to have the elongated proration unit such as we have here in an area where the water-oil contact may change or appear as it does in this Pool and cause acreage which is not productive of oil to be dedicated to the wells? Do you think those wells are receiving more than their actual share of the Pool's allowable?

A No, I don't.

Q Would you elaborate a little further on that statement, please?

A If I understand you right, sir, in that -- as an example, our Tennessee Gas State "B" No. 1 in Section 21 --

Q Yes, sir.

A -- which has the west-east eighty dedicated to it would

be actually getting a higher allowable than the Ohio "S B" No. 1 located directly offset to the north in Section 16.

Q With respect to the amount of productive acreage that is dedicated to the well, do you believe it is getting more allowable?

A No, I do not.

Q Do you believe that Ohio's "S B" No. 1 has eighty productive acres dedicated to it?

A Yes, I believe it has it dedicated.

Q Well, does your well have eighty productive acres dedicated to it?

A Yes, sir, it does, eighty.

Q Productive acres?

A We hope productive acres, sir.

Q However, it is below your water-oil contact?

A Yes, sir. The area in the northeast part of the Field in the Lower Wolfcamp pay is pinching out quite drastically. In some respects it is structurally controlled, in other respects it is not. By that, you may get what we call the Kemnitz Lime and abandonment porosity. In others, you may get Kemnitz Lime and no porosity, so we know the northeast part of the Field is very erratic in development. The water-oil contact in this northeast part was drawn on information that we knew to exist, and we believe that it is encroaching in that area.

MR. NUTTER: Thank you. I believe that's all.

MR. PORTER: Anyone else have a question of Mr. Snell?

MR. BRATTON: I would like to ask a question or two.

REDIRECT EXAMINATION

BY MR. BRATTON:

Q Mr. Snell, do you know whether any or all of these wells as to which Mr. Nutter was inquiring, whether those wells are now top allowable wells? Do you happen to have that information?

A To the best of my knowledge, the Ohio "S B" No. 1, the Tennessee Gas "B" No. 1 are not top allowable wells.

MR. BRATTON: I believe that's all.

QUESTIONS BY MR. PORTER:

Q Do you have any information on the Shell well that was mentioned?

A The Shell "W D" No. 1?

Q Yes, sir.

A To the best of my knowledge, it is -- it was top allowable. At present, whether it is or not, I do not know.

MR. PORTER: Mr. Fischer.

QUESTIONS BY MR. FISCHER:

Q Mr. Snell, could you tell me the present status of -- I think it is Sinclair lease 692, State 692 lease, rather, No. 1 in the SE SW of Section 24?

A No. 1 692. Yes, it's dry and abandoned.

Q Is that the same condition that Phillips New Mexico State lease Well No. 2 in the SE/4 of the SE/4 of Section 25?

A Yes, it is dry and abandoned.

Q It is in the Kemnitz-Wolfcamp?

A Yes, they were both drilled to the Kemnitz Lower Wolfcamp pay and were dry.

Q Are there any indications of oil or production in the Cisco --

A The --

Q -- in those pools?

A The Phillips New Mex "A" No. 2, drilled to the Pennsylvanian at approximately 11,500, and encountered porosity, but it was not considered commercial to produce it.

Q What about that Sinclair State 692 No. 1 in the Cisco?

A To the best of my knowledge, it was also dry in the Cisco.

MR. FISCHER: Thank you.

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

(Witness excused)

JAMES F. CARNES,

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, by whom you are employed and in what capacity?

A James F. Carnes. District engineer for Tennessee Gas in Hobbs, New Mexico.

Q Have you previously qualified before this Commission as an expert petroleum engineer?

A I have.

Q Are you familiar with the Kemnitz-Wolfcamp Pool?

A I am.

Q Are you familiar with the Special Rules and Regulations now in effect in that Pool?

A I am.

Q Have you made a study of the Pool in connection with those Rules and Regulations and this hearing?

A I have.

Q Will you refer, Mr. Carnes, to Tennessee Gas Transmission Company's Exhibits Nos. 5 and 6 and explain what those Exhibits are and what they show?

A Exhibits Nos. 5 and 6 posted here on the board, with the Commission's permission, will be shown together. Exhibit 5 is a plot of the monthly oil and gas producing rate and the fieldwide average bottom hole pressure versus time. Also tabulated across the upper part of the draft is the number of wells completed and producing at the end of each month. Primarily, it shows the rapid development of the Field since discovery in December of 1956 with, as Mr. Snell earlier pointed out, 34 wells producing at the present time. It also indicates that we are having no increase or appreciable

increase in gas-oil ratio at the present time. Current production shown on these is 150,000 barrels of oil per month, approximately 190,000 cubic feet of gas -- pardon me -- 190,000 MCF or gas-oil ratio of 1275. Exhibit No. 6 is a plot of the monthly oil and gas producing rate and fieldwide average, bottom hole pressure plotted against cumulative oil production. The bottom hole pressure as plotted, is a typical, almost a testbook example, of a solution gas drive reservoir. It is a primary reason for plotting these two drafts.

