BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAY 23, 1956

CASE NO. 1147

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3-6691 5-9546

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAY 28, 1958

IN THE MATTER OF:

CASE NO. 1447 Application of The Texas Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Eumont Gas Pool comprising the E/2 of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's C. H. Weir "B" Well No. 3, located 330 feet from the North line and 660 feet from the East line of said Section 11.

BEFORE:

Elvis A. Utz, Examiner

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

MR. UTZ: Next case on the docket will be Case 1447.

MR. PAYNE: Application of The Texas Company for a non-standard gas proration unit.

MR. WADE: Mr. Examiner, I am L. N. Wade with The Texas Company. We have one witness, Mr. John Schaffer, to be sworn.

(Witness sworn)

MR. WADE: We have two Exhibits we would like to have marked, please.

JOHN A. SCHAFFER,

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

DIRECT EXAMINATION

BY MR. WADE:

Q Would you state your name, by whom you are employed and where, please?

A John Schaffer. Employed by The Texas Company, Midland, Texas.

Q Are you a petroleum engineer?

A I am.

Q Have you previously testified before the Commission and had your qualifications accepted?

A Yes, I have.

Q Are you familiar with the application that is the subject of this hearing?

A I am.

MR. WADE: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q Mr. Schaffer, would you refer to what has been marked as Exhibit 1, please, and inform the Commission as to what that Exhibit shows, please?

A Exhibit 1 is a subsurface structural map carrying a portion of the Eumont Pool in Range 37 East, Township 20 South. It is contoured on top of the Penrose porosity, their sand development

in the Queen. The Eumont wells are indicated by the red circles. There are four Drinkard wells indicated by orange circles, and Skaggs Pool wells are indicated with the black circles. The wells on the western portion of the map with no circle are Monument Pool wells.

Q I believe that the subject well is shown on this plat and also the subject lease. Would you give the description and location?

A That is correct. The subject well, our C. H. Weir Well No. "B" is located 330 feet from the North line and 660 feet from the East line, Section 11, Township 20 South, Range 37 East. The proposed non-standard gas proration unit consists of the E/2 of Section 11, Township 20 South, Range 37 East, and is outlined in green on the plat.

Q Would you continue with your explanation by giving the Commission a brief background on this well, the proposed well as to its original completion data and its present status, please?

A Our C. H. Weir "B" Well No. 3 was completed December 7, 1956 as an oil well in the Eumont Pool. It had initial gas-oil ratio of 17,628 cubic feet per barrel, and, therefore, its penalized allowable was assigned. In July, 1957, on the regularly scheduled gas-oil ratio survey, the well tested for 15 barrels of oil with 2,360 MCF which gave a gas-oil ratio of 157,333. The well was then penalized one barrel par day and has produced at that rate since. In February of 1958 another test resulted in flowing 18 barrels

of oil per day with a gas volume of 1,299 MCF or a gas-oil ratio of 72,166. The reason, we believe, for the decline in gas-oil ratio is because of the restricted,or the limitations placed on the producing capacity and the well was logging up with fluid. Actually, if the well is produced at a normal rate, the gas-oil ratio would be in excess of 100,000.

Q In other words, this well is practically a gas well as it stands?

A In my estimation, it is.

Q Would you refer to what has been marked as Exhibit 2?

A Exhibit 2 is a gamma ray neutron log of the subject well. In red is indicated the present perforated interval, which is in the lower part of the sand development. When converting this well to a gas well, we propose to perforate additional sections higher in the Queen, and actually, where the sand development is somewhat better and which is certainly in the gas area.

Q I believe, Mr. Schaffer, that the information concerning the present perforations and proposed additional perforations have been indicated on the log,which is Exhibit 2, is that correct?

A They have. The red perforations are the present perforations, and the blue perforations are the proposed additional perforations.

Q Now, Mr. Schaffer, would you -- I believe you previously indicated, have you not, that it is proposed to assign the east half of the -- of Section 11, Township 20 South, Range 37 East to

the subject well as a non-standard proration unit, is that correct?

A I have.

Q In your opinion, is all of this east half of Section 11 productive of gas?

A It is.

Q Perhaps it would be well if you go into your reasons for so believing.

A Well, first, gas wells to the northwest, west and south presently producing as gas wells. Also the -- our contour map on top of the Penrose indicates the southern portion of the lease to be higher structurally than where your well is located. In addition, there is a dry hole in the northeast quarter of the northeast quarter of Section 14, Township 20 South, Range 37 East, which was drilled in 1936 and 1937, to a depth of 4,210 feet with cable tools. This well was plugged and abandoned, but in the process of drilling, they tested some 3,500 MCF of gas per day from below 3600 or approximately a minus 120 feet.

Q Which further substantiates to you that the Penrose section which would be -- is proposed to be opened in our Well No. 3, was present in this old well at the time it was drilled, and, therefore, it would indicate that the southern portion of the 320 acres, which we propose to assign, is productive of gas?

A The section is, I feel, presently under our lease and is substantially higher to the south than it is in our subject well.

Q All of the proposed unit is within a single governmental

section, is that correct?

A It is.

Q And the length -- neither the length nor the width is in excess of 5,280 feet, is that correct?

A That is correct.

Q In your opinion, will this well, if all of the 320 acres is assigned to it, drain this entire acreage?

A That is my opinion.

Q Actually, this situation with a well located 330 from a line or close proximity or relative close proximity to a line with 320 acres assigned to it is not a new situation before the Commission, is that right?

A No, it is not. There are other gas wells in the Eumont Gas Pool situated similarly with 320 acres assigned to them.

Q Would you elaborate, please, on the wells as a result of your study you found had previously been assigned this type of unit?

A I didn't go through the whole Eumont Pool and check all the non-standard gas proration units. I did make a brief investigation and came up with two that are not too far by. One of them is covered by Commission Order R-612, which covers a 320-acre gas proration unit for Sinclair Oil & Gas Company, consisting of the west half of Section 21, Township 20 South, Range 37 East. It is Sinclair W. C. Roach lease. In this case the well is located 330 feet from the north and 330 feet from the west lines of the non-standard gas proration units.

Q How much acreage was assigned to that well?

A 320 acres.

Q Do you have another such instance that you might relate briefly?

A I have one more covered by Commission Order No. R-835, covering application of Stanolind Gas Company; now, Pan American Petroleum Corporation for a 320-acre non-standard gas proration unit consisting of the east half of Section 21, Township 20 South, Range 37 East. This well is -- this is the Pan American. I may not have the pronunciation right. Gillully, I believe. G-i-l-l-u-l-l-y. "B" Well No. 6. It is located 390 feet from the north line and 660 feet from the east line of the proposed -- of the non-standard gas proration unit.

Q And that non-standard gas proration unit consists of 320 acres?

A It does.

Q Mr. Schaffer, in your opinion, if the proposed non-standard gas proation unit is assigned to The Texas Company's well, will correlative rights be protected and will waste be prevented?

A That is my opinion.

Q Were these Exhibits 1 and 2 prepared by you or under your direction?

A They were.

MR. WADE: We would like to offer these Exhibits.

MR. UTZ: Is there objection to offering Exhibits 1 and

2 in this case? If not, they will be accepted.

MR. WADE: I believe that's all the questions I have of the witness at this time.

MR. UTZ: Any questions of the witness?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Schaffer, is the Yates formation or the Seven Rivers formation productive of gas anywhere in this area?

A I believe it is productive in places, if you can find it, but generally the producing horizon is the Penrose of the Queen.

Q Are any of the Eumont gas wells shown on your Exhibit here productive of gas in the Yates or Seven Rivers?

A I believe one of them has it opened.

Q Which well is that?

A I can't recall right now. It also has the Penrose opened along with the Yates and Seven Rivers.

Q So that one well that is opened may be producing gas from the Queen to the --

A Right.

Q You can expect that the gas-oil ratio in this well will increase when you perforate the upper section of the Penrose porosity?

A I do.

MR. KELLAHIN: Jason Kellahin of Kellahin & Fox, Santa Fe, New Mexico, for Continental Oil Company.