Q Is there any indication of a water drive in this Pool?

A None whatsoever.

Q What wells do you have shown on there?

A Well, I have all of the bottom hole pressures averaged that we have available in the Field, or approximately 100 pressure points have been averaged. The last point shown was taken November the 3rd, is the average of four wells which we felt were representative of the entire Field for bottom hole pressure. Those, if I may read them into the record, were our State "A A" Kemnitz "B" No. 5, thirty days of completion. It is on the extreme western edge of the Field. If you will refer to our Exhibit No. 1, with a bottom hole pressure of 2814 psi. Our Kemnitz "B" 3, an older producing well with bottom hole pressure of 2775; our State "A A" Kemnitz No. 1, the discovery well, which is offset on 40-acre spacing, with a bottom hole pressure of 2725 psi, and the State Western "A" No. 2, on the extreme eastern edge of the Field, the bottom hole pressure

of 2767 psi, the arithmetical average, 2770 psi. Those pressures are plotted on Exhibit 5, and they are shown on Exhibit 6 only by estimating the production for the month of October which we did not have available.

Q Mr. Carnes, I believe you said the last of your four wells was the State Western "A" No. 2. Is that correct, or is it "A" No. 3?

A It was "A" No. 2.

Q Do you have anything further which you wish to explain with regard to Exhibits 5 and 6?

A I believe that covers Exhibits 5 and 6.

Q Turning now to Exhibit No. 7, Mr. Carnes, will you explain Exhibit No. 7 and what it reflects?

A Exhibit No. 7 is a plot of all the bottom hole pressure tests, drill stem tests or initial completion pressures that we had in the Kemnitz Wolfcamp Field. The lower line, the solid line, is a plot of the average field pressures. The upper line is a plot of the drill stem test or initial completion pressures. We show that during the early life when we were at pressures above the saturation point, the average differential pressure between newly completed wells and those older producing wells in the Field was approximately 40 psi; that at the saturation point of 3217 psi, the differential between locations diverged slightly, and at the present time shows an average differential of approximately 80 psi. No distinction was made for this plot or for diagonal 80-acre

locations; 1360 feet from the nearest producer or 160-acre locations; 2640 feet from the nearest producing well. We feel that the 80-acre differential adequately indicates, or indicates adequate drainage on 80-acre spacing; that it was pointed out in our original hearing that the Townsend Wolfcamp Field, the average differential on 40-acre spacing was 138 psi, using ten completed wells, although five of those ten wells indicated differential pressure ranges from 200 to 400 psi.

Q Would you care to comment, particularly with reference to any wells which you have plotted on that curve, Mr. Carnes?

A If you will notice, in April of 1958, the Forest Oil Company State "A" No. 2, that well was 2640 feet from the nearest producer,indicated a differential of 80 psi above the Field average pressure. The Phillips New Mex "A" No. 1 was also a 160-acre location or 2640 feet from the nearest producing well, and indicated a differential pressure of only 130 psi higher than the Field average. The range of differential pressure had been from 30 to 130 psi greater than the Field.

Q Mr. Carnes, in your opinion,does Exhibit No. 7 indicate that there is excellent permeability in this Field?

A I think it shows extremely good permeability, that we are draining something considerably more than 80-acre spacing.

Q Do you believe that the evidence as reflected on Exhibit 7,is that the best type of evidence which could be obtained with regard to whether one well is draining 80-acres,or is there other

type of information which could be obtained which would be superior in quality?

A In our opinion, the bottom hole pressure curves are the best indication of field drainage.

Q And, in your opinion, Exhibit No. 7 conclusively proves to you that one well is efficiently draining 80 acres or more in the Pool?

A Yes. Very efficiently draining 80 or more.

Q Mr. Carnes, have you made any calculations on recovery from this Pool?

A We have made some preliminary calculations on the ultimate economic recovery from the Kemnitz Field. Our estimates indicate approximately 8,125,000 barrels of oil will be recovered from the reservoir.

Q Have you made any calculations as to how much, if any, additional oil could reasonably be anticipated to be recovered if the Pool were to be developed from now forward on 40-acre spacing?

A We have made again some preliminary studies there. Our statement shows that the Kemnitz-Wolfcamp Field will produce approximately 80 barrels of oil per acre foot; that on 40-acre spacing with the drainage that we have shown, there has been some 2,000,000 barrels of oil to date, or approximately 25 percent of the ultimate recovery, leaving only 60 barrels of oil per acre foot throughout the Field to be produced. Therefore, on 40-acre spacing, you would have to encounter immediately if the wells were completed today,

41 feet of net pay merely to return the investment. That would show that there are approximately eight locations that could be drilled on 40's. If those wells were drilled, our figures show that not more than 100,000 barrels of oil could be added to our ultimate recovery.