QUESTIONS BY MR. KELLAHIN:

Q Mr. Schaffer, you made reference, I believe, to two Orders which approve non-standard proration units for Sinclair and Stanoline, now Pan American with, as you say, comparable well locations, am I correct in that?

A That's right.

Q Did you examine the area involved in those two applications to determine if the offsetting acreage is productive of gas?

A It is gas productive.

Q It is gas productive. Now, with reference to your Exhibit No. 2, you said you proposed to perforate higher on the zone; I think it is shown on the Exhibit.

A Do you want the exact perforation or **subsequent perforation?**

Q We want the well depth.

A The well depth would be from 3670 to 3715.

Q Are you familiar with the **Continental State "A" 2 Well and the Skagg "B" 12 No. 2 Well that offsets this location?**

A I am familiar with Continental "B" 12 No. 2.

Q You mean Skagg No. 2?

A Yes.

Q And the State "A" 2 Well? I believe that is immediately to the north?

A To the north.

Q To the north of your Weir "B" 3?

A Reasonably so.

Q You don't classify it as an oil well, do you?

A This Continental -- Skagg "B" 12, I believe, produced with a gas-oil ratio of 47,869 according --

Q Which, according to the rules of the Commission would be an oil well?

A Would be a penalized oil well.

Q And are there any -- where are the closest gas producing wells to this proposed unit, Mr. Schaffer?

A Schermehar Christmas, in the northwest quarter of the northwest quarter is approximately three-quarters of a mile west from the western boundary of your proposed unit, and Continental, or I believe it is the SMU unit, is approximately, oh, a little over half a mile south of the southern extremity of our proposed unit.

Q Would be south and west, would it not?

A Well, it is due south, the way I have it. There is one southwest, and there is another one, No. 66 is southwest and No. 46 would be south.

Q There are no gas wells lying to the east in the Eumont, are there?

A No, sir, not at the present time.

MR. KELLAHIN: Thank you very much.

MR. UTZ: Are there any other questions of the witness?

QUESTIONS BY MR. UTZ:

Q Mr. Schaffer, I believe you stated that you believed the entire 320-acre unit to be productive of gas?

A Yes, sir.

Q Was that based entirely on the DST of the plugged and abandoned well immediately south of the unit?

A No, sir. I believe our structure map indicates that as you go south, you go up structure. In other words, our well was -- our No. 3 Well is at one of the lower points on the lease and it is gas productive. Also our No. 1 C. H. Weir "B" which is south of your No. 3, which is now a Drinkard Well completion, was attempted there in the Grayburg, and there was gas in the Grayburg at that location. It tested, oh, it tested five and a half barrels of oil with a gas-oil ratio of 55,700. Now, that was in the Grayburg, which is, of course, below the main producing horizon which would be the Queen or Penrose.

Q Do you have any indication on the No. 1 Well to the south, which is a Drinkard Well, as to the DST in the Eumont or --

A No, sir. As I say, they tried to complete that well as a Skagg Well initially, the Grayburg, and we had gas in the Grayburg there. The Queen is cased off at seven and five-eighths casing.

Q What do you think the drainage pattern would be for well which you intend to dedicate to this unit, your No.2 Weir, I believe?

A No. 3, I believe.

Q No. 3 Weir?

A I don't exactly understand your question.

Q Is it radial, is it oblong? The point I am getting at is, how is it going to drain the south half of this unit which you said it would?

A I believe that it will drain it as well as some of the other proration units that have been assigned.

Q Do you think it will drain it by comparison to the other proration units?

A Yes, it amounts to counter drainage.

Q You don't think it will drain the southeast quarter of Section 2?

A I am sure it will have some effect.

Q What well do you think will drain the southeast quarter of Section 11? Is there any other well in the vicinity that might drain part of that gas?

A Southeast quarter of Section 11.

Q South half of the unit is what you are asking for?

A I believe the gas wells in Section 14 would have, and also in Section -- in the southeast quarter of Section 10 would affect that area.

Q Do you think by producing the well in question here, the Weir No. 3, that there is a possibility of pulling Eumont oil up structure?

A I would be more apt to think that we would pull gas down structure because of the relative permeability. It is so much greater to gas than to oil.

Q I gather you don't feel that this unit would be productive of Eumont oil at all?

A You mean the unit or the well?

Q The unit.

A No, sir. We drilled this well as an oil well hoping to get an oil well, and I do not believe we could drill an oil well anywhere on that lease.

Q You base that on the contours that you've drawn here?

A Yes, sir.

MR. UTZ: Are there any other questions of the witness?

MR. WADE: I would like to ask one more, Mr. Utz.

REDIRECT EXAMINATION

BY MR. WADE:

Q I believe there was some reference in the cross examination of Mr. Utz, referring to Well No. 1, which is about midway in the proposed non-standard proration unit. You have examined the log on that well, have you not?

A I have.

Q From that examination of the log, did you conclude that the Penrose zone was present and was also productive of gas, as best you could tell from an investigation of the log, that is, was porosity developed in the log?

A It is definitely present and there is good sand development.

MR. WADE: That's all.

MR. UTZ: The witness may be excused.

(Witness excused)

MR. UTZ: Are there any other statements to be made in this case?

MR. KELLAHIN: We would like to offer some testimony in this case. Call as a witness Mr. E. V. Boynton.

(Witness sworn)

E. V. BOYNTON,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A E. V. Boynton.

Q By whom are you employed and in what position?

A I am district engineer for Continental Oil Company at Hobbs, New Mexico.

Q Mr. Boynton, have you made a study of the facts in Case 1447?

A Some of them, yes.

Q Are you familiar with the facts?

A I am familiar with some of the facts, yes.

Q Now, on the basis of your study, do you believe that the granting of a 320-acre non-standard gas proration unit to The Texas Company's Weir "B" No. 3 would be in the interest of the conservation and the protection of correlative rights?

A No, sir, I do not.

Q And why do you say that?

A This well is very near the oil producing rim in the Eumont

Pool and withdrawals of the magnitude allowed by 320 acres gas proration unit would cause oil to migrate up structure into the gas zone where it would be unrecoverable.

Q Do you know approximately what the gas allowable for 320-acre unit in the Eumont Pool would be?

A It would be about 873 MCF a day. That is the average over the past year.

Q Would there be a variation in that as between winter and summer months?

A Yes. It becomes higher in the winter, of course, when demands are greater.

Q What effect would the increased production, say during the winter months, have on the effect of this well on the reservoir?

A Of course, it would lower the pressure around the well bore and cause more rapid influction of oil into the area from the oil rim.

Q Now, you refer to the oil rim, Mr. Boynton. With reference to the area involved in this application only, could you describe roughly the -- where the oil rim lays in relation to the Weir "B" No. 3?

A Well, of course, the Weir "B" No. 3 did produce considerable amount of oil when it was first completed, and now State "A" 2, "A" No. 1, which is only 990 feet from the north of the Weir No. 3 is a top allowable oil well from the Penrose formation. Roughly, the oil rim will follow the contours, I would judge -- let me offer

an Exhibit here.

Q We will come to that in just a moment. I have another question I would like to ask you first. You heard Mr. Schaffer's testimony to the effect that, in his opinion, there would be no migration; he did not think that there would be any migration up structure of oil, rather that there would be migration of gas down structure. Do you agree with that conclusion?

A No, sir.

Q Do you have any evidence that oil can migrate up structure in that area?

A Yes, sir. The Cities Service, State AR No. 1 which is located approximately 1900 feet northwest of the Weir "B" 3 was originally completed as a gas well, and it was reclassified about eighteen months later as an oil well and is now producing as an oil well. So that indicates that oil was pulled from the oil rim into the well bore of the State AR No. 1.

Q Now, have you prepared any Exhibits to show the relation of the Weir "B" No. 3 with other wells in the area?

A I have.

Q Would you have those marked as Exhibits 1 and 2, please, sir?

(Whereupon, Continental's Exhibits Nos. 1 and 2 were marked for identification)

Q Now, referring to what has been marked as Continental's Exhibit No. 2 in Case 1447, would you state what that is?