Q Now, what percentage of the total oil in place would that be?

A By our figures, that would be less than four-tenths of 1 percent of the oil in place.

Q Or what percent of the recoverable oil in place?

A Approximately 1 percent increase in ultimate recovery.

Q Do you have any information on the cost of drilling and completing a Wolfcamp Well?

A Our average cost for a Wolfcamp test only is $180,000 per well.

Q Therefore, if eight wells were drilled, that would be approximately an expenditure of $1,500,000 --

A Approximately.

Q -- for which an additional recovery could not be anticipated in excess of a hundred thousand barrels of oil.

A Approximately correct.

Q And for that expenditure. Some or most of those wells would no more than recover the cost of the well?

A By the time they could be completed, most would merely return the operator's investment.

Q Mr. Carnes, in your opinion, will one well in the Kemnitz Wolfcamp Pool efficiently and economically drain 80 acres?

A In my opinion, it will.

Q In your opinion, will the continuance of the present Special Rules and Regulations for the Kemnitz Wolfcamp Pool prevent waste and protect correlative rights?

A They will.

Q Is it your recommendation that the present Special Rules and Regulations be continued beyond December 31, 1958?

A It is my recommendation, recommendation of Tennessee Gas, that these temporary Rules be made permanent.

Q Do you have anything further which you would like to state in this case, Mr. Carnes?

A I believe we have covered our testimony.

Q Were Exhibits 5 through 7 prepared by you or under your supervision, Mr. Carnes?

A They were.

MR. BRATTON: I would like to offer in evidence Tennessee Gas Company's Exhibits 5 through 7 inclusive.

MR. PORTER: Is there objection to the admission of these Exhibits? Exhibits 5 through 7 will be admitted.

At this time the Commission will recess the hearing until one-thirty.

(Recess)

MR. PORTER: The hearing will come to order, please.

Mr. Bratton, have you concluded with your direct testimony of Mr. Carnes?

MR. BRATTON: Yes, sir.

MR. PORTER: Does anyone have a question of Mr. Carnes? Any questions of this witness? Mr. Nutter, do you have a question?

MR. NUTTER: Yes, sir, I do.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Carnes, your Exhibit 7 shows the differential between the dotted line and solid line. Now, the solid line represents the older bottom hole pressure for several of the older wells --

A Yes, sir, that's what we consider the field average bottom hole pressure.

Q -- and the dotted line is at bottom hole pressure of newer wells, and are they completed?

A Yes.

Q You have an eighty-pound differential for approximately the last seven months' period. How do you explain the lesser differential for the time previous to that?

A At the pressures above the saturation pressure, above 3217 psi, we were working primarily on fluid expansion, we were above the saturation pressure, at pressures below 3217. We are actually working now on a recovery mechanism on the solution gas drive.

Q Well now, in taking -- in deriving this solid line, you state that this is the average pressure for the Field, but I note in a lot of cases that you have only used two wells to obtain this average pressure.

A Where have we only used two wells, Mr. Nutter?

Q In July of 1957, for example, there is two-well average, I believe.

A Yes, July of 1957 there were only approximately eleven wells completed in the Field.

Q How many of those eleven wells could have been classified as older wells? Just the two?

A Only about five.

Q But you only used the bottom hole pressures?

A That's all the bottom hole pressures we had at that time. We used all of the bottom hole pressures we had available at that time.

Q Now, I believe you stated in obtaining this comparison of differential pressures, you in one case said that the differential was effective across 160-acre drilling pattern in the case of the Phillips Wells?

A Yes, sir.

Q And in other places it was an 80-acre pattern. Have you shown the differential in any case for a 40-acre pattern there?

A There are no 40-acres shown, no.

Q You have 40-acre locations in the Pool, however, do you

not?

A Yes, sir.

Q Were no bottom hole pressures available for those 40-acre wells?

A To my knowledge, if we had them, we did not separate them out as 40-acre locations.

Q Do you think that there would be any chance in the variation of pressure or the differential in pressure if you compared 40-acre locations and then compared 80-acre locations?

A My personal opinion is that there would be very very slight difference. I believe if we took the time, we could pick 40-acre offset bottom hole pressures from this curve, referring to our development map, that Shell "W C" No. 1 is a 40-acre pressure. If you will notice, in the latter part of April -- beg pardon -- I am looking at the working pressure point. The State "A" No. 1 is a 40-acre offset through in April --

Q Now, which is that, please?

A The Tennessee Gas Transmission Company's State "A" 1, shown in April of 1956 is offset on 40-acres. That point is approximately 30 psi above the Field average line that we have shown here.