A Beg pardon?

Q Referring to what has been marked as Continental's Exhibit No. 2, will you state what that is?

A Exhibit No. 2 is a comparison of well logs that shows the gamma ray neutron log on Continental State "A" 2, "A" No. 1 which is 990 feet north of the Weir "B" 3. It shows the log of the Weir "B" 3 and it shows the log on the Skagg "B" 12 No. 2 which is 1350 feet from the Weir No. 3.

Q Does that reflect that these wells are completed in the same zone?

A The zones are identical.

Q In the Eumont. Referring to the Exhibit, it would appear that the State "A" 2 Well is completed higher than the Texas Weir No. 3?

A Well, it is -- we have perforations opened at a higher sub sea depth than in the Weir "B" 3, but in a different zone.

Q But that is an oil well?

A Yes, it is a top allowable oil well.

Q Now, referring to what has been marked as Exhibit No. 2 -- No. 1, would you state what that is?

A Exhibit No. 1 is an ownership plat showing the structure in the area drawn on top of the Queen formation, at ten-foot intervals. It shows the location of the Weir "B" 3 in relation to Continental's State "A" 2 A lease and Skaggs "B" 12 lease. It shows Continental acreage outlined in -- colored in yellow, and

the proposed unit outlined in red, and the Weir "B" 3 circled in red. It also -- a red arrow indicates the proximity of the Cities Service State AR No. 1 which recently was reclassified as an oil well. Incidently, the Cities Service Well is approximately 20 feet higher structurally than the Weir "B" 3.

Q That is classified as a --

A It went from gas to oil.

Q Went from gas to oil?

A Right.

Q Now, you were discussing earlier in your testimony the oil rim in relation to the area involved here. Is there anything you want to add to that with reference to the --

A Roughly, it will follow the structure in this area. As you can see, it varies somewhat because the Cities Service Well is considerably higher than the Weir "B" 3 Well, which they have indicated as a gas well. But, roughly, it will follow the structure in the area.

Q Now, with reference to the Exhibit, it would appear that the oil rim lies along the eastern side of the proposed unit and to the north, is that correct?

A To the northeast and -- northeast, yes.

Q And there is no gas production from the Eumont except to the west, is that correct?

A To my knowledge, that is right.

Q And that's at some distance, is it not?

A That's right.

Q You've heard Mr. Schaffer's testimony as to the drainage pattern of the well, the Weir "B" No. 3 Well. Do you have anything -- any opinion on that?

A There is no doubt but that the well will drain some of Continental's acreage both to the north and to the east.

Q Would that result in any loss of oil in the reservoir, Mr. Boynton?

A Of course, when oil migrates into a dry gas zone, it becomes relatively unrecoverable, yes.

Q And that would result in a direct loss to Continental Oil Company, would it not?

A Right.

Q Do you believe that the entire unit proposed by The Texas Company is productive of gas?

A Well, of course, the well has produced and is producing some oil in the Eumont, so it shows that certainly some of the Penrose is productive of oil under the lease. However, gas production should become better to the south, I would say.

Q Would there be a better location for a gas well elsewhere in that unit, in that proposed unit?

A Well, I would think so, yes.

Q And where would that be?

A Oh, any line drawn just south of the Weir "B" 3, in my opinion, would be a better location for a gas well.

Q Have you made any computation as to the pay out on such an additional well on the basis of 160-acre unit?

A Well, it might cost Continental to drill a gas well over there, but it will pay out in two and a half to three years on 160-acre unit.

Q Would Continental have any objection for 160 non-standard proration unit for the Texas Company Weir No. 3?

A My management has stated that in order for The Texas Company to recover its investment, they would not object to a 160-acre NSP.

Q Is there anything you care to add, Mr. Boynton?

A That's all I have.

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

CROSS EXAMINATION

BY MR. WADE:

Q Mr. Boynton, this business about gas wells pulling up oil, I'm interested to know what your interpretation is with reference to the Cities Service Well which is shown in Section 2 that you referred to in your testimony. With relationship to the Continental Well shown in Section 3 being in the northeast quarter of the southeast quarter of that Section, I believe your contours and information shows that that well is completed at approximately the same structural elevation as the Cities Service Well. Is that a gas well or is it an oil well?