Q Now, that's the --

A It is drill stem test pressure shown approximately April the 20th.

Q That's the Tennessee Gas State "A" No. 1?

A Yes, sir.

Q And what well is that pressure compared with?

A That is compared with the Field pressure of Shell's "W C" No. 1, a bottom hole pressure test taken early in May which our field line falls through.

Q What is the location of the Shell "W C" No. 1?

A The Shell "W C" No. 1 is 1320 feet south in the northwest of the northwest of Section 29. 1320 feet south of the State "A" No. 1.

Q Is --

A An interpretation of this map shows approximately 40 psi differential.

Q Are there any 40-acre locations comparisons later on, in late '57 or '58?

A No, there was no 40-acre development after the original Field Rule hearing some eighteen months ago.

Q Now, I believe, Mr. Carnes, that you stated that the original recoverable oil was approximately 80 barrels per acre-foot?

A Yes, sir.

Q And you have recovered approximately 23 percent now?

A Yes, sir.

Q How did you derive the 1 percent estimated increase in ultimate recovery by developing this Pool on 40-acre spacing versus 80-acre spacing?

A We compared our percentage recovery on our predicted percentage recovery on 80-acre development with percentage recovery

on the Townsend Field on 40-acre spacing.

Q This was in comparison, this Pool, with Townsend?

A Yes, sir.

Q At the original hearing of this case in May, 1957, considerable testimony was adduced that would indicate that the conditions in this Pool are very similar to the Townsend Wolfcamp. Has anything occurred in the intervening time to indicate that this would no longer be true?

A No, sir. We feel that the production characteristics are very similar to the Townsend Field excepting we have far better permeability.

Q This is very similar except the Pool conditions would be considered better --

A Yes, sir.

Q -- for development on a wider spacing pattern?

A Yes, sir.

Q You stated that you felt that wells that would be drilled now on a 40-acre pattern would just barely break even if they did that at all, is that true?

A I stated that there were eight locations which could be drilled on 40-acre spacing which would return the investment, if they were completed immediately.

Q Do you think that if these wells had been drilled on 40-acre locations a year ago that they would have had a better chance of paying out and making money?

A On a 40-acre spacing with the original average recovery of 80 barrels per acre-foot would require approximately 34 feet of net porosity to return the operator's investment. By referring to the lower net Isopach map, you could probably find one or two additional locations above the eight that we have estimated that would have broken even on 40-acre spacing.

Q And you stated that you now would have 41 net feet of pay?

A Due to the drainage of the formation.

Q So the time lag has made conditions less favorable for development on 40-acre spacing than it was?

A Yes, sir. As additional time, producing time goes on, conditions will be even less favorable to development on 40's.

MR. NUTTER: Thank you.

MR. PORTER: Any further questions of the witness? You may be excused.

(Witness excused)

MR. PORTER: Anyone else desire to present testimony at this time? Any statements?

MR. McGOWAN: If the Commission please, James McGowan for Sinclair. We own several wells in the Field, and we are co-applicant in the original hearing. Our people have made similar studies to those prepared here by the Tennessee Company. We see no point in reiterating by testimony. We reached essentially the same conclusions; that is, that the present Field Rules are at least the best Field Rules for this Field and should be made permanent.

MR. EFFINGER: If the Commission please, J. F. Effinger, Forest Oil Corporation. Our people also have made an examination of the Field, and we have two wells on the western edge there, and we reach essentially the same conclusions and recommend that these Rules be made permanent.

MR. FEDERICI: Bill Federici, of Seth, Montgomery, Andrews, & Federici, representing Shell Oil Company, I have a statement for the record. Shell Oil Company does not object to the continuance of the Special Field Rules of the Kemnitz Wolfcamp Field. We would like to reiterate our basic position with regard to the 80-acre spacing as expressed by the Commission here during April, 1957. First, rigid definition of the proration unit can lead to inequality and violate correlative rights; second, we feel as much freedom in well locations should be afforded under 80-acre spacing as exists under normal 40-acre development.

MR. PORTER: Anyone else have a statement?

MR. BRATTON: If the Commission please, in conclusion, I would like to say that I believe the evidence presented by the applicant here today and supported by the other operators in the Field is conclusive to show that one well will efficiently and economically drain 80 acres in the Kemnitz Wolfcamp Pool. For that reason, Tennessee Gas Transmittion Company requests that the Special Rules be continued in effect beyond December 31 of this year and be made the permanent Rules of the Pool. I am authorized by Humble Oil & Refining Company to state that they concur in the request of

Tennessee Gas Transmission Company, and advocate that the Special Rules be continued in effect as the permanent Rules of the Pool.

MR. PORTER: Nothing further in this case, we will take it under advisement.

C E R T I F I C A T E

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 Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, 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, the 19th day of November, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
Notary Public

My Commission Expires:

October 5, 1960.