A It is a gas well, sir.

Q Does it produce oil?

A I believe it produces oil and water, yes.

Q How much oil does it produce?

A I don't remember the exact figures on that. Very little.

Q In other words, it is your conclusion that that well will eventually go to oil, is that correct?

A No.

Q You don't think that well will pull oil in to such extent as did this **Cities Service?**

A If you will notice, there are gas wells both to the north and to the northeast and to the east and to the southeast and to the southeast of this particular well, Continental State "A" 3. In my opinion, in the Eumont Pool, as long as a gas well is surrounded by gas wells and all the acreage is gas productive, location has very little relation to a man's correlative rights; as long as he's got the finger in the **pie,** he'll get his right. It may not come from his lease, but someone else will drain his lease.

Q You indicated by your testimony that you -- I believe this is correct -- that you felt like the proposed non-standard proration unit is **pro**ductive of gas in its entirety, or did you say that?

A Yes.

Q Do you think that the gas wells which surround or which were indicated by Mr. Schaffer in his testimony as lying to the southwest and west would drain the southern portion of this non-

standard proration unit?

A Oh, I don't know. I haven't done any investigating along that line.

Q Do you think they are in the same reservoir?

A Theoretically, I think one well would probably drain the entire gas -- Eumont gas reservoir if you give it enough time.

Q And likewise, this one well, this Weir "B" No. 3 would drain the 320 acres which The Texas Company proposes to assign to?

A And also some of the Continental oil acreage, yes, sir. Yes, sir.

Q Do you subscribe to the theory that the relative permeabilities enter into the production at the well bore of oil and gas?

A Oh, yes.

Q Do you think that -- I believe there was a statement made a minute ago by your attorney that Mr. Schaffer had stated that there would be no oil brought into the well because of the relative permeability situation, and I think that was not his testimony. I think it was that there would be less of a tendency for oil to come into the well than there would be gas because of relative permeabilities. Do you subscribe to that?

A That is true. There would be less tendency for oil to come into the well bore than gas, but we all know oil can come into a gas zone because it has already in the **Cities Service Well,** State A R No. 1.

Q Taking into consideration these relative permeability

features, don't you think that it is just as likely that this well would essentially drain gas than it is that it might bring in some oil from across that lease line? Gas from the south rather than oil from the north?

A Rather than --

Q Just as likely than -- rather than bringing it across?

A I think it will do both, yes, sir.

Q If this Well No. 3 can drain the full 320 acres, and I think by your testimony you said that you felt like it could, the drilling of an additional well on this 320-acre tract or a portion of the acreage would, in effect, be economic waste, would it not?

A I don't know.

Q Well, there would be an additional expenditure of money to drain the same acreage, is that correct?

A On the part of The Texas Company, yes. I don't know how much oil you are going to pull up into the gas zone from the oil rim, so when you say economic waste, I don't know, sir.

Q You are assuming that we are going to pull oil up and you don't have any calculation that that will be done?

A No. All I have is the indication that it has happened in the vicinity.

Q And there are little indications in the vicinity that it hasn't happened with a well located in exactly the same structural position as the well that did pull oil up, is that correct?

A I don't know about that.

Q Well, the Continental Well in Section 3, that you referred to a minute ago has not pulled oil up?

A No. It is surrounded by Eumont oil wells.

MR. WADE: I think that's all the questions I have. Just one other question.

Q (By Mr. Wade) The Eumont Pool is primarily a gas pool, is it not?

A That's right.

Q In other words, the basic consideration for the major portion of the Rules and Regulations were given to the effect that this is essentially a gas pool rather than an oil pool?

A That's right.

MR. WADE: Thank you.

QUESTIONS BY MR. PAYNE:

Q I believe you testified, Mr. Boynton, that your company had no objection to the 160-acre non-standard proration unit?

A I didn't say we had no objection. I said we were willing for them to operate 160-acres.

Q Now, when you say that, do you mean for the well to be located where it is proposed on this plat?

A Well, it is there, as I understand it.

Q And a 160-acre unit, then, would just be the 160 to the north?

A Yes, sir.

Q Not the southern portion?

A The northeast quarter of that section.

Q Now, I believe you testified that you felt that a better location would be due south of this location?

A I think the entire 320 -- what I meant to say that that -- that the entire 320-acres is productive of gas, in my opinion, and that a gas well drilled to develop the southwest quarter of this section would pay out in a reasonable length of time.

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

MR. NUTTER: You mean the southeast quarter, don't you?

A Did I say southwest? Correct. That is the southeast quarter.

QUESTIONS BY MR. UTZ:

Q Mr. Boynton, in regard to Cities Service A R No. 1, do you know when that well was completed?

A I think they fooled around with it a long time. All I have heard is that on June the 14th, 1955 it was assigned 160 acres NSP, by NSP Order 137. And in November of 1956 it was retested and produced, let's see, 44 and eight-tenths barrels of oil, no water, with a gas-oil ratio of 3,962 in six hours. And was sometime, during October or November was reclassified as an oil well.

Q And it has remained an oil well ever since?

A In March, 1957 they entered the well and set a liner and perforated the lower sections, and I believe it is still considered an oil well, classified an oil well.

Q Top allowable well?

A No.

Q Do you know what its allowable is?

A I have it here. State A R No. 1 has an allowable of 27 barrels, present ratio is 12,104 to 1.

Q Mr. Boynton, do you know whether or not the entire east half of Section 11 is within the present boundaries of the Eumont Gas Pool?

A No, sir, I don't know.

Q In your opinion, do you think it ought to be?

A Well, as I stated previously, this Weir "B" 3 is producing oil from somewhere, I don't know where. It is probably the lower Penrose. But as to your question, I'm afraid I am not qualified to answer that right now. It is awfully close to the oil rim. The oil producing zone of the structure along Cities Service Well is 20 feet higher structurally than the north, I guess, 40 acres of Section 11.

Q You did testify that you thought the entire unit was productive of gas, didn't you?

A Yes, sir. If you'll refer to Exhibit No. 2, I believe there is no doubt that zone No. 1 which I indicated we intend to perforate in the future would be productive of gas throughout the top portion of that top, probably throughout the east half of the section.

Q You don't think that it would be productive of oil from

the Eumont pay?

A Not unless they pull it in from the rim.

Q Mr. Boynton, on your Exhibit No. 2, the cross section --

A That's No. 2.

Q -- on the cross section, the Weir "B" No. 3, is the cross-hatched perforations the perforation that The Texas Company stated they would like to open up?

A Not exactly. On the C-102, Notice of Intention, they had proposed to perforate from 3670 to 3790. Since they already had a portion of this zone opened, I assumed that to be a typegraphical error and to mean 3709. The crosshatched area is from 3670 to 3709, and I believe Mr. Schaffer indicated that they would take the perforations down to 3715, so that is not quite correct.

Q Did we determine what the top of the sub sea datum would be on the proposed perforation, the present perforation?

A The present perforations. Let's see, the top of present perforations are 2737, is that right?

MR. WADE: We have that figure if you would like to accept our number.

MR. UTZ: I will be happy to accept it.

MR. SCHAFFER: The top of the perforation at the present time, 2737 or minus 124. Do you want the pays too?

MR. UTZ: No, I would like the top of the proposed perforation.

MR. SCHAFFER: Minus 67.

Q (By Mr. Utz) Mr. Boynton, can you give me the sub sea datum on the Skaggs "B" 12 No. 2 and your State "A" 2 No. 1?

A I will have to calculate it. The top of the lower proration is at a minus 165.

MR. WADE: What was that number again?

A Minue 165. And the sub sea depth on the upper perforated interval is a minus 97 feet.

Q Is that on the same well?

A Yes.

Q One is 165 and the top is what?

A Minus 97.

Q How about your "B" 12 No. 2? Just the top of the perforations?

A Just the top of perforations. Minus 95.

Q And while the Weir "B" No. 3 is now perforated at a lower sub sea interval, when new perforations are made, it will actually be higher than your two offset oil wells, is that true?

A Yes, sir.

Q On the basis of the top of the Queen contour on Exhibit No. 1, you feel that the well is actually structurally lower than the Skaggs No. 12, No. 2, is that correct?

A That's true, yes. On top of the Queen.

MR. UTZ: Are there any other questions?

MR. WADE: In view of that, I would like to ask one additional question.

QUESTIONS BY MR. WADE:

Q Do you know what the gas-oil ratio, the producing gas-oil ratio of Continental's Skaggs "B" 12 No. 2 is?

A Well, it is 46,800 to 1 at the present time.

Q Are these black marks as shown on your Exhibit 2, are they indicated to be perforated intervals only and not necessarily oil or gas production?

A That's true.

Q In other words, this upper interval that you have opened, which would be comparable to the one, the proposed interval that The Texas Company has in mind to open, might very well be productive of gas entirely?

A Might very well, yes.

MR. WADE: That's all.

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

(Witness excused)

MR. UTZ: Did you introduce your Exhibits?

MR. KELLAHIN: At this time we would like to offer in evidence Continental's Exhibits 1 and 2.

MR. UTZ: Are there any other statements in this case?

MR. KELLAHIN: I would like to make a brief statement if I may, if the Examiner please.

I think it is apparent from the testimony that the opposition of Continental Oil Company to the proposed 320-acre non-standard

unit is due to two factors: the unorthodox location of the proposed unit well, and its proximity to Continental State "A" 2 and Skaggs "B" 12 wells, which produce oil from the Eumont gas zone. We believe that the granting of a large gas allowable to The Texas Company for the C. H. Weir "B" No. 3 Well will result in waste of recoverable liquid hydrocarbons due to their migration up structure, and in that connection, Mr. Boynton was asked the question if the drilling of an additional well in the south portion of their proposed unit for the formation of two non-standard 160-acre units would constitute waste; that becomes a relative matter, as against the drilling of the additional wells to recover the gas, or the production of large gas allowables from their present Weir "B" No. 3 Well, with the resulting migration of oil and loss of oil in the reservoir which would never be recovered. In addition to that, it is incumbent upon the Commission, we feel, to give serious consideration to the correlative rights of Continental Oil Company, as the offsetting operator, the well location being so close to their properties. We believe that there will be recoverable liquid hydrocarbons migrating up structure, as has been shown by the testimony it has occurred in the Cities Service Well, and upon such migration, the oil would become unrecoverable. However, to enable The Texas Company to recover its investment on the Weir "B" No. 3 Well, Continental would not voice an objection to a 160-acre non-standard unit for assignment to that well. We don't favor such a thing, but under the circumstances in this case, we certainly can

realize Texas Company's position, and as has been shown by Mr. Boynton's testimony, the drilling of an additional well in the southern portion of this proposed unit would be an economic operation on a 160-acre unit with a reasonable pay out period with the experience of -- Continental's experience in drilling other wells in this area.

MR. UTZ: Any further statements in this case?

MR. WADE: I would just like to state for The Texas Company that we feel that this well will drain gas, which has been shown by the testimony, to be underlying the entire non-standard proration unit. We feel that there would be negligible, if any, migration of oil across lease lines. The testimony indicated that there has been some oil produced by this Cities Service Well. I don't know what the situation is on it; it doesn't seem to stand up when you consider that there is a well just to the section west of the same structural location, and it has not pulled in any oil. I think that The Texas Company can produce the gas from this non-standard proration unit with the well that we propose to assign it to. We feel that the drilling of any additional wells on there would just constitute additional expenses that would not be justified under the circumstances. We urge that the Commission grant the application as requested.

MR. UTZ: Are there any other statements? If not, the case will be taken under advisement. The next case, after a five-minute break, will be Case 1461.

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 13th day of June, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
Notary Public

My commission expires:

October 5, 1960.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1447, heard by me on May 25, 1958.

....., Examiner
New Mexico Oil Conservation Commission